McMaster University

McMASTER UNIVERSITY

UNDERGRADUATE CALENDAR
2025-2026

Academic Advising Edition

NOTICE

This print edition of the 2025-2026 Undergraduate Calendar was produced on May 7, 2025 and is an abridged version produced for the convenience of academic advisors, faculty and staff.

Please visit **http://academiccalendars.romcmaster.ca** for the most complete version of this calendar.

McMaster University Undergraduate Calendar 2025-2026

For the online version of this calendar, visit http://academiccalendars.romcmaster.ca
This calendar covers the period from **September 2025 to August 2026**.

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University Policies and Release from Liability

University Policies

Acceptance of the University's policies (University Policies, Procedures & Guidelines), and changes that may be approved from time to time by the Board of Governors and the Senate, is a condition of being accepted in any capacity in any University-controlled laboratory or program. This includes but is not limited to the McMaster University Intellectual Property Policy http://ip.mcmaster.ca/.

Release from Liability

McMaster University reserves the right to change or revise information contained in this Calendar, including the alteration of fee structures, schedules and/or courses. The University reserves the right to limit enrolment in, or admission to, any course or program at any level.
The University will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this Calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by the faculty, staff or students of the University or by others, civil unrest or disobedience, or any other cause of any kind beyond the reasonable control of the University.

Glossary

Academic Probation

Academic Probation may be assigned to students whose Grade Point Average (GPA) is at least 3.0 but less than 3.5, will allow a student to continue at the University for one reviewing period.

Academic Standing

Academic standing is the statement of the academic performance of a student at the end of Winter or Spring/Summer terms. *Good Standing*, *May Continue in Program - Academic Probation*, *May Continue in Program - Program Probation*, *May Not Continue in Program*, *May Not Continue in Faculty*, *May Not Continue at University*, *Required to Withdraw from University*, are examples of academic standings. See *Academic Standing Review* and *Academic Standings* in the General Academic Regulations for more information.

Advanced Standing/Credit

Advanced Standing/Credit may be granted to an applicant who has completed work at another university or college or who has completed a Certificate/ Diploma program at McMaster University, subject to the applicant having met the minimum requirements prescribed by the University.

Antirequisite

An antirequisite is a course which cannot be taken for credit before, after, or at the same time as the course with which it is listed.

Bursaries

Bursaries are granted based upon demonstrated financial need, and may include a minimum expectation of academic achievement or other miscellaneous criteria. They may vary in monetary value, based upon the level of financial need demonstrated.

Continuing Student

- continuing student is a university graduate who is not proceeding to an advanced degree, but wishes to take one or more undergraduate courses after graduation.

Co-requisite

- co-requisite is a course which must be taken together with another course in the same term.

Course Numbers

Course numbers (e.g. 1A03) can be interpreted as follows: the initial digit indicates the Level of the course; the letter(s) in the middle identifies the specific courses within the Level; and the final digit(s) defines the number of units of credit associated with the course.

Credentials

- credential is a body of academic work or collection of course work that is independently recognized. McMaster credentials include certifications, diplomas, microcredentials, and degrees. A single course is permitted to be counted toward a maximum of two credentials.

Cross-listed Course

- cross-listed course is a course which is listed under two or more subjects.

Cumulative Grade Point Average (Cumulative GPA)

The Cumulative GPA is the weighted average based on the Graded Units taken throughout the undergraduate career. The Repeating Courses regulation, effective September 1, 2018, will affect the calculation of subsequent Cumulative GPA.

Deferred (DEF)

Notation
Courses with the notation DEF have been approved for a deferred examination.

Degree

- degree is conferred when a student completes a program of study (e.g. Bachelor of Arts, Bachelor of Science Kinesiology, Master of Science, Doctor of Philosophy).

Department

- department is a subdivision of a Faculty, responsible for a particular subject or group of subjects (e.g. Department of Chemistry, Department of Health, Aging and Society).

Elective Courses

Elective courses are those courses taken by a student which are not specifically designated in a student's program, but which form part of the total number of units required to complete the program.

Extra

Notation
Courses designated as "Extra" at the time of registration by the Faculty Office are not included as units toward completion of a student's program. The grades obtained in such courses will not be included in the computation of the Cumulative GPA. However, they will be included in the computation of the Fall-Winter Average and the Spring-Summer Average.

Faculty

- Faculty is a major administrative and teaching unit of the University responsible for programs and courses relating to common fields of study or academic disciplines (e.g. Faculty of Humanities, Faculty of Engineering).

Full Load

- full load is the number of units specified in the Calendar for an individual level of a program in a given year. If the Calendar does not specify the program requirements by individual levels, divide the total units for all levels by the number of levels, discarding the remainder.

Full-time Student

- full-time student, for academic purposes, is an undergraduate student who is registered in at least 9 units in a term, including Extra Courses. Full-time status for students in the Faculty of Science and Engineering Co-op programs is granted to those students registered in at least 9 units in a term.

Fall-Winter Average

The Fall-Winter Average is a weighted average based on the grades attained in the Fall and Winter Terms. Overload courses and Extra courses are included in the Fall-Winter Average.

Grade Point Average (GPA)

The Grade Point Average is the weighted average based on the grades obtained in all courses taken. Failed courses are included in the GPA calculation.

Graded Units

Graded units refer to the number of units taken at McMaster for which a letter or Numeric Grade is earned. Graded units do not include courses assessed with a Non-Numeric Grade.

Honour Lists

Students are reviewed for Deans' Honour Lists (DHL) and Provost's Honour List (PHL) each time a minimum of 30 units (may not exceed 6 units assessed with a non-numeric grade) have been completed. Subsequent assessments are based on all units completed since the previous review. Students will be named to the Deans' Honour List when a minimum average of 9.5 is achieved. Students will be named to the Provost's Honour List when an average of 12.0 is achieved.

Intersession

The Intersession is a time period in which students may explore novel interdisciplinary and experiential opportunities that may not be available during the Fall or Winter terms. The Intersession begins in the first week of May (concurrent with the Spring Session) and lasts for a four-week period. See the *Sessional Dates* and INSPIRE course listings for more information.

Letter of Permission (LOP)

- Letter of Permission is a formal document which allows a McMaster student to take one or more courses at another university for credit towards a McMaster degree.

Level

Level is used to describe a student's progression through a program.

Mature Student

- mature student has not attended secondary school or college on a full-time basis for at least two years; and has not previously attended university.

Minors

Students enrolled in a four- or five-level program (with the exception of the Medical Radiation Sciences programs) are eligible to obtain a Minor in another subject area, provided that the subject area is not integral to the requirements of their degree program. At least 18 units must be completed at McMaster. Students who wish to receive a Minor must consult the appropriate department section of the calendar. McMaster also offers Interdisciplinary Minors and Thematic Areas. To apply for a Minor, students must complete the Minor/Certificate Application in addition to their online Graduation Information Centre (GIC) application. The student's Faculty will verify that the requirements have been met and, if successful, the transcript will indicate that a Minor has been obtained. Minors cannot be revoked once approved.

Multi-Term Fall/Winter Courses

Codes for multi-term Fall/Winter courses have an A/B suffix. Part A must always be taken in the Fall Term immediately preceding Part B. Neither Part A nor B of a multi-term course has academic credit independent of both parts being successfully completed. Students who drop or withdraw from Part A must also withdraw from B.
Upon completion of the Fall Term, a grade of MT indicating multi-term will be assigned to Part A and the final grade will be assigned to Part B.

Multi-Session Course

- multi-session course is one taught over the Spring and Summer sessions of the Spring/Summer Term. Students enroll in both the 'A' and the 'B' parts of the same course. Part 'A' is taken in the Spring session. Part 'B' is taken in the Summer session. Academic Load and Billing units are assigned to both parts. Units for GPA calculation are assigned to part 'B' of the course only.

OSAP Eligible Course Load

OSAP Eligible Course Load or equivalent refers to the 60% minimum course load per term (40% minimum course load per term for students with permanent disabilities) required to be eligible for full-time OSAP government student aid funding.

Part-time Student

- part-time student, for academic purposes, is an undergraduate student who is registered in fewer than 9 units in a term, including Extra Courses.

Pass/Fail Courses

Courses evaluated on a Pass/Fail basis are not included in the calculation of averages. The earned units are counted towards degree requirements.

Post-Degree Student

- post-degree student is a university graduate or a person with professional qualifications who is not proceeding to an advanced degree, but wishes to take one or more graduate courses.

Prerequisite

- prerequisite is a requirement to be fulfilled before registration in a course is permitted. This is usually the successful completion of another course.

Program

- program is a specific combination of courses that fulfils the requirements for a degree.

Readmission

See *Readmission* in the Admission Requirements section of this calendar.

Reinstatement

See *Reinstatement* in the General Academic Regulations section of this calendar.

Required Courses

Required courses are those courses which are specifically designated for inclusion in a program.

Requisite

- requisite is an academic requirement that must be met to register in a course. A course requisite may comprise Prerequisites, Corequisites and/or Antirequisites.

Review

- academic review is an assessment of a student's performance to determine eligibility to continue in a program or to graduate.

Reviewing Period

The reviewing period is the time between two reviews for a student. Reviews will take place in May and August, provided the student has attempted 18 units of work since the last review or is a potential graduand.

Session

- period of study within a Term. Each term may have multiple sessions. For example, the Summer session runs from June to August within the Spring/Summer term.

Spring-Summer Average

The Spring-Summer Average is a weighted average based on the grades attained in the Spring and Summer Term. Overload courses and Extra courses are included in the Spring-Summer Average.

Term

- period within the Academic Year. The Academic Year will have three Terms that may have multiple Sessions within them. For example: Fall Term (September-December), Winter Term (January-April), and Spring/Summer Term (May-August).

Term Grade Point Average (Term GPA)

The Term GPA is a weighted average based on the Graded Units taken in the term.

Transcripts

- transcript summarizes a student's academic career at McMaster University and is available by electronic request through Mosaic. Transcript requests will not be processed for students with outstanding financial accounts at the University or those under investigation for an academic integrity violation.

Tuition

Tuition is fees paid in consideration for enrolment in a program of study and selected courses.

Undergraduate Student

An undergraduate student is a one who is enrolled in a program of study leading to a bachelor's degree or to the degree Doctor of Medicine.

Units

Units define the number of credits associated with a course. A unit is roughly equivalent to one lecture-hour per week for one term or two hours of laboratories or seminars per week for one term. Three-unit courses are usually one term in length. Six-unit courses are usually two terms in length.

Unused

Notation
Courses designated as "Unused" cannot be used to fulfil the requirements for the student's current degree program. The grades obtained in such courses will be included in the computation of all averages.

Weighted Average

Weighted average is calculated by multiplying the grade points achieved in each course by the number of units in each course, totaling these results, and then dividing this result by the total number of course units.

With Distinction

Notation
Graduation *With Distinction* standing is awarded when a minimum Cumulative GPA of 9.5 is achieved in a degree program. In this case, the Latin phrase *summa cum laude* ("with highest honour") will appear on the graduate's diploma.

Withdrawal With Academic Penalty

Withdrawal With Academic Penalty is the formal process of discontinuing studies in a particular course or program **after** the last day to withdraw without failure by default in the term.

Withdrawal Without Academic Penalty

Withdrawal Without Academic Penalty is the formal process of discontinuing studies in a particular course or program **before** the last day to withdraw without failure by default in the term.

Withdrawn (W)

Notation
After the last day for enrolment and course changes, students may withdraw from courses until the last day to withdraw without failure by default . Withdrawn courses will be shown on the student's transcript with a grade of W. After the last day to withdraw without failure by default, the student will remain enrolled, whether or not they fulfil any further academic obligations, and a final grade will be assigned.

Sessional Dates 2025-2026

The academic year is divided into terms, as shown below. Most undergraduate students register for the **Fall** and **Winter** terms, which run from September to December and January to April respectively. The **Spring/Summer** term starts at the beginning of May and ends in early August.
Note: Effective as of 2022-2023 academic year, the university will not be holding classes on September 30th in observance of the National Day for Truth and Reconciliation.
You may also download a PDF version here: 2025 - 2026 Sessional Dates (UGRD).

2025 Fall Term (62 days)

Item	Date(s)
Enrolment begins	*To be announced*
Classes begin	Tuesday, September 2
Last day for enrolment and course changes (drop/add)	Wednesday, September 10
National Day for Truth and Reconciliation: No classes or tests	Tuesday, September 30
Mid-term recess	Monday, October 13 to Sunday, October 19
Last day for withdrawing from courses without failure by default	Friday, November 21
Test and Examination Restriction	Friday, November 28 to Thursday, December 4
Classes end	Thursday, December 4
Final Examinations	Saturday, December 6 to Friday, December 19
Deferred examinations	Tuesday, February 17 to Friday, February 20

2026 Winter Term (62 days)

Item	Date(s)
Enrolment begins	*To be announced*
Classes begin	Monday, January 5 ***Note:** *Some clinical placements may start the week of December 30, 2025. Program offices will communicate directly with their students about their start date in these instances.*

Item	Date(s)
Last day for enrolment and course changes (drop/add)	Tuesday, January 13
Mid-term recess	Monday, February 16 to Sunday, February 22
Last day for withdrawing from courses without failure by default	Friday, March 27
Test and Examination Restriction	Wednesday, April 1 to Tuesday, April 7
Good Friday Break: No classes or examinations	Friday, April 3
Classes End	Tuesday, April 7
Final Examinations	Thursday, April 9 to Wednesday, April 22
Deferred examinations	Monday, June 22 to Thursday, June 25

2025-2026 Multi-Term Courses (124 days)

Item	Date(s)
Enrolment begins	*To be announced*
Classes begin	Tuesday, September 2
Last day for enrolment and course changes (drop/add)	Wednesday, September 10
National Day for Truth and Reconciliation: No classes or tests	Tuesday, September 30
Mid-term recesses	Monday, October 13 to Sunday, October 19; and Monday, February 16 to Sunday, February 22
Last day for withdrawing from courses without failure by default	Friday, March 27
Test and Examination Restriction	Wednesday, April 1 to Tuesday, April 7
Mid-Term Tests Level (1)	Friday, December 5 to Thursday, December 18
Good Friday Break: No classes or examinations	Friday, April 3
Classes end	Tuesday, April 7
Final Examinations	Thursday, April 9 to Wednesday, April 22
Deferred examinations	Monday, June 22 to Thursday, June 25

2026 Spring/Summer Term

	Spring Session (34 days)	**Summer Session** (33 days)	**Full-Term Courses** (67 days)	**Intersession**
Classes begin	Monday, May 4	Monday, June 29	Monday, May 4	Monday, May 4
Last day for enrolment and adding or dropping courses (drop/add)	Monday, May 11	Monday, July 13	Monday, May 11	Monday, May 11
Victoria Day: No classes	Monday, May 18	--	Monday, May 18	Monday, May 18
Canada Day Observance: No classes	--	--	Tuesday, July 1	--
Last day withdrawing from courses without failure by default	Monday, June 1	Tuesday, August 4	Tuesday, August 4	Thursday, May 22
Civic Holiday: No classes	--	Monday, August 3	Monday, August 3	--
Classes end	Friday, June 19	Friday, August 14	Friday, August 14	Friday, May 30
Final Examinations	*As arranged by instructor in class time*			
Deferred Examinations	Tuesday, October 13, 2026 to Friday, October 16, 2026			

Degrees and Programs: Duration in Years

McMaster University offers the following undergraduate degrees:

FACULTY AND DEGREE		**DURATION IN YEARS**
Arts & Science Program		
	B.Arts Sc.	3
	B.Arts Sc. (Honours)	4

DeGroote School of Business

B.Com.	4
B.Com. (Honours)	4
B.Com. (Honours)	5**

Faculty of Engineering

B.A.Sc.	4
B.Eng.	4
B.Eng.BME	5
B.Eng.Mgt.	5
B.Eng. Society	5
B.Eng. Biosciences	5
B.Tech.	or 4

Faculty of Health Sciences

B.H.Sc. (Midwifery)	4*
B.H.Sc. (Physician Assistant)	2

B.H.Sc. (Honours)	4
B.H.Sc. (Honours) (HESE Specialization)	4
B.Sc.N.	4
B.Sc.N. (Post Diploma RN Stream)	2*
B.Sc.N. (Basic-Accelerated)	2*
M.D. (Doctor of Medicine)	3*

Faculty of Humanities

B.A.	3
B.A. (Honours)	4
B.F.A. (Honours)	4
B.Mus. (Honours)	4
B.A./B.S.W.	4

Faculty of Science

B.A.Sc. (Honours)	4
B.M.R.Sc.	4*
B.Sc.	3
B.Sc. (Honours)	4
B.Sc. (Honours)	5**
B.Sc.Kin. (Honours)	4

Faculty of Social Sciences

B.A.	3
B.A. (Honours)	4
B.A./B.S.W.	4
B.S.W.	2‡

** In these programs, an academic year extends beyond the regular Fall and Winter terms.*

*** These are co-op or internship programs.*

- *Follows completion of prior undergraduate degree.*

Second Undergraduate Degree

Provision exists for a university graduate to take a second bachelor's degree. This program is normally shortened (except for the B.H.Sc. Midwifery program). The DeGroote School of Business does not accept second degree students and encourages them to investigate an MBA program instead. An application for admission is necessary for entry to a second degree program, and it should be submitted by the application deadlines. (See *Application Procedures* and *General Academic Regulations* sections of this Calendar.)

Combined Programs

There is the opportunity to combine two subjects of study within one Faculty, or between two Faculties. Further information can be obtained by referring to the Faculty sections of this Calendar, or contacting the appropriate Office of the Associate Dean.

Elective Courses Available To Level I Students

ELECTIVE COURSES AVAILABLE TO LEVEL I STUDENTS

The following is a list of courses available as electives to Level I students, provided that requisites have been satisfied, and subject to enrolment limitations.

COURSES AVAILABLE

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ART 1TI3 - Making Art and Understanding Technology & Images §
- ART 1UI3 - Making Art and Understanding Images §
- ASTRON 1F03 - Introduction to Astronomy and Astrophysics §
- BIOCHEM 1MM3 - From Molecules to Medicine: Unlocking Biochemical Secrets in Health §
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology §
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity §
- BIOLOGY 1P03 - Introductory Biology §
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- CHEM 1A03 - Introductory Chemistry I §
- CHEM 1AA3 - Introductory Chemistry II §
- CHEM 1R03 - General Chemistry §
- CHINESE 1Z06 A/B - Mandarin Chinese for Beginners
- CMST 1A03 - Introduction to Communication
- COMMERCE 1AA3 - Introductory Financial Accounting §
- COMMERCE 1B03 - Business Environment & Organization §
- COMMERCE 1BA3 - Organizational Behaviour §
- COMMERCE 1DA3 - Business Data Analytics §
- COMMERCE 1MA3 - Introduction to Marketing §
- COMMERCE 4AK3 - Accounting Information for Decision Making §
- COMMERCE 4FP3 - Personal Finance §
- COMPSCI 1JC3 - Introduction to Computational Thinking §
- COMPSCI 1MD3 - Introduction to Programming §
- EARTHSC 1G03 - Earth and the Environment §
- ECON 1B03 - Introductory Microeconomics ∞
- ECON 1BB3 - Introductory Macroeconomics
- ENGLISH 1CS3 - Studying Culture: A Critical Introduction
- ENGLISH 1F03 - The Written World
- ENGLISH 1G03 - Making and Unmaking Literary Traditions
- ENGLISH 1H03 - Words in Place
- ENVIRSC 1C03 - Climate, Water and Environment §
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- FARSI 1Z03 - Introductory Farsi I
- FARSI 1ZZ3 - Introductory Farsi II
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GERMAN 1B03 - Intermediate German I
- GERMAN 1BB3 - Intermediate German II
- GERMAN 1Z06 A/B S - Beginner's Intensive German

- GKROMST 1A03 - Introduction to Greek and Roman Archaeology
- GKROMST 1B03 - An Introduction to Ancient Myth and Literature
- GKROMST 1M03 - History of Greece and Rome
- GLOBALZN 1A03 - Global Citizenship
- GREEK 1Z03 - Beginner's Intensive Ancient Greek I
- GREEK 1ZZ3 - Beginner's Intensive Ancient Greek II
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HTHSCI 1DT3 - Discover Immunology Today §
- HTHSCI 1M03 - Foundations of Data Science §
- HISTORY 1CC3 - Ten Empires that Shaped our World, 500 BCE to Present
- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 1EE3 - The Historical Roots of Contemporary Issues
- HISTORY 1M03 - History of Greece and Rome
- HISTORY 1P03 - A History of Magic
- HISTORY 1Q03 - History of Medicine
- IARTS 1BD3 - 2D Practices in Art §
- IARTS 1CR3 - Acting: Body and Voice §
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment
- IARTS 1SS3 - 3D Practices in Art §
- IARTS 1T03 - Story and Design in Theatre and Film
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INNOVATE 2SI3 - Social Innovations
- ITALIAN 1A03 - Intermediate Italian I
- ITALIAN 1AA3 - Intermediate Italian II
- ITALIAN 1Z06 A/B S - Beginner's Intensive Italian
- INSPIRE 1A03 - Multidisciplinary Experiential Learning Opportunities §
- INSPIRE 1PL3 - Personal Leadership Through University Transition
- INSPIRE 3EL3 - Experiential Learning Opportunities
- INSPIRE 3II3 - Interdisciplinary Inquiry §
- INSPIRE 3MP3 - A World of Big Questions and Multiple Perspectives
- JAPANESE 1Z06 A/B S - Beginner's Intensive Japanese
- KOREAN 1Z03 - Introductory Korean I
- KOREAN 1ZZ3 - Introductory Korean II
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- LATIN 1Z03 - Beginner's Intensive Latin I
- LATIN 1ZZ3 - Beginner's Intensive Latin II
- LIFESCI 1D03 - Medical Imaging Physics §
- LINGUIST 1A03 - Introduction to Linguistics: Speaking, Signing and Hearing
- LINGUIST 1AA3 - Introduction to Linguistics: Words, Sentences and Meaning
- LINGUIST 1Z03 - Structure of Modern English I
- LINGUIST 1ZZ3 - Structure of Modern English II
- MATH 1A03 - Calculus For Science I §
- MATH 1AA3 - Calculus For Science II §
- MATH 1B03 - Linear Algebra I §
- MATH 1C03 - Introduction to Mathematical Reasoning §
- MATH 1F03 - Introduction to Calculus and Analytic Geometry §
- MATH 1K03 - Advanced Functions §
- MATH 1LS3 - Calculus for the Life Sciences I §
- MATH 1LT3 - Calculus for the Life Sciences II §
- MATH 1MM3 - Applied Calculus §
- MATH 1MP3 - Introduction to Mathematical Scientific Computation §
- MEDIAART 1A03 - Media Arts §
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- MUSIC 1A03 - Introduction to the History of Western Music I
- MUSIC 1AA3 - Introduction to the History of Western Music II
- MUSIC 1CR3 - Foundations of Music I §
- NUCLST 1N03 - Nuclear Technology Applications
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PHILOS 1A03 - Philosophical Texts
- PHILOS 1B03 - Philosophy, Law and Society
- PHILOS 1E03 - Philosophical Questions
- PHILOS 1F03 - Meaning in Life
- PHYSICS 1A03 - Introductory Physics §
- PHYSICS 1AA3 - Introduction To Modern Physics §
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences §
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences §
- PHYSICS 1V03 - Introductory Physics
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology §
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- RUSSIAN 1Z03 - Intensive Beginner's Russian I
- RUSSIAN 1ZZ3 - Intensive Beginner's Russian II
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SCIENCE 1A03 - Investigating Science: Opportunities & Experiences ** §
- SOCPSY 1Z03 - An Introduction to Social Psychology ◊
- SOCSCI 1SS3 - Inquiry in the Social Sciences ◊ §
- SOCSCI 1T03 - Life, the University, and Everything ◊ §
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SPANISH 1A03 - Intermediate Spanish I
- SPANISH 1AA3 - Intermediate Spanish II
- SPANISH 1Z06 A/B - Beginner's Intensive Spanish
- STATS 1LL3 - Introduction to Probability and Statistics §
- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 2SS3 - Advocating for Sustainability
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1E03 - Navigating the World of Work

NOTES

- Not acceptable for the six-unit complementary studies elective required in Engineering I or the three-unit complementary studies elective required in Integrated Biomedical Engineering and Health Sciences I.

** SCIENCE 1A03 is only available to students enrolled in a Level I program in the Faculty of Science.

- SOCSCI 1T03 and SOCSCI 1SS3 are only available to students registered

in the Social Sciences I program.
- Engineering I students interested in entering the Engineering and Management program must take ECON 1B03 as one of their complementary studies electives.

Availability of Upper-Level Courses

COURSE AVAILABILITY

The following are lists of upper-level courses available to students subject to enrolment limitations and the prerequisites as specified for each list. (Engineering students should refer to the website at **https://www.eng.mcmaster.ca/sites/default/files/complementary_studies_electives_2019_0.pdf**).

UPPER-LEVEL COURSES AVAILABLE TO ALL STUDENTS

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ANTHROP 2EE3 - Sport and/as Religion
- COMMERCE 4AK3 - Accounting Information for Decision Making
- COMMERCE 4FP3 - Personal Finance
- GENDRST 2BB3 - Images of the Divine Feminine
- GENDRST 3BW3 - Gender in Ancient Eastern Mediterranean
- GKROMST 2MT3 - Ancient Roots of Medical Terminology
- HEBREW 2A03 - Introduction to Biblical Hebrew I
- INSPIRE 3EL3 - Experiential Learning Opportunities
- INSPIRE 3II3 - Interdisciplinary Inquiry
- INSPIRE 3WW3 - Exploring Leadership in University Orientation
- JAPANESE 2X03 - Japanese Anime (Taught in English)
- KOREAN 2X03 - Korean Pop-Culture (Taught in English)
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- LINGUIST 2SL3 - Introduction to American Sign Language
- MATH 2UU3 - Numbers for Life
- POLSCI 2C03 - Force and Fear, Crime and Punishment
- POLSCI 2D03 - Canadian Democracy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2I03 - Global Politics
- POLSCI 2J03 - Global Political Economy
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- POLSCI 2O06 A/B - Political Theory
- POLSCI 2U03 - Public Policy and Administration
- POLSCI 2XX3 - Politics of the Developing World
- SCAR 2AA3 - Introduction to Modern Standard Arabic
- SCAR 2AB3 - Ancient Archaeology
- SCAR 2AM3 - Abraham in Judaism, Christianity, and Islam
- SCAR 2AP3 - Apocalypse, Then and Now
- SCAR 2BB3 - Images of the Divine Feminine
- SCAR 2BE3 - Religion and Ecology
- SCAR 2BN3 - Sex and the City in Buddhism: The Urban Life of Buddhist Nuns in North India
- SCAR 2CA3 - Religion and the Arts
- SCAR 2CH3 - What is Christianity?
- SCAR 2EE3 - Prophets, Priests, and Sorcerers
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2F03 - Storytelling in Asian Religions
- SCAR 2G03 - Religious Themes in Modern Culture
- SCAR 2GB3 - Great Books in Asian Religions
- SCAR 2GG3 - Who was Jesus?
- SCAR 2GR3 - Evil
- SCAR 2HB3 - Introduction to the Jewish Scriptures/Old Testament
- SCAR 2HC3 - Introduction to Biblical Hebrew I
- SCAR 2HR3 - Humour and Religion
- SCAR 2IR3 - Bollywood and Indian Religions
- SCAR 2J03 - Introduction to Judaism
- SCAR 2K03 - What is Buddhism?
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2NT3 - The New Testament
- SCAR 2Q03 - What Is Islam?
- SCAR 2QQ3 - Cults, Conspiracies and Close Encounters
- SCAR 2RD3 - Religion and Diversity
- SCAR 2RN3 - Science, Religion, and Human Futures
- SCAR 2SA3 - Encountering the Sacred
- SCAR 2SG3 - Spirits, Ghosts, and Demons
- SCAR 2SP3 - Sport and/as Religion
- SCAR 2TA3 - Islam in North America
- SCAR 2TT3 - Japanese Popular Culture and Religion
- SCAR 2UD3 - Utopias, Dystopias
- SCAR 2VR3
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SCAR 2YY3 - The Bible and Film
- SOCIOL 2TA3 - Islam In North America
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 2SS3 - Advocating for Sustainability

UPPER-LEVEL COURSES AVAILABLE TO STUDENTS REGISTERED IN LEVEL II OR ABOVE IN ANY PROGRAM

- ANTHROP 2G03 - Readings in Indo-European Myth
- ANTHROP 2MA3 - Art and Activism
- ANTHROP 2U03 - Plagues and People
- ANTHROP 2WA3 - Neanderthals to Pyramids: Introduction to World Archaeology
- ANTHROP 3AR3 - Culture and Religion
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ANTHROP 3SS3 - Sacred Journeys
- ANTHROP 3TR3 - Tourism: Sex, Sun and Sightseeing
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ASTRON 2B03 - The Big Questions
- ART 2ER3 - Environmentally Responsible Art
- ARTHIST 2B03 - Greek Art
- ARTHIST 2C03 - Roman Art
- ARTHIST 2DF3 - From the Guillotine to the Eiffel Tower, France 1789-1889
- ARTHIST 2FA3 - Film Analysis
- ARTHIST 2H03 - Aesthetics
- ARTHIST 2Y03 - Performance, Art and Visual Culture in the Middle East
- ARTHIST 2Z03 - Performance, Art and Visual Culture in East and South Asia
- ARTHIST 3D03
- ARTHIST 3DF3 - Art and Politics in Second Empire France
- ARTHIST 3FL3 - Early Cinema History
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3QQ3 - Greek Sanctuaries

- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CHALLENG 2CC3 - Critical Challenges for Humanity
- CMST 2HM3 - Human Communication
- CMTYENGA 2A03 - Foundations of Community Engagement
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2OC3 - Operations Management
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3MD3 - Introduction to Contemporary Applied Marketing
- COMMERCE 4AK3 - Accounting Information for Decision Making
- COMMERCE 4FP3 - Personal Finance
- COMMERCE 4FW3 - Finance for Entrepreneurs
- COMMERCE 4MG3 - Strategic Philanthropy and Leadership
- COMMERCE 4SG3 - Sustainability: Corporations and Society
- EARTHSC 2GG3 - Natural Disasters
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ENGLISH 2AA3 - Literature and Culture in the United States Before 1900
- ENGLISH 2BB3 - Literature and Culture in the United States After 1900
- ENGLISH 2BL3 - Twentieth- and Twenty-First Century British Literature and Film
- ENGLISH 2C03 - Contemporary Canadian Fiction
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- ENGLISH 2CR3 - Shakespeare: Comedies, Problem Plays, and Romances
- ENGLISH 2CW3 - Genre in Creative Writing
- ENGLISH 2HT3 - Shakespeare: Histories and Tragedies
- ENGLISH 2KK3 - Studies in Women Writers
- ENGLISH 2M03 - Concepts of Culture
- ENGLISH 2PC3 - Popular Culture
- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3CP3 - Writing Practices
- ENGLISH 3CW3 - Creating Writing in/for/with Communities
- ENGLISH 3EC3 - Enlightenment and its Shadows
- ENGLISH 3GF3 - Topics in Popular Genres
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3NH3 - Narratives of Health
- ENGLISH 3QQ3 - Contemporary Critical Theory
- ENGLISH 3V03 - Global Anglophone Literature and Film
- ENGLISH 3VC3 - 'We Other Victorians': Victorian Literature and Culture and Its Afterlives
- ENGLISH 3WE3 - British Romantic Literature and Culture: Revolution, War, Empire
- ENVIRSC 2WW3 - Water and the Environment
- ENVSOCTY 2RC3 - Regional Geography of Canada
- ENVSOCTY 2RU3 - Regional Geography of the United States
- ENVSOCTY 3RW3 - Regional Geography of a Selected World Region
- GENDRST 2AA3 - Feminist Thought
- GENDRST 3BW3 - Gender in Ancient Eastern Mediterranean
- GENDRST 3FF3 - Gender and Religion
- GENDRST 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- GERMAN 2FT3 - The Fairy Tale (Taught in English)
- GERMAN 2KK3 - Postmodern Alienation and Anxieties - Kafka for the Twenty-First Century (Taught in English)
- GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
- GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- GERMAN 3H03 - The New Europe: A New Germany (Taught in English)
- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2C03 - Health Economics and its Application to Health Policy
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2J03 - Selected Topics in Aging and Society
- HLTHAGE 2K03 - Selected Topics in Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing
- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 3Q03 - Selected Topics in Health and Aging
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 3T03 - Health and Incarceration
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2CC3 - The Medieval World 400-1050
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2DD3 - The Medieval World 1050-1400
- HISTORY 2DF3 - From the Guillotine to the Eiffel Tower, France 1789-1889
- HISTORY 2EN3 - The Post-Slavery Caribbean
- HISTORY 2G03 - Modern Latin America Since 1820
- HISTORY 2GW3 - A History of Global War
- HISTORY 2H03 - Tudor and Stuart Britain, 1485-1714
- HISTORY 2HH3 - Pirates, Pilgrims and the Enslaved in the Mediterranean, 1450-1750
- HISTORY 2II3 - Modern Germany
- HISTORY 2IS3 - Historical Roots of Current Social and Political Crises in the United States
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 2KK3 - History of Capitalism
- HISTORY 2MC3 - Modern China
- HISTORY 2PP3 - From Archive to History
- HISTORY 2Q03 - Imperial Russia
- HISTORY 2QQ3 - The Soviet Union
- HISTORY 2RR3 - U.S. History Since the Civil War
- HISTORY 2SH3 - Canadian Sport History
- HISTORY 2SS3 - Liberty, Empire and Industry: Britain, 1688-1867
- HISTORY 2ST3 - Empire, War, Welfare State: Britain, 1867-2020
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 2V03 - Re-Making History
- HISTORY 3AR3 - Atlantic Revolutions, 1750-1804
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3CH3 - Climate History
- HISTORY 3DD3 - Jews and Jesus
- HISTORY 3DF3 - Art and Politics in Second Empire France
- HISTORY 3DS3 - Diasporas, Trade and Conflict: The Sea in History, 1000 BCE to Present
- HISTORY 3EC3 - Chinese Intellectual Traditions
- HISTORY 3FF3 - Nazi Germany
- HISTORY 3H03 - Italian Renaissance, 1300-1600
- HISTORY 3I03 - The International Relations of the European Powers, 1870-1945
- HISTORY 3J03 - The United States in the 1960s

- HISTORY 3KK3 - The Vietnam War
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3RU3 - Early Modern Russia
- HISTORY 3TC3 - Science, Technology in World History
- HISTORY 3TR3 - Trees and their Histories
- HISTORY 3UA3 - The History of the Future
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- HISTORY 3XX3 - Human Rights in History
- HISTORY 3ZZ3 - Judaism in the Modern World
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- HUMAN 3CL3 - Community Leadership at McMaster
- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 2T03 - Sex, Gender, & Health
- HTHSCI 3I03 - Introductory Immunology
- INDIGST 2F03 - Indigenous Education in Canada
- INNOVATE 2SI3 - Social Innovations
- INSPIRE 3AS3 - Language and Communication in Autism Spectrum Disorder
- INSPIRE 3II3 - Interdisciplinary Inquiry
- INSPIRE 3AR3 - Exploring Leadership in Athletics & Recreation
- INSPIRE 3WW3 - Exploring Leadership in University Orientation
- ITALIAN 3X03 - Italy Today Through Film (Taught in English)
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 2FL3 - Introduction to Forensic Linguistics
- LINGUIST 2S03 - Language and Society
- LINGUIST 3AS3 - Language and Communication in Autism Spectrum Disorder
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSIC 2MU3 - Introduction to Music Therapy Research
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 3K03 - Brass Methods *****
- MUSIC 3SI3 - Vocal Pedagogy
- MUSIC 3WW3 - Woodwind Pedagogy

** Students will be expected to read music. Non-music students will be required to bring their own instruments.*

- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2GW3 - A History of Global War
- PEACJUST 2LS3 - Language and Society
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3V03 - Global Anglophone Literature and Film
- PHILOS 2B03 - Introductory Logic
- PHILOS 2CT3 - Critical Thinking
- PHILOS 2D03 - Bioethics
- PHILOS 2E03 - Classical Chinese Philosophy
- PHILOS 2F03 - Philosophical Psychology
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2H03 - Aesthetics
- PHILOS 2N03 - Business Ethics
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2S03 - History of Political Philosophy
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 2U03 - Philosophy of Health and Medicine
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2YY3 - Ethics
- POLSCI 3LA3 - Religion and Politics
- RUSSIAN 2G03 - Masterpieces of Russian Literature in Film and TV Series (Taught in English)
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- SCAR 2BE3 - Religion and Ecology
- SCAR 2FF3 - Pirates, Pilgrims and Enslaved in the Mediterranean, 1450-1750
- SCAR 3AR3 - Culture and Religion
- SCAR 3BE3 - Buddhist Ethics
- SCAR 3BW3 - Gender in Ancient Eastern Mediterranean
- SCAR 3C03 - Islam in the Modern World
- SCAR 3CC3 - Religion and Politics
- SCAR 3DD3 - Jews and Jesus
- SCAR 3E03 - Japanese Film and Religion
- SCAR 3EE3 - Sacred Journeys
- SCAR 3EP3 - Jewish Ethics and Politics
- SCAR 3FF3 - Gender and Religion
- SCAR 3JJ3 - Social Justice
- SCAR 3LL3 - Being Human in the Anthropocene
- SCAR 3PA3 - The Apostle Paul: The First Christian?
- SCAR 3R03 - Death and the Afterlife in Early Judaism and Christianity
- SCAR 3RB3 - Ethnicity, Race, and Religion
- SCAR 3RL3 - Religion and Law
- SCAR 3U03 - The Buddhist Tradition in India
- SCAR 3Y03 - Love
- SCAR 3ZZ3 - Judaism in the Modern World
- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 2F03 - Psychology of Close Relationships
- SOCIOL 2VV3 - Law and Society
- SOCIOL 2WW3 - Media and Power
- SOCIOL 3UU3 - Power, Conflict, and the Law
- SOCSCI 2CC3 - Children and Family in Canada
- SOCSCI 2O03 - Canadian Children
- SOCSCI 2P03 - Canadian Adolescents
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability
- THTRFLM 2FA3 - Film Analysis
- THTRFLM 2J03
- THTRFLM 2JJ3
- THTRFLM 2MM3 - Movies and Me
- THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
- THTRFLM 3FF3 - Early Cinema History
- THTRFLM 3L03 - Cinema History from WWII
- THTRFLM 3QA3 - Documentary, Politics, and Social Change
- THTRFLM 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- THTRFLM 3VS3 - Visual Storytelling
- WORKLABR 2H03 - Sports, Work and Labour
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2M03 - Pop Culture, Media and Work

UPPER-LEVEL COURSES AVAILABLE TO STUDENTS REGISTERED IN LEVEL III OR ABOVE IN ANY PROGRAM

- ANTHROP 3ST3 - Anthropology of Postcolonial Science and Technology
- ANTHROP 3TR3 - Tourism: Sex, Sun and Sightseeing
- ARTSSCI 3GJ3 - Global Justice Inquiry
- BIOLOGY 3HD3 - Human Disasters
- GENDRST 3BB3 - Gender and Visual Culture

- HLTHAGE 3E03 - Ethical Issues in Health and Aging
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3DD6 A/B - Engaging the City: An Introduction to Community-Based Research in Hamilton
- HTHSCI 3FC3 - Science of Fictional Characters
- HTHSCI 3HL3 - Health Law: Current and Emerging Issues
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 3L03 - Introduction to Bioethics
- HTHSCI 3NN3 - Inquiry in Perinatal & Reproductive Health
- HTHSCI 3PP3 - Health Ventures
- HTHSCI 3QA3 - Qualitative Research Methods in Health
- HTHSCI 3RH3 - Racism and Health
- HTHSCI 3RS3 - Exploring the Foundations of Rehabilitation Sciences
- HTHSCI 3S03 - Communication Skills
- HTHSCI 3SS3 - Surviving Survivor: Insights from Reality TV for Real Life
- HTHSCI 3T03 - Inquiry into Work, Self and Purpose
- HTHSCI 3U03 - Medical Genetics
- HTHSCI 4AC3 - Advanced Communication Skills
- HTHSCI 4BB3 - Neuroimmunology
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4J03 - Immunological Principles In Practice
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- HTHSCI 4M03 - Advanced Concepts in Health Psychology
- HTHSCI 4O03 - Principles of Virus Pathogenesis
- HTHSCI 4MS3 - The Social Lives of Molecules
- HTHSCI 4PA3 - Global Health Innovation
- HTHSCI 4SR3 - Global Sexual and Reproductive Health and Rights
- HTHSCI 4TE3 - The Teaching Hospital
- HTHSCI 4Y03 - Science, Culture and Identity
- HTHSCI 4XX3 - Professional Transitions
- HTHSCI 4ZZ3 - Global Health Advocacy
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders

*** Online application also required.*

- LINGUIST 3DS3 - ASL & Deaf Studies
- MUSIC 4N03 - Choral Methods *****

** Students will be expected to read music. Non-music students will be required to bring their own instruments.*

- PEACJUST 3Y03 - Special Topics in Peace and Justice
- POLSCI 3CL3 - Constitutional and Public Law in Canada
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3GG3 - Federalism
- POLSCI 3I03 - Topics in American Politics
- POLSCI 3JJ3 - Provincial Politics in Canada
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LL3 - Development and Public Policy
- POLSCI 3PA3 - Politics of Pandemics
- POLSCI 3Q03 - The Causes of War
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3V03 - Gender and Politics
- POLSCI 3Y03 - Democratization and Human Rights
- POLSCI 3Z03 - Canadian Public Sector Management
- SCAR 3S03 - The East Asian Religious Tradition
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCPSY 3M03 - Counselling & Psychotherapy
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- THTRFLM 3P03 - Gender and Visual Culture

Admission Requirements

1. Admission from Secondary Schools

All Level I programs have enrollment limits and admission is by selection.

A. Ontario

GENERAL REQUIREMENTS (FOR ALL LEVEL I PROGRAMS)

To be considered for admission, an applicant must satisfy the general requirements of the university and the specific subject requirements for the program to which they applied plus any specified supplementary application/on-line assessment/audition/portfolio required by some programs at the university.

If you are an applicant from an Ontario secondary school, you must meet the following minimum requirements:

1. An Ontario Secondary School Diploma (OSSD) with acceptable standing; AND
2. An overall average in completed Grade 12 U and/or M courses which meets or exceeds the minimum set by the specific program to which you applied; AND
3. Satisfactory completion of six Grade 12 U and/or M courses including the subject requirements for your chosen program.

Note: Co-op courses are not included in any admission average calculations. Music External (Conservatory) 4M is acceptable as a credit and the mark obtained can be included in the calculation of your admission average. Alternatively, you may submit certificates from a recognized conservatory of music in Grade 8 practical and Grade 2 theory to your secondary school for one Grade 12M credit.

ADMISSION AVERAGE RANGE

The Admission Average Range used to determine eligibility is calculated using the best six Grade 12 U and/or M grades, including all required subjects.

McMaster calculates averages to two decimal points and does not round up averages. See *Early Conditional Admission* and *Final Admission* below for specific details. Estimated admission average ranges for our Level I Programs can be found at: http://future.mcmaster.ca under *Admission Requirements*.

CONDITIONAL ADMISSION

Conditional admission may be granted annually to qualified applicants with strong academic standing. **Conditional** admission is based on:

1. Six appropriate midterm/interim Grade 12 U and/or M grades, OR
2. At least three final Grade 12 U and/or M grades PLUS enrollment in the appropriate additional three Grade 12 U and/or M courses.
3. In some cases, Grade 11 marks may be considered in extending early conditional offers of admission.

Applicants who do not receive an offer of admission in March, will automatically be reassessed for admission until May 15 after additional Grade 12 U and/or M grades are received from secondary schools. Due to enrollment limits, McMaster may not be able to consider additional grade data received after May 15 for admission purposes.

The University reserves the right to withdraw a conditional offer of admission due to any of the following:

1. The minimum final average required was not met; OR
2. The OSSD was not awarded; OR
3. Six Grade 12 U and/or M courses including all required subjects were not completed; OR
4. The applicant did not successfully accept the offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on the offer letter; OR
5. Conditions stipulated on the conditional offer of admission were not met;

OR
6. A post-secondary institution was attended prior to beginning your studies at McMaster; OR
7. The offer of admission to the university was secured through fraudulent means. **Please note the University's statements regarding application fraud at the end of the Admission section of this calendar.**

MINIMUM FINAL AVERAGE

Secondary school applicants who receive a conditional offer of admission, are required to achieve an overall average (calculated to two decimal points) on six (6) final grades including all program specific required courses. This information is indicated on conditional offers of admission.

If an applicant's final average falls below this level (or equivalent), the offer of admission will be rescinded/revoked, and registration will be cancelled.

The required minimum final average varies from year to year and by program. This average is clearly stated in the offer letter.

SUPPLEMENTARY APPLICATION FORMS AND EXTENUATING CIRCUMSTANCES

Certain Level I programs including Arts & Science I, Automation Systems Engineering Technology 1 (co-op), Automotive & Vehicle Engineering Technology 1 (co-op), Honours Health Sciences 1, Biotechnology 1 (co-op), Computer Science 1 (regular and co-op), Engineering 1 (regular and co-op), Integrated Biomedical Engineering & Health Sciences (iBioMed) (regular and co-op), Integrated Business and Humanities (IBH), Honours Integrated Science, Midwifery, Nursing, and Leadership & Civic Studies I have **mandatory online supplementary application forms or online assessments** which must be completed by specific deadline dates. See *Application and Documentation Deadlines*, for specific deadline dates. Applicants to Business 1 may elect to complete an optional supplemental form prior to February 1.

McMaster does not normally use **optional** supplementary application forms. Applicants will be notified if the program they applied to decides to use an optional supplementary application form.

Applicants with special circumstances whose average falls slightly below the required admission average range may provide information to the Office of the Registrar, **Admissions** explaining the nature of their extenuating circumstances. The Request for Special Consideration form can be found at https://admissions.mcmaster.ca/portal/extenuatingcircumstances. The form is open from November 1 to May 1. In some cases, the university may request letters of recommendation, personal history or other additional information to aid in the admission process.

OFFERS OF ADMISSION FOR SECONDARY SCHOOL GRADUATES

Applicants may be eligible for final admission if they have completed their OSSD and have final grades in six Grade 12 U and/or M courses. Applicants who fulfill these requirements by the end of February, may be granted a **final admission offer**.

The University reserves the right to withdraw an offer of final admission due to any of the following:

1. Failure to accept an offer of admission at the Ontario Universities' Application Centre (OUAC) by the response deadline indicated on the offer letter; OR
2. Attendance at a post-secondary institution prior to beginning studies at McMaster; OR
3. An offer of admission to the university was secured through fraudulent means. **Please note the University's statements regarding application fraud at the end of the Admission section of this calendar.**

DEFERRAL OF ADMISSION

McMaster does not normally grant a deferral of an offer of admission unless special extenuating circumstances exist. Each case is evaluated on its own merits.

All requests for deferral of both admission and scholarship are to be submitted by September 1 of the application year, outlining the reasons for the request. Deferrals will be considered only after the applicant has accepted the offer of admission and all conditions outlined in the offer of admission letter have been met. If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period. For additional information, please refer to: https://registrar.mcmaster.ca/events/admission-deferrals/

SUBJECT REQUIREMENTS FOR SPECIFIC LEVEL I PROGRAMS

McMaster University offers the following Level I programs:

Arts & Science I, Automation Systems Engineering Technology 1 (B.Tech.), Automotive and Vehicle Engineering Technology I (B.Tech.), Biotechnology I (B.Tech.), Business I, Chemical & Physical Sciences Gateway, Computer Science I (regular and co-op), Economics I, Engineering I (regular and co-op), Environmental and Earth Sciences Gateway, Honours Health and Society I, Honours Health Sciences, Humanities I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Arts I, Integrated Biomedical Engineering & Health Sciences I (regular and co-op), Integrated Business & Humanities I, Life Sciences Gateway, Mathematics and Statistics Gateway, Medical Radiation Sciences (Level I), Midwifery I, Nursing I, Social Sciences I, and Leadership & Civic Studies I.

ARTS & SCIENCE I

Admission to Arts & Science I is by selection. Applicants must complete a **mandatory supplementary application** which must be submitted at (https://artsci.mcmaster.ca/prospective-students/supplementary-application/) by the deadline as specified each year. See *Application and Documentation Deadlines* for specific deadline dates. A minimum overall average of 88% is required for application consideration.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U or Calculus and Vectors U (Calculus and Vectors U is strongly recommended)
3. Completion of four additional U or M courses, to total six courses, of which two must be at the U level

AUTOMATION SYSTEMS ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), AUTOMOTIVE AND VEHICLE ENGINEERING TECHNOLOGY I CO-OP (B.TECH.), BIOTECHNOLOGY I CO-OP (B.TECH.)

Admission to Automation Systems Engineering Technology I, Automotive and Vehicle Engineering Technology I, and Biotechnology is by selection. A minimum average range in the low 80s is required for application consideration. Applicants must complete a **mandatory on-line assessment** by the deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Chemistry U
4. Physics U
5. Completion of two additional U or M courses to total six courses

BUSINESS I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

Applicants to Business I may elect to complete an optional supplemental form prior to February 3 to provide the program with more information about themselves.

CHEMICAL & PHYSICAL SCIENCES GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U

3. Calculus and Vectors U
4. Chemistry U
5. Physics U
6. Completion of one additional U or M courses to total six courses

COMPUTER SCIENCE I, COMPUTER SCIENCE I CO-OP

Admission to Computer Science I (regular and co-op) is by selection. A minimum average range in the low 90s is required for application consideration. Applicants must complete a **mandatory on-line assessment** by the deadline as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Two of: Biology U, Chemistry U, Physics U, Earth and Space U, Computer and Information Science M (or Computer Science U), or Computer Engineering M (or Computer Engineering Technology M)
4. Completion of two additional U or M courses to total six courses

ECONOMICS I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

This Level I program is being phased out and will be last offered for Fall 2025 entry. It wil be replaced by Honours Economics I.

ENGINEERING I, ENGINEERING I CO-OP

Admission to Engineering 1 (regular and co-op) is by selection. A minimum average range in the high 80s is required for application consideration. Applicants must complete a **mandatory on-line assessment** by the deadline as specified each year. See *Application and Documentation Deadlines,* for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Chemistry U
4. Physics U
5. Completion of two additional U or M courses to total six courses

ENVIRONMENTAL AND EARTH SCIENCES GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U or Calculus and Vectors U
3. One of Biology U, Chemistry U
4. One of Advanced Functions U, Biology U, Calculus and Vectors U, Chemistry U, Physics U
5. Completion of two additional U or M courses to total six courses

HONOURS ECONOMICS I (Effective September 2026)

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

HONOURS HEALTH AND SOCIETY I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses to total six courses

HONOURS HEALTH SCIENCES I

Applicants will be selected based on both their academic qualifications and their scores on the **mandatory on-line Supplementary Application (due early February); details at https://hhsp.healthsci.mcmaster.ca/future-students/supplementary-application/.** A minimum overall average of 90% or higher is required for consideration. The Supplementary Application is a very important component of the admission process. Applicants who do not complete the Supplementary Application will not be considered for admission.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U, Calculus and Vectors U, or Mathematics of Data Management U
3. Biology U
4. Chemistry U
5. One U or M non-math; non-science; non-technology course (**Note:** courses in technological education, science or mathematics are not acceptable)
6. Completion of one additional U or M course in any subject area to total six courses

HUMANITIES I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses to total six courses

The Faculty of Humanities strongly recommends at least one Grade 12 U or M course from Humanities subjects (Art, Drama, English, French, Français, other languages, History and Music). **Note:** In addition to Requirement 1 above, Biology U is strongly recommended for students planning to enter the Cognitive Science of Language program or the Bachelor of Health Sciences (Honours) Integrated Rehabilitation and Humanities Program.

INTEGRATED ARTS I (iArts)

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of additional U or M courses to total six courses

iArts is a direct-entry Level I program leading to a Bachelor of Fine Arts (BFA) degree. Admission to this program is by selection and requires a **mandatory creative submission** to the School of the Arts. https://sota.humanities.mcmaster.ca/undergraduate-programs/iarts/apply-now/

For questions, please contact sota@mcmaster.ca.

HONOURS INTEGRATED SCIENCE (Level I)

Candidates are required to complete a mandatory **Supplementary Application Form** which must be submitted electronically at **http://science.mcmaster.ca/sis/undergraduate/isci/isci-admission-requirements.html#admission-review-process**. The information provided in the supplementary application is considered during the selection process. Only applicants with high academic standing will be selected. Successful candidates must present a minimum average in the high 80's.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Two of Biology U, Chemistry U, Physics U
5. Completion of one additional U or M course to total six courses

INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I / INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I CO-OP

Admission to Integrated Biomedical Engineering and Health Sciences 1 (regular and co-op) is by selection. A minimum average of 90% or higher is required for application consideration. Applicants must complete a **mandatory on-line assessment** as specified each year. See *Application and Documentation Deadlines*, for specific deadline dates.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Biology U
4. Chemistry U
5. Physics U
6. Completion of one additional U or M course to total six courses

INTEGRATED BUSINESS AND HUMANITIES I

Admission to Integrated Business and Humanities 1 is by selection. A minimum overall average of 88% or higher is required for application consideration. Applicants must complete a **mandatory on-line assessment** by February 3 each year. See *Application and Documenation Deadlines*, for specific deadline dates.

The following are the Minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Completion of four additional U and M courses to total six courses.

HONOURS KINESIOLOGY (Level I)

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Calculus and Vectors U
3. Biology U
4. Completion of three additional Grade 12 U or M courses to total six courses. Introductory Kinesiology U is strongly recommended.

LEADERSHIP & CIVIC STUDIES I

Admission to Leadership and Civic Studies I offered by Wilson College of Leadership and Civic Engagement is by selection. A minimum average in the mid-80s or higher is required for application considerations. Applicants must complete a **mandatory supplemental application** as specified each year. See *Application and Documentation Deadlines* for specific dates.

The following are minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses, to a total of six (6) courses

LIFE SCIENCES GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U or Calculus and Vectors U
3. Biology U
4. One of Advanced Functions U, Calculus and Vectors U, Chemistry U or Physics U
5. Completion of two additional U or M courses to total six courses

MATHEMATICS AND STATISTICS GATEWAY

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Completion of three additional U or M courses to total six courses

HONOURS MEDICAL RADIATION SCIENCES (Level I)

Students considering the Medical Radiation Sciences I program should refer to the *Regulations for License to Practice and Functional Demands* in the Medical Radiation Sciences program in the *Faculty of Science* section of this calendar.

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Advanced Functions U
3. Calculus and Vectors U
4. Biology U
5. Chemistry U
6. Completion of one additional U or M course to total six courses

MIDWIFERY I

Space in the Midwifery program is very limited and the admission process is highly competitive. Admission to the Midwifery Education Program is by selection. **Application to the Midwifery program must be completed by January 15**. In recent years an average range in the mid to high 80's has been required to move forward to the admissions interview stage. Interviews are by-invitation only.

Applicants Directly from Ontario Secondary Schools

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Biology U
3. Chemistry U
4. Completion of additional U or M courses to total six courses

Students must obtain a minimum grade of 85% in each of the three required courses listed in points 1, 2, and 3 above AND a minimum overall average of 85% on grade 12 U or M courses including the required courses.

Current (Ontario) secondary students may apply if one or more of the three (3) mandatory prerequisite courses are in progress at the time of application; however, the grade 11 prerequisite(s) in the same subjects must be completed at the time of application so that a preliminary assessment of the subject area(s) can be made. Admission is based on in-progress secondary school subjects for current secondary students only if the grade 11 prerequisite in that subject has been completed with a minimum grade of at least 85%.

Applicants with Prior College Diploma Studies

Applicants from a Pre-Health Sciences Pathway to Advanced Diplomas and Degrees

Applicants who have successfully completed a Pre-Health Sciences Pathway certificate or are registered in the program with a minimum average of 85% will be considered for admission. Applicants who are currently registered and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the pre-health program need the following minimum requirements:

i. Program equivalent of Biology - 85% minimum
ii. Program equivalent of Chemistry - 85% minimum
iii. Program equivalent of English - 85% minimum
iv. Overall average 85%

Applicants from a Registered Practical Nursing (RPN) Program

Applicants who have a diploma in practical nursing from an Ontario College or equivalent with a minimum overall average of 85% or higher will be considered for admission. Applicants who are currently registered in a practical nursing program and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the RPN program need the following minimum requirements:

i. Program equivalent of Biology - 85% minimum
ii. Program equivalent of Chemistry - 85% minimum
iii. Program equivalent of English - 85% minimum
iv. Overall average 85%

Applicant from other College Programs

Any other college applicants need the following minimum requirements.

· College courses in the required subject areas of:

i. Biology - two semesters or 6 units
ii. Science - two semesters or 6 units of Biology, Biochemistry, Chemistry, Kinesiology, or Physics (a total of 12 units of Biology will be acceptable)
iii. English - two semesters or 6 units
iv. Overall average of 85%.

· Minimum of 85% in each of the required courses.

The offer of admission will be withdrawn if the applicant does not complete the minimum requirements by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria. Overall average from most recent 42 units of college coursework must be a minimum of 85%.

Applicants with Prior/Current University Studies

The following are the minimum course and grade requirements for applicants who are currently attending or have attended university in the past:
Prerequisite Requirements

- Grade 12 U courses from Ontario high school, equivalent out-of-province high school or CEGEP curricula, or 6 units (1.00 credit) from university courses in the following three (3) required subject areas of:
- Biology - 3 units
- Science (Biology, Biochemistry, Chemistry, Kinesiology, or Physics) - an additional 3 units (a total of 6 units of Biology will be acceptable)
- English - 3 units
- Minimum of 75% in each of the three required courses
- Overall average from most recent 42 units or 14.00 credits of undergraduate coursework must be a minimum of 75%

All prerequisites must be complete at the time of application. If an applicant has obtained less than 18 units of university credit and has been out of high school or college for more than two years at the time of application, it is required that the applicant complete at least 18 units of university to be eligible for consideration.

Identity and Admission Survey

All applicants to Midwifery must complete a mandatory Identity and Admission Survey as part of the application to the Midwifery Education Program. The survey must be completed and submitted along with the other requirements and documents by the February 1 deadline.

MUSIC I

Admission to the Music I program is temporarily suspended as of September 2024. Prospective applicants with an interest in pursuing a degree in Music are encouraged to apply to Humanities I. Interested applicants can take relevant courses within this program to work towards obtaining a Bachelor of Arts in Music or Combined Honours Bachelor of Arts in Music and another subject.
Currently on pause:
The academic requirements are the same as for Humanities I. In addition, applicants to Music I or to the B.A. in Music must successfully complete a **music audition/examination** consisting of:

1. Demonstration of technique (a level equivalent to at least honours standing in Grade 8 of the Royal Conservatory of Music)
2. Performance (approximately 20 minutes' duration) of two or three varied pieces of your choice (approximately Grade 8 honours level), including at least one from the past 100 years
3. Ear test appropriate to the Grade 8 performance level
4. Written examination on rudiments of theory (Grade 2 level)
5. Interview

For comprehensive details, visit https://www.humanities.mcmaster.ca/programs-and-courses/undergraduate-programs/.
Auditions take place between February and April. Audition arrangements are to be made with the School of the Arts at **sota@mcmaster.ca.**

NURSING I

NURSING CONSORTIUM (MOHAWK)

All applicants for the two sites apply to the OUAC (Ontario Universities' Application Centre), selecting McMaster University BScN and the specific site(s) of interest.

Students interested in a McMaster (B.Sc.N.) Nursing degree have **two location options: McMaster University or Mohawk College**. Each of the two sites offers the four-year program which uses the problem-based learning and small group educational model. For more information about the Mohawk site refer to the B.Sc.N. (A) Stream in the School of Nursing, *Faculty of Health Sciences* portion of the Calendar. For full application instructions see the *School of Nursing* and *Application Procedures* sections as well as https://nursing.mcmaster.ca/programs/undergraduate.
Admission to Nursing 1 at all sites is by selection. A minimum overall average of 85% or higher is normally required for application consideration. Additionally, all applicants to the B.Sc.N. Program are required to complete a mandatory, online computer-based assessment called Casper, as a component of the selection process, on the dates specified each year (October-February) on https://acuityinsights.app/.
Note: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. One of Advanced Functions U, Calculus and Vectors U, or Mathematics of Data Management U
3. Biology U
4. Chemistry U
5. Completion of two additional U or M courses to total six courses

Health requirements for admission to Nursing 1: During the registration process, you must file with the University information pertaining to your state of health and immunization is required. Detailed instructions will be provided after acceptance into the program.
Students considering the Nursing 1 program should refer to the document *Requisite Skills and Abilities for Nursing Practice in Ontario* at the College of Nurses of Ontario www.cno.org.
The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses to total six courses

Advanced Functions U and Calculus and Vectors U are strongly recommended for students planning to enter programs in Economics or Psychology, Neuroscience and Behaviour. Biology U is recommended for students planning to enter a program in Psychology, Neuroscience and Behaviour.

SOCIAL SCIENCES I

The following are the minimum Grade 12 U and M requirements:

1. English U
2. Completion of five additional U or M courses to total six courses

Advanced Functions U and Calculus and Vectors U are strongly recommended for students planning to enter programs in Economics or Psychology, Neuroscience and Behaviour. Biology U is recommended for students planning to enter a program in Psychology, Neuroscience and Behaviour.

B. Other Canadian Provinces and Territories

SUBJECT REQUIREMENTS FOR LEVEL I PROGRAMS

In addition to the minimum requirements below, satisfactory completion of the specified subject requirements for the program is also required. Please refer to **http://future.mcmaster.ca** for more details.
Averages used to determine eligibility for admission and residence are calculated to two decimal points based on the minimum provincial requirements, including the prerequisite courses for the program.

CONDITIONAL ADMISSION

Applications are reviewed for conditional admission as soon as all required documents, with sufficient course and grade data, are received by the Office of the Registrar, Admissions. All Canadian applicants should **upload interim/midyear/in-progress school grade reports** showing **marks for all courses taken during the Grade 11 and 12 years as well as all course registrations for the current academic year**, as soon as available. The terms and conditions of the offer of admission are stated clearly on the offer letter. The Provincial Ministry final transcript confirming final grades and graduation status will be required at the end of the school year. **Students from all other provinces where transcripts are issued by their high schools should have their schools forward the appropriate final transcripts confirming graduation directly to the Admissions Office.**
Applicants are required to meet the following minimum requirements including the specified subject requirements (not listed below) for their chosen program. For a complete listing of our specific course requirements by province and Level

l program you may refer to our web site: https://future.mcmaster.ca/.

ALBERTA, NORTHWEST TERRITORIES AND NUNAVUT

Grade 12 high school diploma with five acceptable academic courses numbered 30 or 31, including English Language Arts 30-1.

BRITISH COLUMBIA AND YUKON

Grade 12 high school diploma with five acceptable Grade 12 academic courses (or equivalent), including one of English Studies 12, English 12, or English 12 First Peoples.

MANITOBA

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 40S, including one of English 40S.

NEW BRUNSWICK

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 120, 121, or 122, including one of English 121, English 122, or English as a Second Language 22411.

NEWFOUNDLAND AND LABRADOR

Grade 12 high school diploma with eleven acceptable Grade 12 academic credits at the 3000 level, including English 3201.

NOVA SCOTIA

Grade 12 high school diploma with five acceptable Grade 12 academic or advanced courses, including English 12.

PRINCE EDWARD ISLAND

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 611 or 621, including English 611 or 621.

QUÉBEC

Grade 12 Diploma with six acceptable Grade 12 academic courses in the 600 series, including English.

OR

Year I CEGEP with twelve appropriate academic courses, including two English/ Anglais 603 or two English 604 courses. Students completing Year II or III CEGEP who will or have achieved the DEC may be considered for advanced credit in their chosen program. The *côte de rendement* (R Score) is used for admission consideration.

SASKATCHEWAN

Grade 12 high school diploma with five acceptable Grade 12 academic courses numbered 30, including both English A30 and B30.

C. International Baccalaureate Diploma

Applicants who have completed or will be completing the International Baccalaureate Diploma will be considered for admission to Level I, provided the completed diploma program includes the subject requirements of the program desired. Advanced credit of up to 18 units of study may be considered for Higher Level (HL) courses based on the achievement of final IB Diploma grades of 5 or greater.

For more information please refer to https://future.mcmaster.ca/.

D. Visiting Student Researcher

Visiting Students are individuals who are currently registered in an undergraduate degree program at another university, and who have made arrangements through their home university and an undergraduate program at McMaster, or with an individual researcher to spend time at McMaster as part of their degree program. While they are visiting students, they will not be enrolled in a degree program at McMaster. They are not part of any official exchange agreement although there may be an agreement between the McMaster program and their home institution.

Applicants must have permission from both the potential supervisor at McMaster and from their home institution. The McMaster faculty member must submit a form (available online through the Office of International Affairs, the International and Exchange Student Experience Office or the Office of the Registrar). Department Chair approval is required. Once this is complete, students will apply through the admissions team in the Office of the Registrar.

E. Advanced Placement (AP) Courses/ Examinations

Applicants who have completed AP courses will be considered for admission to a Level I program. Applicants who have completed A.P. exams through the College Board in acceptable courses and achieve a minimum grade of 4 may be considered for up to 18 units of advanced credit upon request, after acceptance of the offer and receipt of official results. For all students who have completed AP examinations through the College Board, an official copy of the final *Advanced Placement Examination Results Report* from the College Board is required as part of the admission and advanced credit evaluation process. For more information, please refer to https://future.mcmaster.ca/.

F. Other International Secondary School Qualifications

Admission requirements for applicants from the more common international educational systems are noted below. For all other education systems, please visit our website country-specific requirements. Required subjects are the same as required for Ontario and other Canadian students: https://future.mcmaster.ca/.

Applicants must upload high school transcripts as part of the application process. The equivalent of first-class standing will be required for admission consideration. Documents in a language other than English should be accompanied by notarized English translations. Applicants are considered for admission on an individual basis, and you will not be allowed to attend the University until all conditions specified in the admission offer have been fulfilled.

McMaster University may require students presenting admission documents from schools outside of North America, to have those documents authenticated via WES Canada https://www.wes.org/ca/. This requirement, if applicable, will be specified in the official Offer of Admission letter.

AMERICAN HIGH SCHOOL CURRICULUM

American Curriculum High School applications are reviewed for admission based on McMaster's own calculation of the admission average. McMaster's calculations may vary from those used at other institutions.

Applicants from an American high school curriculum must satisfactorily complete a secondary school diploma with a minimum overall average of at least 80% in a Grade 12 academic program from an accredited American high school/International American Curriculum high school AND must present all prerequisite courses for their chosen program(s).

Admission is competitive and many programs will require grades/averages well above the minimum 80% for admission consideration. For complete requirements for American Curriculum applicants, please visit our website: https://future.mcmaster.ca/.

GENERAL REQUIREMENTS

High school diploma from an accredited school with prerequisite subjects including English completed at the AP or Senior Grade 12 academic level. Students may be required to satisfy our English language proficiency requirements: https://future.mcmaster.ca/english-proficiency/.

McMaster will consider a minimum of five Senior Grade 12 academic courses including all prerequisite subjects for the applicant's selected program(s).

Students applying to programs in Engineering, Science, Health Sciences, Economics and Business programming that have mandatory Science and/or Mathematics prerequisites should note the following requirements for each subject:

- **Biology** - 2 years/ 2 full credits (Junior and Senior), AP Biology, or equivalent.
- **Physics** - 2 years/2 full credits (Junior and Senior), AP Physics, or equivalent.
- **Chemistry** - 2 years/ 2 full credits (Junior and Senior), AP Chemistry, or equivalent.

- **Calculus** - 4 years of high school Mathematics including Pre-Calculus and AP Calculus or equivalent.

Results of an equivalent **AP challenge examination** will be accepted in lieu of ONE of the science/math prerequisites. A minimum score of 4 or 5 is required for AP challenge exams.

Upon request, students presenting AP courses to fulfill program requirements (or requisites) may be required to present official AP Examinations results with minimum results of '3' via the College Board to finalize their admission.

For claimed course equivalencies, detailed syllabi including all topics covered, total hours and textbooks used are required for our evaluation and should be submitted alongside official high school transcripts/reports.

SAT/ACT results (if submitted), will be considered if they benefit the student and strengthen their application. Students who do not submit a score will not be penalized. The institutional code for SAT/AP is 0936. The institutional code for ACT is 5326.

For SAT/ACT admission requirements, please visit https://future.mcmaster.ca/ for updated information as it becomes available.

- Detailed school profile including grading scale may be requested.
- 2nd quartile results can be used for consideration for a conditional offer of admission provided at least 2 of the 5 required courses have been completed with grades presented.
- Grade 9, 10, 11 and Grade 12 2nd quartile results are required for an admission review.
- SAT results must be sent directly from the College Board.

GENERAL CERTIFICATE OF EDUCATION (G.C.E.)

Applicants presenting the General Certificate of Education (British Patterned Education) require a minimum of five G.C.E. subjects, **at least** three of which must be at the Advanced A2 Level with the balance of the subjects at the IGCSE/GSCE (Ordinary Level). Advanced Level subjects must be appropriate to your chosen program.

For program specific requirements please refer to https://future.mcmaster.ca/.

OTHER COUNTRIES OR EDUCATIONAL SYSTEMS

For admission requirements from other education systems, please visit https://future.mcmaster.ca/ to view our country-specific Admissions Requirements.

G. Home Schooled Applicants

Home schooled applicants who in addition to their home schooling experience have completed six Grade 12 U and M courses at an Ontario Ministry of Education inspected and approved school, or equivalent courses from another recognized academic jurisdiction may be considered for their program of choice providing they present the appropriate prerequisite courses and required admission average on official transcripts from accredited schools. McMaster University is the sole arbiter of what is considered as equivalent level education and equivalent courses.

All other home schooled applicants may apply for admission consideration to Humanities I or Social Sciences I by presenting the following:

1. List of home school credentials including but not limited to structured curriculum completed through ACE (Accelerated Christian Education Program) or other such programs.
2. Portfolio of written work; normally, evidence of appropriate intellectual maturity.
3. Results of standardized tests such as SAT, ACT.

Applicants must also present results from the Critical Reading and Mathematics components of **SAT I** with a minimum combined score of 1200 (minimum 580 Critical Reading, 520 Mathematics) OR a minimum combined score for the **Redesigned SAT** result of at least 1200 as a combined score with a minimum of 600 in each section OR from **ACT** with a minimum composite score of 27.

Interested applicants should contact the Office of the Registrar for further information regarding admission criteria.

H. Prior-Year Secondary School Graduates

Applicants who have previously completed a secondary school diploma and have not attended a post-secondary institution since graduation, may be considered for admission by presenting satisfactory standing in six required Grade 12 U and M courses (or equivalent) as identified in the *Subject Requirements For Specific Level I Programs* section in this calendar.

Having attended a post-secondary institution after high school graduation disqualifies applicants from being considered as an applicant from secondary school. See *Admission/Transfer From Post-Secondary Institutions* section in this calendar.

2. Admission/Transfer from Post-Secondary Institutions

A. From Universities

McMaster programs have enrollment limits and admission is by selection. Achievement of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.

Transfer applicants will normally receive credit for courses in which a grade of at least a C- (as per the McMaster grading scale) has been achieved. Assessment of courses for transfer credit is subject to the guidelines of the individual Faculties.

Transfer students must also satisfy the Residence Requirements set out in the General Academic Regulations section of this Calendar. **The University will not accord to you privileges which would not be granted by your own university.**

Grades obtained in courses taken at another university will not be included in McMaster's Grade Point Average, and, therefore, cannot be used to raise your standing.

If you have been required to withdraw from another university and have fulfilled your period of suspension, you may apply for admission. The Admissions Committee may request a letter of explanation and clarification concerning your past academic performance. You may also be asked to provide academic documentation for proof of further academic achievement which is both current and relevant. For full transfer information see our website: https://future.mcmaster.ca/admission/transfer-student-information/.

B. From Colleges of Applied Arts and Technology

McMaster programs have enrollment limits and admission is by selection. Achievement of the minimum admission requirements does not guarantee admission. Admission will be considered on a case by case basis and is not guaranteed.

For information regarding the amount of available transfer credits when transferring from a College of Applied Arts and Technology and to view the minimum admission requirements, please visit https://future.mcmaster.ca/college-transfer-student/.

C. University Graduates Applying for a Second Bachelor's Degree

All programs have enrollment limits and admission is by selection. If you have a first non-Honours degree, you may apply to take an Honours second degree in the same subject area or a second degree in another discipline. Please note the following exceptions: B.Arts Sc.(Arts & Science), B.Com. (Bachelor of Commerce), B.Com. (Honours), Honours Health Sciences, B.Sc. (Honours) in Integrated Science (ISCI), Honours B.Sc. Kinesiology, Integrated Biomedical Engineering and Health Sciences, and Integrated Business and Humanities, and Social Psychology cannot be done as second degree programs. B.Arts Sc. (Honours) can only be completed as a second degree by students who have

completed a B.Arts Sc. at McMaster. The requirements are set out in the *General Academic Regulations* section of this Calendar.

If you wish to enter a Second Bachelor's Degree in a subject area from the Faculty of Science, please note that admission to all limited enrollment programs, with the exception of Medical Radiation Sciences I, may not be possible. Second Degree applicants to all Science programs, except Medical Radiation Sciences I, are not eligible for admission to any of the other first year Science programs. Second Degree applicants must have already completed all first year requirements for the second year program they wish to apply to, with the exception of Medical Radiation Sciences I. See *Limited enrollment Programs* in the *Faculty of Science* section of this Calendar for a list of programs. Please contact the Office of the Associate Dean of Science (Academic) for further information (see the *Application Procedures* section).

If you are a McMaster graduate or potential graduate, you may be able to use the *McMaster University Returning Student Application* (see the *Application Procedures* section).

D. Continuing Students

At McMaster, a *Continuing Student* is defined as a graduate from an undergraduate program, who wishes to take more undergraduate courses. To be eligible to take courses as a Continuing Student applicants will need to be completing or have completed an undergraduate university degree with a minimum GPA of a C average, with no failures in the final year of study, (or equivalent, in the case of a degree taken through part-time studies), and academic records which are satisfactory to the Department and the Office of the Associate Dean of the appropriate Faculty. *Please Note: not all courses are available to Continuing students and course prerequisites for selected courses must be met. Also note that admission as a Continuing student does not guarantee registration in courses of interest to the student.

MCMASTER GRADUATES

Graduates of a McMaster undergraduate degree program who wish to become a Continuing Student do not need to apply for admission. Graduates who have not attended courses for more than two years will need to contact the Office of the Registrar prior to attempting to enrol in courses.

GRADUATES FROM OTHER UNIVERSITIES

Continuing Students with a non-McMaster degree, must apply for admission through OUAC. In subsequent academic terms, students will only be required to enrol.

Acceptance as a Continuing Student carries no implications with respect to acceptance in the School of Graduate Studies. Those who plan to proceed to a graduate degree should apply directly to the specific program of interest.

E. From Six Nations Polytechnic

McMaster University, along with five other universities, partnered with Six Nations Polytechnic to offer university courses in the community of Six Nations. The courses offered are eligible for transfer credit at any of the universities within the consortium. For more information please contact the Indigenous Student Services at 905-525-9140, ext. 27459 or indigsc@mcmaster.ca.

F. From Post-Secondary Institutions with Religious Affiliation

Undergraduate general academic studies taken at colleges with religious affiliation that are member institutions of specific accredited associations will be considered for admission and transfer credit on a case by case basis. Applicants from a non-accredited postsecondary institution with religious affiliation will be considered for admission based on completion of a Grade 12 high school diploma.

3. Other Categories of Admission

A. Part-time Admission

Applicants interested in beginning studies on a part-time basis should review the requirements and information found in the following sections of this Calendar:

- Admission Requirements
- Application Procedures
- General Academic Regulations
- Sessional Dates
- Program descriptions found in the specific Faculty sections

Applicants must meet one of the admissions criteria outlined in the sections above. If applicants do not meet any of these criteria, they may qualify for *Mature Student Admission* as outlined under the heading *Mature Student Admission* below.

Detailed information can be found on our website: **http://future.mcmaster.ca/**.

B. Mature Students (Admission)

Applicants who do not qualify for admission under one of the above categories, may be assessed for eligibility as a mature student, provided the following criteria are presented:

1. The applicant has not attended secondary school or college on a full-time basis for at least two years.
2. The applicant has never attended university.

Applicants admitted as mature students will not be granted transfer credit. Programs in the Faculties of Humanities and Social Sciences have no specific course requirements for mature student admission. The following Level I programs have specific course requirements that mature applicants must present from secondary school:

- **Business I:** requires satisfactory completion of Grade 12 Calculus and Vectors U (or equivalent).
- **Chemical and Physical Sciences Gateway:** requires satisfactory standing in four Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Environmental and Earth Sciences Gateway:** requires satisfactory standing in three Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Life Sciences Gateway:** requires satisfactory standing in three Grade 12 U mathematics and science courses (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Mathematics and Statistics Gateway:** requires satisfactory standing in Grade 12 U Advanced Functions U and Calculus and Vectors U (or equivalent) as specified under the heading *Subject Requirements For Specific Level I Programs*.
- **Midwifery I does not offer mature admission directly to the program.** However, applicants interested in Midwifery may be admitted as a mature student to another program in order to complete a minimum of six university courses (18 units) in their program of admission before applying to the Midwifery Education Program.
- **Nursing I does not offer mature admission directly to the program.** However, applicants interested in Nursing may be admitted as a mature student to another program in order to complete university prerequisite courses for later consideration for admission to Nursing I. Presenting the minimum admission requirements does not guarantee an offer of admission. Contact the School of Nursing for more details.
- **Economics I:** requires satisfactory standing in Grade 12 U Advanced Functions U and Calculus and Vectors U (or equivalent) as specified

under the heading *Subject Requirements for Specific Level I Programs.*

The following programs do not admit under the category of Mature Students: Arts & Science I, Automation Systems Engineering Technology I (B.Tech.), Automotive and Vehicle Technology I (B.Tech.), Biotechnology I (B.Tech.), Computer Science I, Engineering I, Honours Health Sciences I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Biomedical Engineering and Health Sciences I, Integrated Business and Humanities I, Medical Radiation Sciences (Level I), Midwifery I, and Nursing I.

Mature students may register for up to 18 units of course work (normally Level I courses) during the Fall/Winter session with no more than nine units per term (three courses). Within the first 18 units, mature students will be limited to taking three units (one course) per term of the Spring/Summer session.

Upon completion of 18 units, academic performance is reviewed according to the general academic regulations of the university. (See Level I *Registration and Academic Standing Requirements under General Academic Regulations*).

C. Visiting Students (Letter of Permission - For Credit at Another University)

Students currently attending another university, may apply to take McMaster courses and receive credit at their home institution. Please note, not all courses are available for credit outside McMaster and all are subject to enrollment limits. Applicants must adhere to McMaster application deadlines. Applications are made through the Ontario Universities' Application Centre (OUAC). The **Letter of Permission and an official transcript are required.** Transcripts are reviewed to ensure prerequisites courses have been completed. **Approval of a Visiting Student application does not guarantee your enrollment in a course**.

Subsequent requests to take courses on a Letter of Permission do not require another application; however an updated Letter of Permission and updated official transcript must be sent to the Office of the Associate Dean of the Faculty offering the course at McMaster. If interested in registering in courses offered by more than one Faculty, approval from each Office of the Associate Dean must be obtained.

D. Graduates of McMaster Certificate/Diploma Programs

Applicants who have completed certificate or diploma programs from McMaster may be granted advanced credit up to maximum specified by Undergraduate Council. Faculties review the subject matter of both the certificate and degree programs. Credit granted will normally be applied against elective courses. For more information regarding advanced credit, please refer to the *Certificate and Diploma Programs* section of this Calendar.

E. Post-Degree Students

University graduates or persons with professional qualifications who wish to take one or more graduate courses but not proceed to an advanced degree, may apply to McMaster as a post-degree student. To enroll as a post-degree student, apply to the appropriate department(s) and have your admission and registration approved by the School of Graduate Studies for each session in which you wish to take courses. You will register and pay fees as a graduate student.

Acceptance as a post-degree student carries no implications with respect to admission to advanced degrees, and even if such admission is granted subsequently, credit toward the advanced degree will not normally be granted for the work previously taken.

F. Listeners

If uncertain about taking degree courses, registering as a listener in a degree course may be of interest. Listeners attend all classes, but do not complete any of the essays, tests or other formal requirements and do not receive a grade or credit. Some students have eased their way into degree study with this option, subsequently applying for admission and enrolling in further courses for credit. Please note not all courses are available to Listeners. Please see https://registrar.mcmaster.ca/fees/ for any applicable fees. For more information please contact the Office of the Registrar.

Written permission to attend must be obtained from the instructor delivering the course. An I.D. card cannot be issued until permission has been obtained.

G. Enrichment Program for Secondary School Students

Outstanding Grade 12 students who wish to enroll in a university-level course while completing Grade 12 U and M courses in their final year of study, may apply for the Enrichment Program. For more information contact the Office of the Registrar https://future.mcmaster.ca/contact-us/.

H. Former McMaster Degree Students (Returning Students)

READMISSION

Former McMaster students who voluntarily withdrew from an undergraduate program **more than five years ago** (and have not attended another university or completed a college diploma elsewhere) and wish to return to studies, must apply for Readmission. Students from the School of Nursing or the Physician Assistants program must apply for Readmission regardless of time elapsed following voluntary withdrawal.

Those enrolled (have a record of course enrolment) within the last five years and who left the university in good academic standing (and have not attended another university or completed a college diploma elsewhere), do not require an application for readmission. Students will be permitted to enrol in their previous program or another program for which they qualify. Students must contact the Office of the Registrar directly to request registration access prior to enrollment.

REINSTATEMENT

See the *General Academic Regulations* section in this Calendar.

SECOND MCMASTER DEGREE

See *University Graduates Applying for a Second Bachelor's Degree* in this section of the Calendar.

CONTINUING STUDIES

See *Continuing Students* in this section of the Calendar.

4. Transfer Credits

A. General Policy on the Transfer of University Course Credits

To facilitate program completion by undergraduate students seeking to transfer course credit from an accredited university to McMaster, the University has implemented the following principles:

1. Acceptance of transfer credits from accredited universities shall be based on the recognition that, while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. Insofar as possible, acceptance of transfer credit shall allow for the maximum recognition of previous learning experience in university-level courses;
2. Subject to degree, grade and program requirements, any course offered for credit by an accredited university shall be accepted for credit by McMaster when there is an essential equivalency in course content. However, no

course for which a grade of less than C- (60%) has been achieved will be considered.
3. Evaluation of all possible transfer credits available at the time of admission must be completed within one year of the date of admission to the University.

B. From Colleges of Applied Arts and Technology

Normally, well-qualified graduates of a three-year program where the college work is appropriate to the chosen university program, may receive up to 30 units of transfer credit. Graduates of two-year programs will be reviewed for transfer credit on a case-by-case basis.
Credit beyond this may be given on an individual basis where the college and university programs are in similar areas, and where the academic record warrants special consideration.
In the granting of credit, attention will be given to:
1. Performance in the college program;
2. The duration of the college program;
3. The program taken at the college and the program to which entry is sought;
4. The applicant's secondary school record.

Each case will be considered on its own merits for the program desired. Further information is available at https://registrar.mcmaster.ca/build-degree/college-transfer/. Requirements may be subject to change.

C. Advanced Credit

Subject to the discretion of the Faculty, advanced credit may be granted for a completed: International Baccalaureate (I.B.) Diploma, the Advanced Placement (A.P.) Program and the College Board examinations; or the General Certificate of Education (G.C.E.). Advanced credit may shorten the degree program length at McMaster.

D. Credit in Courses by Special Assessment (Challenge Examinations)

Applicants who have acquired knowledge at a different type of institution or in a manner that makes assessment of their qualifications difficult are permitted to seek degree credit through special assessment (Challenge for Credit). Challenge for credit is not intended to give credit for skills or knowledge gained through high school, college or previous university instruction. The special assessment may include one or more of the following: written examinations, papers, essays, submissions of a substantial body of work, portfolios, or laboratory tests. Credit can be granted only for those courses listed in the current McMaster calendar. Not all courses in all disciplines are available for challenge. Faculties and departments are free to determine which, if any, of their courses are open for special assessment. Challenges are assessed on a pass/fail basis. The passing grade for a challenge appears on the transcript as COM (Complete) and is not used in computing averages or evaluating honours or scholarship standing, but is counted as a course attempt. Unsuccessful attempts will be noted on the transcript as a grade of F/below 50%. Special Assessment is not available for a course taken previously and a course may be attempted only once by special assessment. Once you have registered for a course by such means (known as challenge exams) the registration may not be cancelled and you may not withdraw from the course.
Waivers of prerequisites only (ie. no degree credit) will be at the discretion of the department.

5. English Language Proficiency

Applicants asked to meet the English Language Proficiency requirement, must demonstrate English language proficiency by achieving the minimum requirements as specified by McMaster. The university reserves the right to require applicants with an English Language Proficiency score disparate from their English prerequisite subject grade to present further evidence of achievement. Acceptable tests of English Language Proficiency and minimum score requirements are specified on our web site https://future.mcmaster.ca/english-proficiency/. It is the applicant's responsibility to make all arrangements regarding the writing of the English Language Proficiency tests and to have the official score report submitted to the Office of the Registrar, Admissions in a timely manner.
At the discretion of the university, applicants may be exempt from this requirement if meeting one of the following requirements:
i. Attended, in full-time academic studies (non-ESL), an accredited Secondary School (High School) or Post-Secondary College in an English-speaking country for at least four years immediately prior to your anticipated start date at McMaster, **OR**
ii. Attended, full-time academic studies (non-ESL), at an accredited English medium Secondary School (High School) or Post-Secondary College for at least four years,* immediately prior to the anticipated start date at McMaster **OR**
iii. Attended full-time academic studies (non-ESL), at an accredited English medium University for at least one year, immediately prior to the anticipated start date at McMaster **OR**
iv. Resided in an English-speaking country for at least four years immediately prior to anticipated start date at McMaster.

*Please note that the Undergraduate MD program requires a minimum of three years of study at an English-medium university. More information about the admission requirements for Medicine at McMaster can be found at: https://mdprogram.mcmaster.ca/.

Statements for Application Fraud

If McMaster concludes based on reasonable grounds that the applicant has falsified any information presented to the University as part of his or her application, without limiting any other rights of McMaster available at law, McMaster reserves the right to revoke the offer and, subject to applicable law and University Policy, to terminate a student's registration.
Without limiting McMaster's General Statement on Collection of Personal Information and Protection of Privacy, please take note that McMaster University collects and retains personal information of applicants for admissions to McMaster University under the authority of The McMaster University Act, 1976. This information may be used for the administration of admissions and registration and, subject to McMaster University policies (as may be amended or revoked from time to time), McMaster may disclose any evidence of misrepresentation, fraud or falsification of admissions documentation to other educational institutions, to government agencies, to law-enforcement agencies and to other relevant third parties. The information you provide on any application for admissions will be protected and used in compliance with *Ontario's Freedom of Information and Protection of Privacy Act (RSO 1990)* and will be disclosed only in accordance with this Act. Questions regarding the collection and use of this information may be directed to the University Registrar, University Hall, Room 209, Student Records, Gilmour Hall, Room 108, or the University Secretary, Gilmour Hall, Room 210, McMaster University.

STEP Certificate

Summer Transition through English Prep (STEP) Certificate
Department of Linguistics and Languages (Faculty of Humanities)
Phone: (+1) 905.525.9140 Ext. 23718
Email: macstep@mcmaster.ca
Web: https://meld.humanities.mcmaster.ca/step/
The Summer Transition through English Prep (STEP) program is an intensive six-week academic English bridging program designed for English-Language Learners who wish to pursue their undergraduate studies at McMaster University and almost meet the university's language proficiency requirements. During the STEP program, students will develop the academic English skills

necessary for a successful transition in September, into their first-year undergraduate program.
Acceptance into the STEP program includes a conditional offer of admission from an undergraduate program. Following the successful completion of the STEP certificate, students move on to their undergraduate studies at McMaster University.
Please visit https://meld.humanities.mcmaster.ca/step/ for more information or email macstep@mcmaster.ca.

McMaster English Language Development Diploma (MELD)

Department of Linguistics and Languages (Faculty of Humanities)
Phone: (+1) 905.525.9140 Ext. 23718
Email: meld@mcmaster.ca
Web: https://meld.humanities.mcmaster.ca/diploma/
Students who meet the academic admission requirements for their choice of Level 1 program, but do not meet McMaster's English Language Proficiency requirement may be admitted to the MELD bridging program which has been developed for international students, providing them with a supportive environment in which they can succeed. The diploma is a two-term, full-time intensive bridging program in English language development, acculturation and engagement. Students accepted into MELD are given a conditional offer of admission to their program of choice, pending successful completion of the MELD diploma. Once the diploma in MELD has been successfully completed, the student may register in the program to which the student was given conditional admission and will have completed 6 units of degree credit courses in Linguistics that may be applied as electives to that program. In exceptional circumstances, MELD will consider transfers from other McMaster programs.
Please visit https://meld.humanities.mcmaster.ca/diploma/ for more information or email meld@mcmaster.ca.

Fall Term

(September - December)

- LINGUIST 1E03 (degree credit course)
- MELD 1M00 - Mentorship Lab 1
- MELD 1Q03 - Critical and Analytic Reading
- MELD 1QQ3 - Grammar, Structure and University Writing
- MELD 1R03 - Aural Communication and Academic Culture
- MELD 1RR3 - Oral Communication for Academic and Social Interactions

Winter Term

(January - April)

- LINGUIST 1EE3 - Introduction to English Linguistics II (degree credit course)
- MELD 1MM0 - Mentorship Lab 2
- MELD 1S03 - Critical Reading, Research and Academic Vocabulary
- MELD 1SS3 - Academic Writing, Reporting and Research 14
- MELD 1T03 - Cross-Cultural Perspectives on Language and Language Learning
- MELD 1TT3 - Oral Communication for Academic Discourse

McMaster English Readiness for Graduate Excellence Certificate

https://meld.humanities.mcmaster.ca/merge/
MERGE (the McMaster English Readiness for Graduate Excellence Certificate) is an intensive six-week summer certificate program for current or prospective graduate students from any institution who are looking to improve their English-language skills. The MERGE program offers over 200 hours of language training; 35 hours per week. Admission requirements include successful completion of an undergraduate degree and English language proficiency minimum requirements of **TOEFL iBT 90** or **IELTS 6.5** (with minimum category requirements). Target English proficiency upon program completion will be an **IELTS score of 7-7.5** or **Common European Framework Reference for Languages (CEFR) level C2.1**, in keeping with graduate English proficiency admission requirements.
The MERGE program goes beyond essential training in speaking, listening, reading, and writing. It has been designed to support the integration of these skills as applied to real world contexts students will encounter during graduate school and beyond. The MERGE certificate does not require current or conditional admission to a McMaster University graduate program and program completion does not guarantee admission to a graduate program of study in and of itself. As a stand-alone program, the MERGE certificate coursework cannot be utilized for advanced standing or credit towards degree studies.

CERTIFICATE REQUIREMENTS

Each of the program's six weeks will be divided into modules that will focus on a different set of skills. These modules will approach the development of these skills from the point of view of both cultural understanding and practical implementation, with an emphasis on teaching and practising the language skills needed to be successful in each domain. The six modules are:

- **Module 1 - General social interactions:** conventions and strategies for everyday social encounters students face
- **Module 2 - Academic feedback and critique:** the role of critique in academia along with tools for both giving and receiving feedback or peer review
- **Module 3 - Academic reasoning:** identifying, understanding, and summarizing arguments and evaluating supporting evidence in both reading and listening
- **Module 4 - Academic interactions:** navigating relationships with supervisors, teams, and other faculty in person, through email, at conferences, and in seminars
- **Module 5 - Career preparation:** best practices for CVs/resumes, job interviews, elevator pitches, and online brand building
- **Module 6 - Teaching:** principles of effective teaching including developing lessons, interacting with students, and grading

Application Procedures

HOW TO APPLY

1. Determine application deadline. (See *Application and Documentation Deadlines* in this section.)
2. Refer to the Admission Requirements and specific Faculty sections of this Calendar for further information.
3. Complete your application at https://www.ouac.on.ca/guide/undergrad-guide and submit your application as directed.
4. Submit all required documentation to McMaster. (See *Documents* in this section.)
5. Once an application has been received, McMaster's Office of the Registrar, Admissions will provide an acknowledgment of receipt of application plus further instructions/details about tracking the application.

1. Categories of Applicant Groups

All applicants apply to McMaster University using the application at the Ontario Universities Application Centre, https://www.ouac.on.ca/guide/undergrad-guide. The OUAC application will automatically put you in the right group of applicants. If you make changes to your application, your group may change. Program selection, admission requirements, and deadlines may vary, depending on whether you are placed in Group A or Group B.

A. Current Ontario High School Students

The 101 application should be used if ALL of the following requirements apply:

- You are taking courses during the day at an Ontario secondary school (this includes students returning for second semester and graduated students returning to upgrade one or more courses)
- You have not, at any point, been out of secondary school for more than seven consecutive months
- You will have received or expect to receive your Ontario Secondary School diploma (OSSD) with six 4U/M courses at the end of the current year
- **You have not attended a postsecondary institution (college/university/career college)**
- You are applying to the first year of an undergraduate degree program or diploma program at an Ontario university
- You are under 21 years of age.

B. All Other Canadian High School Students

You are currently attending secondary school outside of Ontario or have recently completed a secondary school diploma in any Canadian province or territory.

C. High School Students with International Qualifications

You are currently attending or have recently completed a secondary school program outside of Canada.

D. University/College Transfer/Continuing Students

You are registered in or have completed an undergraduate degree program at another university and wish to attend McMaster **OR** you are currently registered in or have attended or completed a college diploma program and wish to attend McMaster.

E. Nursing Consortium Programs

You are applying to McMaster's Nursing (B.Sc.N.) and programs at the Mohawk College site.

F. Previous McMaster Degree Students (Returning Students)

1. **Readmission:** If you are a former McMaster student with a record of course enrolment, who was in good standing and who voluntarily withdrew from an undergraduate program more than five years ago (providing you have not attended another university nor received a college diploma since last registered at McMaster). If you are a former Nursing or Physician Assistant student, you must apply for readmission regardless of the amount of time that has elapsed. Apply on-line at: **https://registrar.mcmaster.ca/build-degree/continuing-students-second-degree/#tab-20**
2. **McMaster Second Degree:** If you are a McMaster graduate or potential graduate at the end of your current academic term and wish to pursue a second undergraduate degree (providing you have not attended another university nor received a college diploma since last registered at McMaster).
   - Use the McMaster Returning Student Application to apply on-line at **https://registrar.mcmaster.ca/build-degree/continuing-students-second-degree/#tab-10**
3. **Reinstatement:** If you are a former McMaster student who was required to withdraw from studies at McMaster.
   - Complete the *Reinstatement Request Form* found online here: https://registrar.mcmaster.ca/build-degree/reinstatement/. Submit a Service Request in Mosaic and attach the completed form.
4. **Continuing Student:** If you are a McMaster graduate from an undergraduate program and wish to become a Continuing Student. You do not need to apply for admission. You will submit a Continuing Student Status Update form as a Service Request in your Mosaic Student Centre. Once this is approved you will be activated for the requested term and be able to enrol. You will be subject to any course prerequisites and seat availability. Access the necessary form online at: https://registrar.mcmaster.ca/build-degree/continuing-students-second-degree/#tab-00.

G. Visiting Students (Letter of Permission - For Credit at Another University)

If you are currently enrolled at another university and wish to attend McMaster to take courses on a Letter of Permission for credit at that university.

H. Part-Time Degree Studies at McMaster Only

If you wish to begin undergraduate studies on a part-time basis (enrolled in less than 18 units of study).

I. Post-Degree Studies

If you wish to register as a post-degree student (taking graduate courses but not proceeding to an advanced degree)

- Contact the Graduate Studies Office, Gilmour Hall, Room 212, McMaster University, Hamilton, Ontario, L8S 4L8 for information on how to apply to the appropriate academic department(s).

J. Medical Program

See the heading *Admission Policy for the Medical Program* in the *Faculty of Health Sciences* section of this Calendar.

2. Documents

A. Required Documents

- complete application includes: an application form, relevant transcripts and all other documentation stipulated in the *Admission Requirements* and specific Faculty sections of this Calendar. The Admission Office may request clarification and/or additional supporting documentation when applicable. Application requirements will be available for the applicant to view in their McMaster Applicant Portal. Upon applying, all applicants receive communication with instructions on how to access the McMaster Applicant Portal.

Transcripts of marks and/or certificates from all secondary and post-secondary institutions attended must be provided. When requested to provide an **official** transcript, an official signed and sealed transcript record of all academic achievement must be **issued and sent by an academic institution directly to McMaster University, Office of the Registrar, Admissions**.

If currently attending secondary school, contact a guidance counselor to request your current Grade Report showing all Grade 12 courses. If you previously attended secondary school in another province, you may need to request a transcript containing your secondary school marks from the Ministry or Department of Education in that province if it is not normally provided by your high school.

Where documentation from a school outside of Canada is in a language other than English, transcripts in the original language as well as notarized English translations are required.

For specific document submission requirements and processes/procedures, please review: https://future.mcmaster.ca/admission/documents/.

If McMaster concludes based on reasonable grounds that the applicant has falsified any information presented to the University as part of their application, without limiting any other rights of McMaster available at law, McMaster reserves the right to revoke the offer and, subject to applicable law and University Policy, to terminate a student's enrolment.

Without limiting McMaster's General Statement on Collection of Personal Information and Protection of Privacy, please take note that McMaster University collects and retains personal information of applicants for admissions to McMaster University under the authority of *The McMaster University Act, 1976*. This information may be used for the administration of admissions and registration and, subject to McMaster University policies (as may be amended or revoked from time to time), McMaster may disclose any evidence of misrepresentation, fraud or falsification of admissions documentation to other educational institutions, to government agencies, to law-enforcement agencies and to other relevant third parties. The information you provide on any application for admissions will be protected and used in compliance with Ontario's *Freedom of Information and Protection of Privacy Act (RSO 1990)* and will be disclosed only in accordance with this Act. If you have any questions about the collection and use of this information please contact the University Registrar, University Hall, Room 209, Student Records, Gilmour Hall, Room 108, or the University Secretary, Gilmour Hall, Room 210, McMaster University.

B. Retention of Documents

All documentation submitted in support of an application for admission **becomes the property of the University and will not be returned**. Documentation for those not accepted or for those who fail to enroll following acceptance, will be destroyed at the end of the admissions cycle. If an applicant reapplies, they must resubmit required documentation.

3. Application and Documentation Deadlines

McMaster University reserves the right, at its sole discretion, not to accept, process or adjudicate applications or amendments to applications to any program at any time. Meeting minimum application requirements does not guarantee admission to any program at McMaster University. **Application fees are non-refundable and you are advised to review admission requirements carefully before applying**, to determine your academic eligibility for admission consideration. Please see the *Admission Requirements* section of this calendar for general information. University transfer applicants should review Programs (by Degree) and Minors requirements section before applying.

McMaster University has several highly competitive by-selection programs requiring a mandatory supplementary application/assessment, and these programs have early application and supplementary submission deadlines, as specified in the chart below. Failure to apply on time or to submit the required supplementary application/assessment by the specified dates will automatically disqualify applicants for consideration to these specified programs. Submission of an application and/or amendments should be made well in advance of the deadlines listed below.

Fall and Winter Terms

The dates and deadlines listed below are for applications submitted for the 2025-2026 academic year. Please refer to http://future.mcmaster.ca for the date and deadline information for new applications.

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Arts & Science I	January 15	February 1, 11:59 (ET) Details at: https://artsci.mcmaster.ca/future-students/supplementary-application/
Actuarial & Financial Mathematics (Above Level 1) Regular and Co-op Programs	April 1	May 6 For information see: https://math.mcmaster.ca/undergraduate/useful-links/actuarial-and-financial-math-supplementary-application/
Automation Systems Engineering Technology I Co-op (B.Tech.), Automotive and Vehicle Engineering Technology I Co-op (B.Tech.), Biotechnology I Co-op (B.Tech.)	January 15	January 30, 12:00 noon (ET) Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/supplementary-application/
Bachelor of Technology Degree Completion (Above Level 1)	March 1 (May intake) July 1 (September intake) November 1 (January intake)	Must be completed by the application deadline. Details at: https://www.eng.mcmaster.ca/forms/bachelor-technologydegree-completion-program-supplementary-application-form

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Health Sciences (Above Level II) Biomedical Discovery & Commercialization Program	February 1	February 1 Supplementary application deadline - details at https://bdcprogram.mcmaster.ca/apply/bhsc-admission-requirements/
Computer Science I (Regular and Co-op)	January 15	January 30, 12:00 noon (ET) Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/supplementary-application/
Computer Science (Above Level 1) (Regular and Coop)	April 1	April 17 Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/futurestudents/supplementary-application
Engineering 1 (Regular and Co-op)	January 15	January 30, 12:00 noon (ET) Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/supplementary-application/
Engineering (Above Level 1) (Regular and Co-op) **Engineering & Management (Above Level 1) (Regular and Coop)** **Engineering & Society (Above Level 1) (Regular and Co-op)**	April 1	April 17 Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/supplementary-application/
Honours Health Sciences I	January 15	Early February Details at: https://hhsp.healthsci.mcmaster.ca/ OR https://hhsp.healthsci.mcmaster.ca/future-students/supplementary-application/
Honours Health Sciences Level II Transfer (Above Level I)	April 1	Early May Details at: https://hhsp.healthsci.mcmaster.ca/ OR https://hhsp.healthsci.mcmaster.ca/future-students/supplementary-application/
Honours Biology and Pharmacology Co-op (Above Level II)	February 1	Mandatory Letter of Intent specifying reasons for applying and applicant suitability for the program. Email biophrm@mcmaster.ca by February 1.

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Honours Integrated Science I	January 15	February 3 Details at: https://www.science.mcmaster.ca/sis/undergraduate/isci/isci-admission-requirements.html
Integrated Biomedical Engineering & Health Sciences I (Regular and Co-op)	January 15	January 30, 12:00 noon (ET) Online Kira© Assessment Details at: https://www.eng.mcmaster.ca/ibiomed/ibehs-1/
Integrated Business & Humanities	January 15	February 3 Online Kira© Assessment. For more information see: https://ug.degroote.mcmaster.ca/academic-programs/integrated-business-humanities/
Integrated Rehabilitation and Humanities Program (Above Level I)	April 1	April 30 at 11:59 pm (ET) For more information see: https://irh.healthsci.mcmaster.ca/future-students/
Justice, Political Philosophy & Law	April 1	April 30 For more information see: https://philos.humanities.mcmaster.ca/undergraduate-programs/justice-political-philosophy-and-law-program/
Leadership & Civic Studies I	January 15	You must complete a supplemental application. You can find information about the supplemental application on our website: https://wilsoncollege.mcmaster.ca/programs/
Midwifery	January 15	Note: You must complete all prerequisite requirements and submit all transcripts by February 1. High school applicants: If the Grade 12 prerequisite subjects will be in progress by February 1, the corresponding Grade 11 subjects with final grades must be included in your transcripts/grade data. You must complete the Identity and Admissions Survey found here https://midwiferyundergrad.mcmaster.ca/prospective-students/ by February 1.

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Nursing I: Secondary School Applicants	February 1	You must complete a Casper assessment on one of the dates listed on https://acuityinsights.app/. Note: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment.
Nursing I (university transfer applicants from programs other than Nursing and applicants from college pre-health programs (including submission of all official transcripts)	February 1	You must complete a Casper assessment on one of the dates listed on https://acuityinsights.app/. Note: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment.
Nursing: Transfer from another Nursing program to the McMaster site.	February 1	Students from other university Nursing programs should contact the McMaster Nursing program office at 9055259140, ext. 22232, for information about transfer options and application procedures. McMaster will not typically accept transfer applications from students already in a Nursing program elsewhere. In addition, you must have completed or already registered for any prerequisite subjects by February 1.

PROGRAM	APPLICATIONS	MANDATORY SUPPLEMENTARY APPLICATIONS
Nursing Basic-Accelerated Stream (above level I) (including submission of all official transcripts)	February 1	You must complete a Casper assessment on one of the dates listed on https://acuityinsights.app/. **Note**: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment. In addition, you must have completed or already registered for any prerequisite subjects by February 1.
Nursing Post-Diploma RPN Stream (Mohawk)	February 1	You must complete a Casper assessment on one of the dates listed on https://acuityinsights.app/. Note: Indigenous (First Nations, Inuit and Métis) applicants are encouraged to consider an application through the Facilitated Indigenous Admission Program (FIAP). Those who have been endorsed through FIAP will be exempt from completing the Casper assessment. In addition, you must have completed or already registered for any prerequisite subjects by February 1.
Physician Assistant (including submission of all official transcripts) **Note:** This program is not open to International Applicants. This program is open to Canadian citizens and present Permanent Residents of Canada only.	January 15	The supplementary application will be released by February 21 and must be completed by noon (ET) on February 27. https://physicianassistant.mcmaster.ca/
Social Work	January 15	February 1 You must complete a supplementary application. https://socialwork.socsci.mcmaster.ca/undergraduate-programs/

Application Deadlines for All Other McMaster Programs for Fall and Winter Terms

*__February 1__ - Applications from applicants with no postsecondary experience will be reviewed for admission pending space availability in the program. All supporting official documentation must be received by February 15. All applications received after February 1, or without all paperwork submitted by February 15, will be considered only if there is space available in the program.
April 1 - The final date to apply for admission and submit all required documentation for admission consideration is April 1. This final deadline applies to all international and domestic applicants.

	APPLICATION DEADLINE	SUPPORTING DOCUMENTATION DEADLINE
Ontario High School Applicants (Recommended)	January 15	April 1
Early Deadline* (see above)	February 1	February 15
Final Deadline Domestic Applicants	April 1	April 1
Final Deadline International Applicants	April 1	April 1
B.Tech. Degree Completion Program Only - January Entry May Entry September Entry	 November 15 March 31 July 1	 November 30 April 7 July 15

Spring/Summer Term

	DOMESTIC DEADLINE	INTERNATIONAL DEADLINE
May Entry (Term 1 or 3)	April 1	April 1
Supporting Documentation for May Entry	April 1	April 1
June Entry (Term 2)	May 15	May 15
Supporting Documentation for June Entry	May 15	May 15

Former McMaster Students: Re-admission / Re-instatement Deadlines for Fall and Winter Terms

	DOMESTIC DEADLINE	INTERNATIONAL DEADLINE
Re-instatement Deadline	September entry - June 30 May entry - April 1 June entry - May 15 Humanities September entry - July 15	September entry - June 30 May entry - April 1 June entry - May 15 Humanities September entry - July 15
Re-admission Deadline	July 15	July 15
Nursing Deadline	February 1	February 1
Physician Assistant	January 15	N/A

Academic Advising for Admitted Students

Applicants offered admission to a program at McMaster, will be asked to confirm acceptance of the offer. Admission offers will include information regarding acceptance procedures, a response deadline and registration procedures. Admission acceptance deadlines specified in the Offer of Admission letter are strictly enforced. Accepting the offer of admission well before the specified deadline date is recommended.
An Admission offer letter may recommend that a student meet with an Academic Advisor prior to enrolling in courses. For Level 1 students, although summer advising and registration sessions are not compulsory, it is recommended to participate.

4. Review of Admission and Re-Admission Decisions

No appeal procedure shall be available for decisions on admission or re-admission to the University. Such decisions may be reviewed within the following framework:

a. An applicant to the University believes the admission or re-admission decision, or, in the case of a transfer student the decision to grant credits, is incorrect, or based on incorrect or incomplete information, may, **within one week of receiving the decision,** request a review of that decision by writing to the Senior Associate Registrar, Undergraduate Admissions, stating why they think the decision should be reviewed.
b. The Senior Associate Registrar, Undergraduate Admissions, shall determine whether the information on which the decision was based was incomplete or incorrect and, if so, shall refer the request for review to the appropriate Faculty Committee. That Committee shall make a final decision and report it to the Senior Associate Registrar, Undergraduate Admissions, who shall then convey the decision in writing to the student.

Enquiries: Application Procedures

For information about applying to McMaster, visit: https://future.mcmaster.ca/apply/, or direct your enquiries to our online chat: https://future.mcmaster.ca/contact-us/

General Academic Regulations

This section outlines the general undergraduate academic regulations of the University. Students must read and comply with both these regulations and those set out by their Faculty elsewhere in this Undergraduate Calendar, as applicable. In the event of a conflict between the Faculty/Program Regulations and these General Academic Regulations, the program regulations take precedence.
Since the Academic Regulations are continually reviewed, the University reserves the right to change the regulations in this section of the Calendar. The University also reserves the right to cancel the academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. Faculties are authorized to use discretion in special situations by taking into account past practice, the spirit of the regulations, and extraordinary circumstances. Students who believe their situations warrant special consideration should consult the appropriate Faculty/Program Office.

Academic Commitments

Students should expect to have academic commitments for instructional activities (e.g., lectures, labs, tutorials, etc.) Monday through Saturday,

normally 8:30 a.m. to 10:30 p.m., but not on statutory holidays, as outlined in the Sessional Dates. Also, students may be required to write tests or examinations Monday through Sunday. Students are responsible for meeting all course requirements, including final examinations, as scheduled.

Academic Accommodations: Religious, Indigenous or Spiritual Observances

Students who require accommodations to meet religious, Indigenous or Spiritual Observances are expected to read the *Policy on Academic Accommodation for Religious, Indigenous and Spiritual Observances* ("RISO policy") and must make their requests within 10 working days from the beginning of the start of term to their Faculty/Program Office. (In the event of a conflict between the Policy and these General Academic Regulations, the Policy takes precedence.).

Academic Accommodations: Permanent Disability, Temporary Disability, and Retroactive Accommodation

Students seeking an accommodation related to a permanent or temporary disability, or a retroactive accommodation, are expected to read the *Academic Accommodation of Students with Disabilities* policy. (In the event of a conflict between the Policy and these General Academic Regulations, the Policy takes precedence.) Important excerpts from the current policy include:

- students are not to seek accommodation directly from their professors, instructors, and/or teaching assistants. Accommodation requests should be directed to Student Accessibility Services or the Faculty Office;
- students are not required to reveal their private medical information, such as the cause of the disability, diagnosis, symptoms or treatment (unless these clearly relate to the accommodation being sought) to register with Student Accessibility Services, or receive accommodations or supports;
- students may request interim accommodations for disabilities (this includes mental health disabilities) pending receipt of medical documentation;
- both Temporary and Permanent disabilities will be accommodated
- **Permanent Disability** is where a functional limitation will occur for more than one academic term or as defined by a regulated health professional.
- **Temporary Disability** may be a short-term injury or illness (such as mononucleosis, a broken limb or concussion) or an episodic condition (e.g. mental illness) where a functional limitation *generally* occurs within one academic term or less or as defined by a regulated health professional.
- requests for accommodation should be submitted in a prompt and timely manner. Requests made after a deadline has passed may be considered Retroactive Accommodations. A Retroactive Accommodation may be for either a Permanent or Temporary Disability when the request is made after the fact (e.g. after a course has been completed), as the result of the discovery or diagnosis of an existing disability of which the student was previously unaware.

Sessional Dates

Please visit the Sessional Dates page for important dates for this academic year.

Student Responsibilities

Academic

McMaster University provides many resources to help students achieve their academic goals, including the Undergraduate Calendar, program advisement reports and academic advisors.

Students must assume certain responsibilities. They include:

- meeting admission requirements and application deadlines for their intended program(s) of study
- selecting and completing courses in an order that meets requisite and program requirements
- becoming familiar with and respecting University Sessional Dates, the General Academic Regulations, their Faculty/Program-specific regulations, and the Regulations for Aid and Awards as found in the appropriate sections of this Calendar.

Students who do not follow these guidelines may experience academic consequences such as cancellation of course enrolment, completion of courses that are not counted toward their degree, or delayed graduation.

In addition to the responsibilities listed above, students are expected to:

- know and follow the Senate policies
- keep their student account in good standing, paying all charges on time
- be aware that changes to course load and program may affect eligibility for government and University aid and awards (e.g. OSAP, work programs, bursaries, scholarships, etc.)
- consult with Student Accessibility Services in a timely manner to make disability related accommodation requests under the *Academic Accommodation of Students with Disabilities* policy

Enrolment

Access to Undergraduate Courses

The University endeavours to enable students to enrol in required courses so that their program admission requirements, course requisites, and program progression can be achieved in a timely manner.

Enrolment capacities are set on all undergraduate courses taking into account enrolment projections along with resources and type of course (required or elective). Where students are selecting from a list of required courses, access to a specific course is not guaranteed when there is another course available to meet a specific degree requirement.

The University reserves the right to change a student's enrolment in classes should the need occur (e.g. low enrolment, urgent timetable changes, etc.).

Communication

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information
- use the university provided e-mail address or maintain a valid forwarding e-mail address
- regularly check the official University communications channels, including the Mosaic Student Centre. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca account
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca account

Due Date Restrictions

Academic assessments, due dates and evaluations are described in course outlines except where other University policies apply, e.g., Student Accessibility Services (SAS) accommodations, deferred exams, etc. When students are aware of their progress early in a course they can make informed decisions. Restrictions are placed on academic obligations to enable students to plan their work schedules.

1. Due dates for all term work must be on or before the final day of classes for courses with a final examination. For courses with no final examination, academic assessments can be due on or before the final date of examinations.
2. Academic obligations cannot be due during the December holiday break or the fall and winter mid-term recesses, with the exception of deferred exams scheduled by the Office of the Registrar.
3. The Test and Examination Ban period is the last 5 days of classes plus the day(s) between the end of classes and the beginning of examinations, and:

a. Tests, quizzes, exams and take-home exams worth more than 10% cannot be assigned or due during the last five days of classes plus the days(s) between the end of classes and the beginning of examinations.
b. Assignments worth more than 10% that are assigned at the beginning of the course and noted on the course outline, can be due during this time period, provided students are given sufficient additional detail to enable them to work on the assignment in advance of the due date.

Maximum Value of Academic Assessments

1. Student learning in undergraduate courses should be assessed on more than one occasion. To that end, no single academic obligation (e.g., essay, test, examination, etc.) should have a value of more than 75% of the final grade without approval from the Department Chair or Associate Dean's Office. Clinical, placement, thesis and capstone courses are exempt.
2. For students requiring relief from an academic obligation, it is at the discretion of the instructor to determine the nature of the relief. In cases such as this, students can be offered the choice of another assessment or the option of writing a final examination which may be worth more than 75% of the course grade.

Online Assessments

If students taking online assessments experience technical difficulties, the student must immediately report the difficulty. Reporting may take different forms dependent upon the online platform being used. Options to report difficulties may include emailing the appropriate contact (Instructor or designate as set by the Instructor); accessing a chat function (where available) within the online platform to document any difficulties.

Early Feedback

1. All students must receive feedback regarding their progress prior to the last day for withdrawing from courses without failure by default.
2. For Level 1 and Level 2 courses, this feedback must equal a minimum of 20% of the final grade.
3. For Level 3 courses and above, this feedback must equal a minimum of 10% of the final grade.
4. For courses where it is difficult to achieve a numeric grade due to the design of the course (e.g., supervised study, thesis, capstone, inquiry, independent research/study, experiential courses, etc.), clear and early feedback must be provided.
5. When academic obligations are completed by the due dates in the course outline, early feedback will be received by the last day for withdrawing from courses without failure by default. Students who use the MSAF process and other petitionable accommodations may not receive feedback by the early feedback deadline.

Residence Requirements

Most students complete all undergraduate work at McMaster University. However, students who complete work at other universities must meet the minimum requirements set out below.

To obtain any four- or five-level, first undergraduate degree:

- at least two levels (approximately 60 units of work) beyond Level 1, including the final level, must be completed at McMaster University.

To obtain a three-level, first undergraduate degree:

- the final level and at least one other level (a minimum of approximately 60 units of work) must be completed at McMaster University,

or,

- the final level (approximately 30 units of work) including at least 18 units of program- specific requirements must be completed at McMaster University.

Courses taken at another university on a *Letter of Permission* will not count toward the residence requirements.

All course work for a second bachelor's degree must be completed at McMaster University.

McMaster University's Notice of Collection, Use and Disclosure Statement

On June 10, 2006, Ontario universities became subject to the *Freedom of Information and Protection of Privacy Act (FIPPA).* As its name implies, the legislation has two distinct purposes and each of these carries with it a different set of requirements.

Under *Freedom of Information*, the public has the right of access to all of the recorded information which is in McMaster's custody and control (with some specific limitations). In order to facilitate this right of access, the University is required to prepare descriptions of the institution's records and personal information banks (PIBs). These directories, which must be published annually, are intended for use by the public to determine the information generally maintained by each institution.

The *University Secretary and Privacy Officer* is the appointed head of the institution for FIPPA purposes. While the Privacy Office (University Secretariat) has primary responsibility for the administration of FIPPA-related matters, a great deal of information is routinely available at McMaster without the need to submit a formal request. Formal Freedom of Information requests must be directed to the Privacy Office (University Secretariat), who will contact the appropriate university department. Information on making a formal request can be found on our webpage **Filing a Freedom of Information (FOI) request**.

McMaster University's Notice of Collection, Use and Disclosure Statement

The *Protection of Privacy* provisions of the Act regulate the collection, use, disclosure, security and retention of personal information in the University's custody and control. Many of the administrative requirements of this section of the legislation have been addressed previously with the introduction in 1995 of McMaster's Guidelines on Access to Information and Protection of Privacy, and the federal Personal Information Protection and Electronic Documents Act (2000), which as of January 2004 imposed similar requirements on those sectors of the University involved in commercial activity. The University has developed a **Notice of Collection, Use and Disclosure** statement, outlining the kind of personal information that is collected and the use that is made of such information. You may review each section of the Collection Notice below. For questions regarding this Notice of Collection, Use, and Disclosure Statement, please contact the Privacy Office (University Secretariat), 210

Gilmour Hall, privacy@mcmaster.ca, 905-525-9140 ext. 24337.

Introduction

1. McMaster University collects and retains the personal information of students, alumni and other parties, including but not limited to faculty, staff, visiting academics and private citizens using services provided by McMaster University under the legal authority of the *McMaster University Act,1976*.
2. The principal purpose for collecting personal information by the University is to execute the functions of the University and to administer the relationship between the University and its students, alumni, employees, clients, suppliers, partners and others.
3. The University uses and discloses personal information in ways consistent with this Statement unless otherwise informed at the time of collection. Questions about this collection should be directed to the Privacy Office (University Secretariat), 210 Gilmour Hall, privacy@mcmaster.ca905-525-9140 ext. 24337.

General Uses of Personal Information

4. All activities, programs and technologies that collect, use, retain and disclose personal information are assessed to protect individuals' privacy. To provide members of the University community with services and programs, the University may use your information for the following purposes:

a. recruitment, admission and registration, academic programs and evaluations, and graduation;
b. evaluation of academic and non-academic programs;
c. employment-related matters;
d. assistance to student associations, retiree associations and the University's Alumni Association;
e. financial assistance, awards and payment of fees;
f. alumni and development activities;
g. institutional planning and statistics;
h. centralization or sharing of service delivery among academic units, administrative services and programs;
i. reporting to government agencies, funding agencies and professional licensing bodies;
j. safety and security;
k. detection, monitoring and prevention of non-compliance with policies, regulations and procedures; and
l. promotion in print, electronic and internet publications.

Video Surveillance

5. Video surveillance cameras monitor areas of McMaster's campuses to promote public safety. Further information can be found in the *Closed Circuit Television Surveillance Policy* or by contacting Security Services. Surveillance recordings are retained for 30 calendar days unless related to an investigation.

Cookies and Remarketing Services

6. The University uses cookies for remarketing services (advertising based on visits to previous web pages) and analytics. No personal or identifying information is gathered or transmitted with this cookie. Individuals may opt out of cookies by changing their browser settings or using a browser plugin permanently.

Disclosure of Personal Information

7. The University shall not disclose Personal Information to external individuals or organizations unless:

a. otherwise provided by this Notice of Collection, Use and Disclosure of Personal Information Statement;
b. the individual is notified of such potential disclosure when the Personal Information is collected;
c. the individual has consented to the disclosure; or
d. permitted under applicable privacy legislation, including FIPPA, PHIPA, or the Health Protection and Promotion Act (HPPA).

Uses of Alumni/Student Personal Information: Information Collected for Public Purpose

8. The University considers the following information as information collected and maintained to create a record that is available to the public and that may be published in print or electronic format:

a. the names of graduates, the credentials conferred by the University and the date received. Educational history other than University-conferred credentials will be released only by Student consent (for example, forwarding transcripts or other official documentation to another institution on behalf of a student or graduate);
b. the recipient of excellence scholarships or other prizes or honours awarded by the University or a third party. The names, programs and other similar personal information of the recipients of honours, such as inclusion on a dean's list or receipt of a scholarship, are used by the University to create and maintain a public record; and
c. voluntary membership on teams representing the University or participation in events as a representative of the University is considered an agreement by the member or participant to the public disclosure of limited personal information, such as name, degree/program, and other team- or event-related information;
d. many scholarships, bursaries and prizes have specific additional collection and disclosure conditions. McMaster assumes that persons applying for scholarships, bursaries, and awards have agreed to the relevant conditions; and
e. publicly available personal information may be collected to update alumni records and recognize outstanding achievements or distinguished service by alumni in University and *McMaster University Alumni Association* (MAA) publications.

Information Shared Internally

9. To allow for core operations, including elections, the University may provide personal information of alumni and students to the *McMaster Students' Union (MSU), McMaster Graduate Students' Association (GSA), McMaster University Alumni Association (MAA)* and other similar organizations.
10. The University may also use the personal information of students and alumni to collect fees on behalf of these organizations. The University, on behalf of the MSU and GSA, discloses student personal information to insurers selected by the students' associations. These constituent student groups use personal information for membership, administration, elections, annual general meetings, health plans and other matters related to membership benefits only. Please contact the relevant Student Union or Association office if you have questions about this collection, use and disclosure of your personal information and their respective privacy policies.
11. The University and MAA share alumni personal information with affinity partners who may contact you about their services. You may opt out of receiving this information. Please see the MAA Privacy Policy for details.
12. To provide library services, the personal information of University library patrons is collected, used, and shared within the shared services library platform with participating collaborative futures University partners.

Information Shared with Third-Party Partners

13. Unless directed otherwise by the student, the University may disclose the contact information of graduating students to organizations providing convocation-related services, such as photography and degree framing.
14. Information regarding student participation in work-study placements, co-op training, or University-directed external training may be disclosed to the relevant third-party partners.
15. Any disclosure of Personal Information to a third-party partner must include the collection of express consent from the individuals for such disclosure to occur.

Use of Personal Information in the Classroom and By Instructors

16. The University collects students' names to operate virtual and physical classroom environments. By registering for courses, students recognize and agree that their names may be disclosed to other members of the student body during activities such as taking attendance, assigning topics, organizing students for group work, assessing classroom participation, facilitating classroom discussion, working in learning management systems (such as Avenue to Learn) and organizing tutorials. Students concerned about such disclosures should contact the course instructor directly to identify possible alternatives.
17. Some courses utilize services that help detect academic misconduct that requires a student's work to be submitted to a third party. Courses requiring such services will include this in the course outline. By registering for these courses, students acknowledge and accept that some of their personal information may be submitted to a third party and may be retained for future use.
18. The University may also retain materials submitted in courses for use and disclosure as samples for course design and evaluation. Course materials may also be retained until operational use ceases regarding petitions, cases of academic misconduct, or other similar uses (see *Academic Integrity Policy, Research Integrity Policy and Appeals Form A, Form B, and Form C).*

Administrative Uses of Personal Information

19. Social Insurance Numbers (SIN) are collected under the authority of the *Income Tax Act* when required.
20. Address, telephone, email and other information may be used to contact you by any department within the University, including our ancillary services and external agencies involved in collecting fees and fines owing to the University. This includes the collection of fines for parking-related infractions.
21. The University uses a range of third parties located in Canada and other countries to deliver services for students and employees on its behalf. Before entering into an agreement with a supplier, McMaster has a privacy and security impact assessment process available to identify risks and make recommendations to ensure personal information will be securely collected and stored and used only as needed.
22. The University may collect personal information from other relevant sources, including, without limitation, from the Ontario Universities' Application Centre (OUAC), secondary schools, colleges, universities and other institutions previously attended, including third-party services and test score providers where the items collected form a part of the application or admission process to a University program. Applicants may be contacted about admission opportunities other than those specifically identified by the applicant. They may also be contacted to guide the improvement of the University's services and offerings.
23. Personal information provided to the University and placed in a student record or personnel record will be protected and used in compliance with the *Freedom of Information and Protection of Privacy Act* (RSO 1990) and will be disclosed only in accordance with this Act. If you have any questions about the collection and use of student information, please contact the Office of the Registrar. If you have any questions about the collection and use of employee information, please contact Human Resources Services at hr.mcmaster@mcmaster.ca.
24. Registration records, educational history and supporting documents, including records of misconduct, may be used for the adjudication of admission, progression, and graduation with respect to various programs. Such information may be transmitted to other educational institutions and partners involved in the delivery of programs offered at, with, or through McMaster, including, but not limited to, entities engaged in the provision of joint degrees, cross-registration, practicums, exchanges, placements, co-op positions and service-learning opportunities. Personal information may be collected, used, and disclosed in petition or appeal processes and for disciplinary or security purposes.
25. Personal information is used to create class lists, grade submission lists and other materials needed for administrative purposes by employees of the University. Identity Cards and their photos may be used by the University and other contracted third parties for administrative purposes such as identity verification.
26. Personal information may be used or disclosed to determine eligibility for scholarships, bursaries and other forms of student aid and to promote the availability of such assistance.
27. Personal information may be used for institutional development, fundraising programs and initiatives. Forms may also be pre-populated with an individual's name and ID number to assist with tasks such as donating or registering for an event.

Use of Personal Information for Academic Research

28. Research involving personal information collection, use or disclosure will follow a review and approval process administered by the relevant University research administration office and the McMaster Research Ethics Board (MREB). The collection, use, or disclosure of this information will comply with University policies and provincial and federal regulatory requirements.

Statistics and Reporting

29. The University uses personal information to create various statistical and analytical reports that guide planning and administration. Personal information may also be transferred to external entities involved in research and statistical analysis of student experience and accomplishment to improve the quality and effectiveness of the University's programs, policies and practices.
30. Email and physical addresses of samples of the student body may be provided to organizations that collect student opinions regarding the quality of the educational environment offered by the University. Such research and analyses include the *National Survey of Student Engagement (NSSE)* and the *Canadian Graduate and Professional Student Survey (CGPSS).*
31. Personal information may be transferred to ministries and agencies of the Ontario Government and the Government of Canada as required by statute or regulation. This includes transfers to entities such as Statistics Canada, the Ministry of Colleges and Universities (MCU), and Immigration, Refugees, and Citizenship Canada.

32. As a *Designated Educational Institution*, the *Income Tax Act* requires the University to make reasonable efforts to obtain students' Social Insurance Numbers (SIN) and report these annually to the Canada Revenue Agency as part of the Tuition and Enrolment Certificate for each full-time and part-time student. In addition to SIN, the certificate includes enrolment information such as the number of months of full-time or part-time enrolment and tuition fees. A student's SIN may also be used to support the processing of financial aid or other administrative purposes, including processing payment for student employees.

Disclosure of Information to the Ministry of Colleges and Universities

33. The University must disclose personal information such as Ontario Education Numbers, student characteristics and educational outcomes to the Ministry of Colleges and Universities under s. 15 of the *Ministry of Training, Colleges and Universities Act, R.S.O. 1990, Chapter M.19*, as amended. The ministry collects this data for purposes such as planning, allocating and administering public funding to colleges, universities, and other postsecondary education and training institutions and to conduct research and analysis, including longitudinal studies and statistical activities conducted by or on behalf of the Ministry for purposes that relate to postsecondary education and training.
34. Any information collected by the University for self-identification as a member of a specific group (i.e., First Generation, First Nations, etc.) may be subject to disclosure to the MCU by McMaster and collected by the MCU pursuant to its statutory authority. Further information on how the MCU uses personal information is available on the ministry's website (https://www.ontario.ca/page/privacy-statement).
35. Information on how the Ministry of Colleges and Universities uses this personal information is available on the ministry's website or by writing to Director, Postsecondary Finance Branch, Postsecondary Education Division 7th Floor, Mowat Block, 900 Bay Street Toronto, Ontario, M7A 1L2.

Disclosure of Information to Statistics Canada

36. Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys yearly on a wide range of matters, including education.
37. The *Statistics Act* provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used for statistical purposes only, and the confidentiality provisions of the Federal Statistics Act prevent the information from being released in any way that would identify a student.
38. Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide information to Statistics Canada, including student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number), student demographic characteristics, enrolment information, previous education, and labour force activity.
39. Community members may contact Statistics Canada by email if they have any questions: statcan.PSIS-SIEP.statcan@canada.ca.

Individuals Residing in the European Union

40. For members of the University community who reside within the European Union (EU) or European Economic Area (EEU), the university acknowledges the rights granted to you under the *General Data Protection Regulation (GDPR)*. Please contact the Privacy Office (contact information provided above) if you have any questions or concerns about how your data is being collected, used, or disclosed.
41. The GDPR does not apply to the University processing information belonging to individuals residing outside of the EU. The University must legally comply with *Ontario's Freedom of Information and Protection of Privacy Act (FIPPA)*.

Record Retention

When individuals apply for admission to and enrolment in programs at McMaster they accept the University's right to collect pertinent personal information. This information is needed to assess qualifications for entry, establish records of performance in programs and courses, provide the basis for University aid and awards and governmental student aid programs, and to assist the University in the academic and financial administration of its affairs. All documentation submitted to the University in support of applications for admission, residence accommodation, University aid and awards, appeals and/or petitions becomes the property of the University.
All application documents are normally destroyed at the end of each admission cycle for applicants who are not accepted, or who do not enrol following acceptance. For applicants who become McMaster students, their application documents are normally destroyed five years after the last term of their enrolment at the University (regardless of whether or not they graduate). Supporting documentation relevant to government student aid programs (e.g., OSAP) is kept per the retention policies of the Federal and/or Provincial governments. Supporting documentation, relevant to the administration of online aid applications, as well as University aid and awards, will normally be destroyed after the petition for special consideration period, per the Regulations for Aid and Awards, has passed.
All information needed to produce official transcripts is maintained permanently.

Second Bachelor's Degree Programs

For admission to a second undergraduate degree program a student must hold a first undergraduate degree. A second degree is not available in all degrees and/or subject areas. See *University Graduates Applying for a Second Bachelor's Degree*.

1. All work for the second degree must be completed at McMaster University.
2. Second degree programs may not be available where there is substantial overlap in the requirements of the first degree. See individual Faculty/Program regulations or consult Faculty/Program Offices for exclusions or further information.
3. Extra courses taken while enrolled in a first degree program, or courses completed as a Continuing Student, may, with the approval of the Faculty, be applied to the second degree program.
4. Students must meet the same regulations for continuation and graduation as are applied to students enrolled in a first degree program.
5. Credit from the first two degrees cannot be applied to a third undergraduate degree. To obtain a third undergraduate degree students must complete all program requirements, i.e. approximately 90 units for a three-level degree and approximately 120 units for a four-level degree.

Requirements for Second Bachelor's Degree Programs

- **Honours Degree following a Three-Level Degree in the Same Subject:** For consideration into an Honours B.A., Honours B.Sc., or Honours B.A.Sc. degree program following a three-level degree in the same subject, a Cumulative GPA of at least 5.0 in the first degree program is required. For consideration into all other eligible degree

programs, a Cumulative GPA of at least 6.0 in the first degree program is required. If admitted, at least 30 units beyond the first degree, including all program requirements, must be completed.

- **B.A. or B.Sc. in Another Subject:** For consideration, students must meet the admission requirements for the program. If admitted, at least 30 units beyond the first degree, including all program requirements, must be completed. Students are not eligible for a second B.A. or B.Sc. degree in a program in which they have been awarded a minor, however, they may apply for an honours second degree in that subject.
- **Honours B.A., Honours B.A.Sc., Honours B.Sc. or Honours B.H.Sc. in Another Subject:** For consideration, students must meet the admission requirements for the program and have a Cumulative GPA of at least 5.0. If admitted, at least 60 units beyond the first degree, including all program requirements, must be completed.
- **Honours B.M.R.Sc.:** For consideration, students must meet the admissions requirements for the program. If admitted, students will be required to complete a minimum of 24 units during Level 1 of the program. Some of these units may be extra to the degree requirements.
- **B. Eng., B.Tech., and B.A.Sc.:** For consideration, students must meet the admission requirements for the program. If admitted, students must complete at least 60 units beyond the first degree including all program requirements.

McMaster Students Studying at Another University: Letter of Permission (LOP) and Exchange (Study Abroad)

1. McMaster students who wish to complete courses at another university for transfer credit towards their McMaster degree must be in good academic standing.
2. Grades obtained in courses at another university will not be included in the calculation of McMaster averages, which may affect consideration for in-course academic awards.
3. Courses taken at another university cannot be used to satisfy McMaster's Residence Requirements.
4. Students may take up to six units at another university toward a minor.

Letters of Permission (LOPs):

Students may study outside of McMaster as a Visting Student at another accredited degree-granting institution with a Letter of Permission (LOP).

- LOP must be approved by your Faculty/Program Office before you register at another institution. An approved LOP is a confirmation that a course you intend to take at another accredited degree-granting institution is acceptable for transfer credit toward your undergraduate degree at McMaster.

REQUESTING A LETTER OF PERMISSION

- Students are encouraged to review the policies and procedures of their Faculty and Program or Academic Program Office.

DEADLINES:

- Students are required to submit an online application, via Mosaic, thirty days prior to the date classes begin in each Term (see the *Sessional Dates* section of this Calendar).
- Students must also consult the institution you wish to attend for any relevant deadlines and application procedures.
- Students/learners in Faculty of Health Sciences programs should confer with their education programs as deadlines may differ across programs.

LOP Course Taken in:	Apply on Mosaic by:	Submit other institution's transcript to your Faculty by:
Fall (Sept - Dec)	August 1	January 20
Winter Term (Jan - Apr)	December 1	May 20
Spring/Summer (May - Aug)	April 1 (spring), June 1 (summer)	September 20

STUDENT ELIGIBILITY:

Students must:

- be pursuing a first undergraduate degree at McMaster.
- have completed a minimum of 18 units of coursework.
- have a minimum cumulative grade point average (CGPA) of 3.50 /12.0 and be in Good Standing.

COURSE ELIGIBILITY:

- LOP may only be requested for a course that meets the following conditions:
- Taken at an accredited degree-granting institution approved by the student's Faculty/ Program Office.
- The course must be graded on a numeric or letter-grade basis. Courses graded on a pass/fail structure, credit/no credit basis or a *challenge for credit* process or equivalent are not eligible for transfer credit.
- LOP will not normally be granted for a course that would exceed a student's maximum allowable course load for a given academic term.

TRANSFER CREDIT

- Transfer credit will only be awarded for approved LOPs.
- **A student enrolled in an undergraduate degree program at McMaster is not permitted to be concurrently registered in a degree program at any other university.**
- Transfer credits appear on a student's McMaster transcript, but do not count toward their GPA. Transfer credits do not count towards the unit count for the Dean's Honour List or Provost's Honour Roll.
- Normally, if the course grade is 60% (C-) or higher, the McMaster transcript designation will read T, indicating *transfer credit*. Some programs require a higher course grade to grant transfer credit. If the course grade is lower than 60% (C-), the transcript designation will read NC, indicating *no credit*. If the student withdraws from the course, the transcript designation will read W, indicating *withdrawn.*
- Once you have been granted a Letter of Permission, you are considered by McMaster to be enrolled in the course. If you drop or withdraw from the course at the host university, you must provide your Faculty/ Program Office with documentation confirming your withdrawal. Without such documentation, your transcript will read *NC*, indicating no credit for the LOP course.
- Up to six units of transfer credit may be counted towards a minor or concurrent certificate
- Transfer credits awarded must not exceed the Residence Requirement limits as outlined in the General Academic Regulations section of the Calendar.

Exchange (Study Abroad):

1. Students must obtain necessary approvals in advance from both their Faculty/Program Office and International Student Services.
2. Upon completion of course work, if a passing grade (as determined by the host university) is obtained, the transcript designation reads T indicating *transfer credit*. If less than a passing grade is attained, the transcript designation reads NC indicating *no credit*. If the student withdraws from the course(s), the transcript designation reads W indicating *withdrawn*.

3. Students who return from exchange prior to completion of course work must supply the Faculty/Program Office with a proof of withdrawal from the host university, otherwise grades of NC will be placed on the transcript.

Credit in Courses by Special Assessment (Challenge Examinations)

Students who have acquired knowledge at a different type of institution or in a manner that makes assessment of their qualifications difficult are permitted to seek degree credit through special assessment *(Challenge for Credit).* Challenge for credit is not intended to give credit for skills or knowledge gained through high school, college or previous university instruction. The special assessment may include one or more of the following: written examinations, papers, essays, submissions of a substantial body of work, or portfolios, or laboratory tests. Credit can be granted only for those courses listed in the current McMaster calendar. Not all courses in all disciplines are available for challenge. Faculties and departments are free to determine which, if any, of their courses are open for special assessment. Challenges are assessed on a pass/fail basis. The passing grade for a challenge appears on the transcript as COM *(Complete)* and is not used in computing averages or evaluating honours or scholarship standing, but is counted as a course attempt. Unsuccessful attempts will be noted on the transcript as a grade of F. Special Assessment is not available for a course taken previously and a course may be attempted only once by special assessment. Once you have registered for a course by such means (known as *challenge exams*) the registration may not be cancelled and you may not withdraw from the course.

Waivers of prerequisites only (i.e. no degree credit) will be at the discretion of the department.

Voluntary Withdrawal from the University

Students who wish to permanently or temporarily withdraw from the University must consult their Faculty/Program Office. Students in receipt of government student aid (e.g., OSAP) and/or University aid or awards should contact the Office of the Registrar, Aid & Awards.

Petitions for Special Consideration

The University wishes to assist students with legitimate difficulties. It also has the responsibility to ensure that degree, program and course requirements are met in a manner that is equitable to all students. Students may submit, in a prompt and timely manner, a Petition for Special Consideration to the Faculty/Program Office in those instances where a student acknowledges that the rules and regulations of the University have been applied fairly, but is requesting that an exception to the regulations be made because of special circumstances. Requests related to temporary or permanent disabilities, or for retroactive accommodations related to a disability are excluded from petitions and must be processed under the *Academic Accommodation of Students with Disabilities* policy. Petitions should be submitted in a prompt and timely manner for the relevant term, but no later than July 31 immediately following the Fall/Winter Term or November 15 immediately following the Spring/Summer Term.

Two forms are available from your Faculty/Program Office:

Petition for Special Consideration (Form A):

The *Petition for Special Consideration (Form A)* is submitted for a variety of issues, including, when a student wishes to have a leave of absence or seeks to depart from University requirements based on compelling medical or personal reasons; or a student believes that an adverse ruling or decision about their academic performance, such as failing a course, or being required to withdraw from a program for failure to meet program requirements, should be waived because of compelling medical or personal circumstances. Requests related to temporary or permanent disabilities, or for retroactive accommodations related to a disability are excluded from petitions and must be processed under the *Academic Accommodation of Students with Disabilities* policy.

Petition for Special Consideration: Request for Deferred Examination (Form B):

The *Petition for Special Consideration: Request for Deferred Examination (Form B)* is used when a student misses an examination because of compelling medical or personal reasons. Requests related to temporary or permanent disabilities, or for retroactive accommodations related to a disability are excluded from petitions and must be processed under the *Academic Accommodation of Students with Disabilities* policy.

1. Once a student has completed an examination, no special consideration will be granted.
2. A student who misses an examination because of compelling medical or personal reasons may submit a Petition for Special Consideration: Request for Deferred Examination (Form B) to the Faculty/Program Office, normally within five working days of the missed examination.
3. If the reason is medical, the approved McMaster University Medical Form must be used. The student must be seen by a doctor at the earliest possible date, normally on or before the date of the missed exam and the doctor must verify the duration of the illness. Relief will not be available for minor illnesses. If the reason is non-medical, appropriate documentation with verifiable origin covering the relevant dates must be submitted, normally within five working days.
4. In deciding whether or not to grant a petition, the adequacy of the supporting documentation, including the timing in relation to the due date of the missed work and the degree of the student's incapacitation, will be taken into account.
5. It is the student's responsibility to check Mosaic Student Center > Deferred Exam Approvals or with the Faculty/Program Office for a decision on the request for a deferred examination. If the deferred examination is granted, the student will be informed officially by means of the notation DEF which will appear against the relevant course on the student's academic record and via Mosaic > Student Center > View My Grades.
6. Deferred examinations are written during the next official University deferred examination period. Default of the deferred examination will result in a fail for that examination.
7. Students who have been granted more than one deferred examination may be required by their Faculty/Program Office to reduce their course load during the term in which the deferred examinations are being written. The decision on a reduced load will be made and communicated with the decision on the request for deferred examinations.
8. At the discretion of the Faculty/Program Office, students who have been granted one or more deferred examinations, may not be allowed to enrol in a subsequent term until all deferred examinations have been completed and the Academic Standing calculated. Students will be notified of this decision by their Faculty/Program Office.
9. Students who will be living more than 160 kilometres from Hamilton during the deferred examination period and wish to write their approved deferred

examination at an institution other than McMaster must submit a Request to Write Deferred Examination Off-campus Form at least 15 working days prior to the deferred examination period. Students are responsible for making arrangements for a presider to conduct the deferred examination at an outside institution and for paying any fees such as invigilation and return courier.

10. The authority to grant any petitions lies with the Faculty/Program Office and is discretionary. It is imperative that students make every effort to meet the originally-scheduled course requirements and it is a student's responsibility to write examinations as scheduled.

Decisions made on Petitions for Special Consideration are final. In accordance with the *Student Appeal Procedures*, decisions made on Petitions for Special Consideration cannot be appealed to the Senate Board for Student Appeals. However, should students believe that a decision may be a violation of their human rights, they may wish to contact the Equity and Inclusion Office to identify appropriate avenues of recourse as per the *Policy on Discrimination and Harassment: Prevention & Response*. Requests related to temporary or permanent disabilities, or for retroactive accommodations related to a disability, are excluded from Petitions for Special Consideration and, therefore, must be processed under the Academic Accommodation of Students with Disabilities
policy.

Regulations for Authorized Leave for Undergraduate Students Studying with a Study Permit

Students studying with a study permit have a number of conditions they must meet in order to maintain their eligible status in Canada. These conditions are found on the Immigration, Refugees and Citizenship Canada (IRCC) website as follows: Your conditions as a study permit holder in Canada. Failure to meet the study permit conditions may result in students losing their student status and IRCC cancelling their study permit. Students may also be required to leave Canada.

Subject to eligibility and specific conditions, undergraduate students studying with a study permit may request an authorized leave to pause their studies for a defined period of time.

Students attending the University under a study permit who will not be enrolling in the next expected term or are withdrawing from all courses in the current term must contact their Faculty or program office and request an authorized leave. This ensures that the student's status is correctly reported under the University's obligation as a Designated Learning Institution (DLI). If the authorized leave is approved, the Faculty or program office will also assist the student in developing an academic plan for a successful return to their studies.

Approval from the student's Faculty or program office and subsequent arrangements should be finalized prior to the start of the authorized leave.

Eligibility:

Authorized leaves may be granted for the following reasons:

- 1. Medical or parental leave.
- 2. Military service in another country.
- 3. Family emergency.
- 4. Death of a friend or family member.
- 5. Other reasons as approved by the Faculty or program office.

The IRCC will only recognize leaves up to a maximum of 150 days for students to still be considered as actively pursuing their studies. Visit The Government of Canada - Your conditions as a study permit holder in Canada for more information.

Students may be required to provide documentation to support the reason for their authorized leave. If the leave is approved, the Registrar's Office will issue an authorized leave letter to provide to IRCC documenting the authorized leave.

Return from Authorized Leave:

Students are encouraged to inform their Faculty or program office of their desire to resume their studies. Students who fail to return from their authorized leave by the date specified in the terms of their authorized leave letter may not be permitted to return as planned and academic progress may be impeded. An authorized leave from clinical placements, co-ops, internships, or other experiential learning course components may have additional requirements for return.

For extended leaves, please visit the Former McMaster Degree Students (Returning Students) - Readmission (3.H) section of the Undergraduate Calendar to understand your return options.

Deferral of Admission: For deferral of admission, consult the Office of the Registrar - Deferral of Admissions.

Additional Support for Students: Students should seek the advice of an Immigration specialist to ensure full compliance and understanding of the IRCC policies. Support for immigration-related issues is available through the Student Success Centre - Immigration Advising.

McMaster Student Absence Form Policy (MSAF Policy)

The University recognizes that undergraduate students periodically require relief from academic work due to extenuating circumstances. Students seeking relief for missed academic term work are expected to read the **McMaster Student Absence Form Policy** (In the event of a conflict between the Policy and these General Academic Regulations, the Policy takes precedence.)

The MSAF Policy supports the management of **MSAF Self-Report** and **MSAF Administrative Report** requests by reducing the requirement for documentation from a healthcare practitioner for short-term absences, while considering the needs and obligations of undergraduate students, instructors, and administrators.

Students should **contact their respective Faculty/Program Office** with any questions about the MSAF.

The MSAF Policy cannot be used:

· for the purpose of time-management;

· for academic work such as online assessments (e.g., quizzes, tests, etc.), where the student has already completed the work, or has attempted to complete the work. This includes the viewing and/or partial completion of online assessments (e.g., quizzes, tests, etc.);

· to apply for relief for any final examination or its equivalent (refer to Petitions for Special Consideration: Request for Deferred Examination);

· for absences in a student's clinical placement, co-op placement, or internship; and

· for McMaster Continuing Education (MCE) programs and courses. MCE students are directed to contact their course instructor.

Late Withdrawal from a course

McMaster University provides a Late Withdrawal option to assist students who have become irretrievably behind in a course. Students who have fallen behind with assignments and/or are not prepared to write final examinations (or equivalent) in one or more courses are encouraged to make use of this option and must contact their Academic Advisor in the Faculty/Program Office. Students will work with their Academic Advisor to discuss the situation and what steps they can take to prevent a recurrence.

Students may request a Late Withdrawal, without petition, no later than the last day of classes in the relevant Term. However, it is important to note that:

- Requests for Late Withdrawal cannot be made in courses for which the final exam (or equivalent) has been attempted or completed. This also

includes courses where a final grade has been assigned (e.g. clinical courses).
- Such requests will be cancelled or revoked if it is determined that the student attempted or completed the final exam (or equivalent).
- Students cannot use the Late Withdrawal option for courses in which they are under investigation or for which they have been found guilty of academic dishonesty.

Course(s) approved for Late Withdrawal will be:
- Assigned a non-numeric grade of LWD, in lieu of an alpha/numerical grade
- Excluded from the calculation of the GPA
- Ineligible for tuition refund

Approval of a late withdrawal is final, and requests to be re-enrolled in the withdrawn course(s) will not be considered. A withdrawal will not preclude students from enrolling in the course(s) in a subsequent term.

Examinations

(See also *Office of the Registrar (Examinations)*)

Examinations conducted by the Office of the Registrar will appear in the Mosaic Student Center and may be scheduled in the morning, afternoon, or evening, Monday through Sunday. Other instructor-scheduled tests and examinations may be held throughout each term in compliance with Academic Obligations: Restrictions.

Full details regarding examination procedures conducted by the Office of the Registrar are found in the Undergraduate Examinations Policy.

McMaster student photo identification cards are required at all examinations.

Examinations are not rescheduled for purposes of travel. Students must be available for the entire examination period as listed in the Sessional Dates section.

The Office of the Registrar will reschedule final examinations within the examination period for the reasons listed below. Application to reschedule examinations must be made at least 10 working days before the scheduled examination period. Failure to meet the stated deadline may result in the denial of the application.
- Conflict with religious obligations
- More than one examination scheduled at the same time
- Three examinations in one calendar day (midnight to midnight).
- Three consecutive examinations over two days (e.g., December 14th at 4:00 pm and 7:30 pm and December 15th at 9:00 am).

Students who miss a final examination for medical or personal reasons may submit a Petition for Special Consideration: Request for Deferred Examination (Form B) to their Faculty/Program Office, normally within five working days of the missed examination.

Students who begin a final examination, but are unable to complete it for medical reasons, may submit a Petition for Special Consideration (Form A) to their Faculty/Program Office, normally within five working days of the examination.

Students with disabilities are required to inform Student Accessibility Services of accommodation needs for examinations on or before the last date for withdrawal from a course without failure by default. This allows sufficient time to verify and arrange appropriate accommodation.

Request to Write Deferred Examinations at an Off-Campus Location

Students living more than 160 kilometers from Hamilton during the deferred examination period and wishing to write their approved deferred examination at an institution other than McMaster must submit a Request to Write Deferred Examination Off-campus Form at least 15 working days prior to the deferred examination period.

If the deferred examination is written at an off-campus location, any fees incurred are the responsibility of the student. This includes the fee to courier the written examinations back to the Office of the Registrar, Scheduling and Examinations (GH 114).

For information regarding application for Deferred Examination, see *Petition for Special Consideration: Request for Deferred Examination (Form B)*.

Academic Evaluations

Numeric Grading System

The results of all courses attempted will appear on the transcript. The method for determining final grades will be given in the course outline. Unless otherwise specified in the course outline, course results determined on a percentage scale will be converted to an official letter grade, as indicated in the following equivalent percentage scale.

Grade	Equivalent Grade Point	Equivalent Percentages
A+	12	90-100
A	11	85-89
A-	10	80-84
B+	9	77-79
B	8	73-76
B-	7	70-72
C+	6	67-69
C	5	63-66
C-	4	60-62
D+	3	57-59
D	2	53-56
D-	1	50-52
F	0	0-49 - Failure

Non-Numeric Grades and Notations:

Non-Numeric Grades

AUD	Audit
CAN	Cancelled
COM	Complete
CR	Credit
F	Fail
INC	Incomplete
IP	In Progress
LWD	Late Withdrawal
MT	Multi-Term
NC	No Credit
NMR	No Mark Received
P	Pass
T	Transfer Credit
W	Withdrawn
XCH	Exchange

Notations

DEF	Deferred Examination
EXTRA	Extra credits not used towards degree
REPEAT	Repeat of a previously failed course (under discontinued repeat regulations)
(R)	Repeat of a previous course (under current repeat regulations)
UPGRADE	Repeat of a previously passed course (under discontinued repeat regulations)

WITHDRAWN

After the last day for enrolment and course changes, students may withdraw from courses until the last day to withdraw without failure by default. Withdrawn courses will be shown on the student's transcript with a grade of W. After the last day to withdraw without failure by default, the student will remain enrolled, whether or not they fulfil any further academic obligations, and a final grade will be assigned.

DEF

Courses with the notation DEF have been approved for a deferred examination.

EXTRA

Courses designated as "Extra" at the time of registration by the Faculty Office are not included as units toward completion of a student's program. The grades obtained in such courses will not be included in the computation of the Cumulative GPA. However, they will be included in the computation of the Fall-Winter Average and the Spring-Summer Average.

UNUSED

Courses designated as "Unused" cannot be used to fulfil the requirements for the student's current degree program. The grades obtained in such courses will be included in the computation of all averages.

GRADED UNITS

Graded units refer to the number of units taken at McMaster for which a letter or Numeric Grade is earned. Graded units do not include courses assessed with a Non-Numeric Grade.

PASS/FAIL COURSES

Courses evaluated on a Pass/Fail basis are not included in the calculation of averages. The earned units are counted towards degree requirements.

MULTI-TERM FALL/WINTER COURSES

Codes for multi-term Fall/Winter courses have an A/B suffix. Part A must always be taken in the Fall Term immediately preceding Part B. Neither Part A nor B of a multi-term course has academic credit independent of both parts being successfully completed. Students who drop or withdraw from Part A must also withdraw from B.

Upon completion of the Fall Term, a grade of MT indicating multi-term will be assigned to Part A and the final grade will be assigned to Part B.

CUMULATIVE GRADE POINT AVERAGE (CUMULATIVE GPA)

The Cumulative GPA is the weighted average based on the Graded Units taken throughout the undergraduate career. The Repeating Courses regulation, effective September 1, 2018, will affect the calculation of subsequent Cumulative GPA.

FALL-WINTER AVERAGE

The Fall-Winter Average is a weighted average based on the grades attained in the Fall and Winter Terms. Overload courses and Extra courses are included in the Fall-Winter Average.

SPRING-SUMMER AVERAGE

The Spring-Summer Average is a weighted average based on the grades attained in the Spring and Summer Term. Overload courses and Extra courses are included in the Spring-Summer Average.

TERM GRADE POINT AVERAGE (TERM GPA)

The Term GPA is a weighted average based on the Graded Units taken in the term.

WEIGHTED AVERAGE

Weighted average is calculated by multiplying the grade points achieved in each course by the number of units in each course, totaling these results, and then dividing this result by the total number of course units.

Example of a weighted average calculation, using the grade points and units for courses attempted:

Grade	Grade Points		Units		Total Points
A-	10	x	6	=	60
C+	6	x	3	=	18
B	8	x	6	=	48
B+	9	x	3	=	27
F	0	x	6	=	0
		Total	24		153
			To calculate average: 153 ÷ 24 = 6.4		

HONOUR LISTS

Students are reviewed for Deans' Honour Lists (DHL) and Provost's Honour List (PHL) each time a minimum of 30 units (with at least 24 graded units) have been completed. Subsequent assessments are based on all units completed since the previous review. Students will be named to the Deans' Honour List when a minimum average of 9.5 is achieved. Students will be named to the Provost's Honour List when an average of 12.0 is achieved.

WITH DISTINCTION

Graduation *With Distinction* standing is awarded when a minimum Cumulative GPA of 9.5 is achieved in a degree program. In this case, the Latin phrase *summa cum laude* ("with highest honour") will appear on the graduate's diploma.

TRANSCRIPTS

- transcript summarizes a student's academic career at McMaster University and is available by electronic request through Mosaic. Students may request a transcript upon demand and free of charge in the Office of the Registrar, Student Services, Gilmour Hall Room 108. Transcript requests will not be processed for students with outstanding financial accounts at the University or those under investigation for an academic integrity violation.

CREDENTIALS

- credential is a body of academic work or collection of course work that stands on its own and for which a parchment is issued. McMaster credentials include certificates, diplomas and degrees. A single course is permitted to be counted toward a maximum of two credentials.

MINORS

Students enrolled in a four- or five-level program are eligible to obtain a Minor in another subject area, provided that the subject area is not integral to the requirements of their degree program. At least 18 units must be completed at McMaster. Students who wish to receive a Minor must consult the appropriate department section of the calendar. McMaster also offers *Interdisciplinary Minors and Thematic Areas*. To apply for a Minor, students must complete the Minor/Certificate Application in addition to completing their profile in the graduation tile in Mosaic. The student's Faculty will verify that the requirements have been met and, if successful, the transcript will indicate that a Minor has been obtained. Minors cannot be revoked once approved.

OVERLOAD WORK

Students wishing to take more units than prescribed for their Level/program in the Fall-Winter Term or more than 12 units in the Spring-Summer Term (no more than 6 units in either session of that term) must seek permission from

their Faculty/Program Office. Normally, a Fall-Winter Average of at least 7.0 in the immediately preceding review period will be required if an overload is to be permitted. Additional academic fees will be assessed for overload work.

OSAP ELIGIBLE COURSE LOAD

OSAP Eligible Course Load or equivalent refers to the 60% minimum course load per term (40% minimum course load per term for students with permanent disabilities) required to be eligible for full-time OSAP government student aid funding.

REPEATING COURSES

Effective September 1, 2018, students may repeat a course twice (i.e. attempt a course three times). Cross-listed courses count as attempts. Grades from every attempt will appear on the academic transcript. The Cumulative GPA will include only the grade earned on the most recent attempt. Units earned will be counted once toward the student's program requirements, regardless of the number of times the course is repeated. Prior to September 1, 2018 the grades from all attempts are included in the GPA calculation.

AUDITING COURSES

Students currently enrolled in a degree program wishing to audit a course must obtain approval from the course instructor and their Faculty/Program Office. Additionally:

- course requisites must be met
- academic obligations (assignments, test, examinations, etc.) are not completed
- a grade of AUD (audit) will be assigned
- units will not be earned nor applied toward the student's program requirements
- tuition fees apply
- students will not be permitted to enrol for credit in the course after the Last Day for enrolment and course changes
- students enrolled in a course for credit will not be permitted to change the course to 'audit' after the Last Day for enrolment and course changes

Non-McMaster students wishing to audit a course must enrol as a Listener.

PERSONAL INTEREST COURSE (PIC)

McMaster University encourages interdisciplinary study and believes undergraduate studies provides an excellent opportunity to explore topics which are new and unfamiliar. Students, however, may be reluctant to take a course if they are unsure of their academic performance for fear of compromising their Cumulative GPA. The Personal Interest Course (PIC) option is designed to encourage students to explore interests outside of their program without affecting their Cumulative GPA.

1. A student can declare a PIC to signify they want an elective course to be assessed on a *Credit* or *No Credit (CR/NC)* grading scale.
2. To receive the grade of CR, the student must earn a final mark of at least 50%. Units earned from a successfully completed PIC will be counted in the units required for a student's degree as applicable.
3. Courses with a final grade of NC do not count as degree credits or as failures, nor are they included in the GPA calculation or averages. Please note, government student aid (e.g., OSAP) will consider a NC grade as a failure.
4. The PIC option is not available for any course that is considered a program requirement (which includes courses listed as possible required courses), independent study, thesis, field study or placement course, or on a list of required courses. Students are responsible for ensuring the course is an elective course for their program. Engineering students should note the PIC option is available only for complementary studies electives. For students in a Bachelor of Commerce program, only non-Commerce electives may be taken as a PIC.
5. Students may declare a maximum of 3 units of PIC per term to a maximum of 12 units per four- or five-level degree or a maximum of 9 units per three-level degree. A maximum of 6 units of PIC may be used to satisfy requirements toward a Minor.
6. The PIC option is available to undergraduate students registered in a program above Level 1, with a Cumulative GPA of at least 3.5, who are enrolled in a Program/Faculty which is participating in the PIC option. Exchange students should seek advice from the International Study Office and Faculty/Program Office.

The PIC option is not available to students who

- are enrolled in the School of Medicine, or
- are enrolled in a Program/Faculty which is not participating in the PIC option (see Faculty Academic Regulations), or
- have graduated and are in a second degree or a non-degree program, e.g., continuing, etc.

7. If a percentage grade in a course is required for future applications to graduate or professional school, the PIC option should not be selected for that course. Students may not subsequently request to have a PIC grade recalculated to a numeric grade. Students must carefully review any government (e.g., OSAP) and University aid and award eligibility rules which may be affected by the use of the PIC option.
8. If the student changes their program of study and a course taken as a PIC becomes a required course, the new Faculty/Program Office may accept the course grade of CR or NC or have the grade converted back into a numeric grade. If a grade is converted back into a numeric grade, there will be no retroactive reconsideration of aid and award.
9. Students cannot use the PIC option for courses in which they have been found guilty of academic dishonesty. In these cases, the grade will be converted into a numeric grade.

DEADLINES:

1. Students must declare a course as a PIC on Mosaic by the last day for enrollment and course changes date. The student progresses in the course as per normal, and has the option to withdraw from the course as per the normal procedures and deadlines.
2. If the student would rather keep the numeric grade, they must indicate the course is no longer a PIC on Mosaic by the final date in which a student can withdrawal from a course without failure by default and the numeric grade will appear on their transcript.

ACADEMIC STANDING REVIEW:

Each year in May and August (and after deferred examinations) academic standing is reviewed and determined for students who have:

- attempted at least 18 units of work since the last review, or
- may be eligible to graduate.

In the academic standing review, three determinations are made:

- whether a student may graduate
- whether a student may continue at the University
- whether a student may continue in a program.

ACADEMIC STANDINGS:

GOOD STANDING

- student who satisfies the minimum requirements to continue in their program without restriction.

MAY CONTINUE IN PROGRAM - ACADEMIC PROBATION

Academic probation is assigned when a student:

- achieves a Cumulative GPA between 3.0 and 3.4. If at any future academic standing review their Cumulative GPA falls below 3.5, the academic standing assigned will be *May Not Continue at the University*.
- returns to studies after being Reinstated. If at any future academic standing review their Cumulative GPA falls below 3.5, the academic standing assigned will be *Required to Withdraw from the University*.

MAY CONTINUE IN PROGRAM - PROGRAM PROBATION

Program Probation is assigned when a student's Cumulative GPA falls below the minimum requirements to remain in their program. Failure to achieve *Good Standing* at the next academic standing review will result in their removal from the program. See Faculty specific *Minimum Requirements for Entering and*

Continuing in a Program Beyond Level 1.

MAY NOT CONTINUE IN PROGRAM

This standing is assigned to:

- students who fail to achieve the minimum Cumulative GPA to remain in the program, or
- students previously on Program Probation who fail to achieve *Good Standing*.

To continue at the University, the student must apply to transfer to another program.

MAY NOT CONTINUE IN FACULTY

May Not Continue in Faculty is assigned when:

- a student enrolled in a program in the Faculty of Engineering or Business has achieved a Cumulative GPA between 3.0 and the minimum requirements to remain in their Faculty, or
- a student enrolled in a program in the Faculty of Business in Level 2 or above receives a grade of F in more than 6 units.

To continue at the University, the student must apply to transfer to another program or continue as a transition student for one reviewing period.

MAY NOT CONTINUE AT UNIVERSITY

May Not Continue at University is assigned when:

- a student achieves a Cumulative GPA below 3.0, or
- a student previously on Academic Probation fails to achieve *Good Standing*.

The student cannot enroll in courses at the University unless granted Reinstatement.

REQUIRED TO WITHDRAW FROM UNIVERSITY

- student who at any time received a standing of Academic Probation and at a future academic standing review achieves a Cumulative GPA below 3.5 will be required to withdraw from the University. The student will be unable to apply for Reinstatement for at least 12 months.

REINSTATEMENT

Students must contact the Office of the Registrar to apply for reinstatement within the application deadlines. Reinstatement is not guaranteed.

If reinstatement is granted, the student is placed on academic probation and their Cumulative GPA is re-set to 0.0 on zero units. At the discretion of the Faculty, the student may retain credit for courses successfully completed. If at any academic standing review after reinstatement the student's Cumulative GPA falls below 3.5, the student will be required to withdraw from the University.

The student must complete a minimum of 60 units of work after reinstatement to be eligible for Graduation With Distinction or other recognition based on the Cumulative GPA.

Level 1 Registration and Academic Standing Requirements

When you are admitted to McMaster University for a first degree, you will enrol in one of the following Level 1 programs: Automation Engineering Technology I Co-op (B.Tech.), Automotive and Vehicle Engineering Technology I Co-op, Arts & Science I, Biotechnology I Co-op, Business I, Chemical and Physical Sciences Gateway, Computer Science I, Economics I (effective 2019-2020), Engineering I, Environmental and Earth Sciences Gateway, Health Sciences I, Honours Health and Society I (effective 2019-2020), Humanities I, Honours Integrated Science (Level I), Honours Kinesiology (Level I), Integrated Biomedical Engineering and Health Sciences (IBEHS) I, Integrated Business & Humanities I, Life Sciences Gateway, Mathematics and Statistics Gateway, Honours Medical Radiation Sciences (Level I), Midwifery I, Music I, Nursing I, Process Automation Technology I, Social Sciences I, and iArts I. If you enter the University without Advanced Standing being granted, you must normally attempt a full load of Level 1 work before proceeding to the work of higher levels.

If you are studying part-time, the Office of the Associate Dean has the discretion to permit you to take some of the work in the higher levels prior to having attempted the full load of Level 1. Decisions will be made on an individual basis, according to the special circumstances that apply in the particular case.

At any review during Level 1 before you complete the Level 1 work, as in the case of a part-time student, you must attain a GPA of at least 3.5 to continue at the University in good standing. If you attain a GPA of 3.0 to 3.4 you may remain at the University for one reviewing period, but will be placed on academic probation. You may be on academic probation only once during your University career. If your GPA is less than 3.0 you may not continue at the University.

At the review when you complete the Level 1 work, if you attain a GPA of at least 3.0 and have not previously been on academic probation, but fail to meet the admission requirements of any program, you may continue at the University for one additional reviewing period on academic probation. You will be enrolled in your original Faculty, and will be classified as a Level 1 transition student if your work may only qualify you to be considered for admission to a program in another Faculty. If, at the end of the next reviewing period, you again do not qualify for admission to a program, you may not continue at the University. If your GPA is less than 3.0 you may not continue at the University.

Students in Arts & Science I should refer to the Arts & Science Program regulations listed below.

Health Sciences I, Nursing I and Midwifery I students should refer to the program regulations listed in the Faculty of Health Sciences section in this Calendar.

Minimum Requirements for Entering and Continuing in a Program Beyond Level 1

Admission to the programs beyond Level 1 is based on performance in Level 1. You must meet both the minimum requirements to continue at the University, as described above, and program-specific requirements of each Faculty, as described in this Calendar.

Arts & Science Program

B.Arts Sc. (Honours) AND B.Arts Sc. Programs

You must have a Grade Point Average (GPA) of at least 6.0 to continue in the program. If your GPA is from 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once.

If your GPA is 3.5 to 5.4, you must transfer to another program for which you qualify, or you may enrol in the Arts & Science General Program on program probation for one reviewing period. During that period, with permission, you can take Arts & Science Program required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration advising session in the Arts & Science Program Office. At the end of the probation period, you may apply for readmission to the Honours Arts & Science Program; a minimum GPA of 6.0 is required. If the minimum GPA of 6.0 is not achieved after one reviewing period, you must transfer to a Program for which you qualify.

If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a student in the Arts & Science General Program, but cannot take Arts & Science Program courses. The purpose of this period is to prepare yourself for a program outside the Honours Arts & Science Program. You may be on academic probation only

once.
If your GPA is less than 3.0 you may not continue at the University.

School of Business

Business I

For specific admission requirements to the Honours B.Com. program, see *Program Notes* under the heading *Programs* in the *DeGroote School of Business* section of this Calendar.
If you are not admitted to the Honours B.Com. program at the end of Business I, you have the following options available to you:

- If your cumulative Grade Point Average is 3.5 or greater, you are still in good standing at the University. You may continue at the University in a program outside the School of Business or as a *transition* student in Business. To continue in a program outside the School of Business you must apply for admission to that program through the Office of the Associate Dean appropriate for that program. You should consult that office for more details.
- If you are not admitted to another Faculty you may enrol in the School of Business as a transition student for one reviewing period. During that period you cannot take upper-level Commerce courses. The purpose of your registration as a transition student is to make yourself eligible for admission to a degree program. If you have a cumulative Grade Point Average of 3.0 to 3.4, you will be on academic probation and may continue at the University for one reviewing period as a transition student in the School of Business but will not be permitted to take any upper-level Commerce courses. The purpose of the probation period is to make yourself eligible for a degree program.

If you have a cumulative Grade Point Average of less than 3.0 at the end of Business I, you may not continue at the University either on a full-time or part-time basis.

Honours B.Com. Program:

You must have a cumulative Grade Point Average of at least 5.0 to continue in the Honours B.Com. Program. Once admitted to Honours B.Com., if your cumulative GPA is 4.5 to 4.9, you may continue in the Honours B.Com. Program, but will be placed on program probation. You may be on program probation for only one reviewing period. If your GPA is a 3.5 to 4.4, you may transfer to the B.Com Program.

B.Com. Program:

You must have a cumulative Grade Point Average of at least 4.0 to continue in the B.Com. Program. If your GPA is 3.5 to 3.9, you are permitted to continue in the B.Com. Program on program probation for one reviewing period.

Integrated Business & Humanities:

To be admitted to Level 2 of the Integrated Business & Humanities (IBH) program, students must have completed at least 24 units of the required Level 1 courses with a minimum Cumulative Grade Point Average (GPA) of 5.0. In Level 2 and above, you must maintain a cumulative GPA of at least 5.0 to continue in the IBH program. If your cumulative GPA is 4.5 to 4.9, you may continue in the Integrated Business & Humanities program, but will be placed on program probation. You may be on program probation for only one reviewing period. If your cumulative GPA is a 3.5 to 4.4, you must transfer to another program for which you qualify, or enrol in the IBH program as a transition student for one reviewing period. During that period you cannot take IBH program courses. The purpose of this period is to prepare yourself for a program outside the IBH program. If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a transition student but cannot take IBH program courses. The purpose of this period is to prepare yourself for a program outside the IBH program. You may be on academic probation only once.
If your GPA is less than 3.0 you may not continue at the University.

Faculty of Engineering

B.Eng., B.A.Sc. Programs

Admission to Level 2 Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. In Level 2 and above, you must maintain a GPA of at least 4.0 to continue in an Engineering program or in an Honours Computer Science programs. If you have a GPA of 3.0 to 3.9, you may not continue in the Faculty. If your GPA is less than 3.0, you may not continue at the University.

B.Tech. Programs

For specific minimum requirements, please see the descriptions for the individual programs within the Faculty of Engineering section in this Calendar.

Integrated Biomedical Engineering & Health Sciences (B.Eng.BME., B.H.Sc. (Honours)) Programs

For specific minimum requirements, please see the descriptions for the individual programs within the Faculty of Engineering section in this Calendar.

Faculty of Health Sciences

For specific minimum requirements, please see the descriptions for the individual programs within the Faculty of Health Sciences section in this Calendar.

Faculties of Humanities and Social Sciences

Honours B.A. Programs; B.Mus. (Honours) Program; BFA (Honours) Program

You must have a Grade Point Average (GPA) of at least 5.0 to continue in an Honours B.A. program. If your GPA is 4.5 to 4.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 4.4, you must transfer to another program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

Honours B.S.W., B.A./B.S.W. and B.S.W. Programs

You must have a Grade Point Average (GPA) of at least 6.0 to continue in an Honours B.S.W., B.A./B.S.W. or B.S.W program. If your GPA is 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 5.4, you must transfer to another program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

B.A. Programs

You must have a Grade Point Average (GPA) of at least 3.5 to continue in, or graduate from, a three-level B.A. program. If your GPA is 3.0 to 3.4, you may remain in the program, but will be placed on academic probation. You may be on academic probation only once. If your GPA is less than 3.0, you may not continue at the University.

Faculty of Science

Honours B.Sc. Programs

Students must have a Grade Point Average (GPA) of at least 5.0 to continue in and graduate from an Honours B.Sc. program. Students with a GPA between 4.5 to 4.9, may remain in the Honours B.Sc. program, but will be placed on program probation. Students may be on program probation for only one reviewing period. Students with a GPA between 3.0 to 4.4, must transfer to another program for which they qualify. Students with a GPA below 3.0 may not continue at the University.

Honours B.Sc. Kinesiology Program

Students must complete Level I Honours Kinesiology (including KINESIOL 1A03, 1AA3, 1E03, 1F03, 1K03) with a Grade Point Average (GPA) of at least 6.0 to continue onto Level II Honours Kinesiology.
If, upon completion of Level I Honours Kinesiology (including KINESIOL 1A03, 1AA3, 1E03, 1F03, 1K03), students achieve a GPA between 5.5 and 5.9, they may enrol in Level II Honours Kinesiology but will be placed on program probation for one reviewing period. Students may be on program probation only once.
If, upon completion of Level I Honours Kinesiology, students who achieve a GPA between 3.5 and 5.4 and/or fail to successfully complete each of KINESIOL 1A03, 1AA3, 1E03, 1F03, 1K03, may enrol in Level II Kinesiology General and take Level II required Kinesiology courses (for which all prerequisites have been met). At the next review, such students must achieve a GPA of at least 6.0 including, successful completion of KINESIOL 1A03, 1AA3, 1E03, 1F03, 1K03, to transfer to the Honours Kinesiology program. Such students must attend a mandatory preregistration counselling session with an Academic Advisor. Students who fail to meet the minimum requirements for transfer to Honours Kinesiology, must transfer to a non-Kinesiology program for which they qualify. Students with a GPA between 3.0 to 3.4, must transfer to another program to which they qualify. Students with a GPA below 3.0 may not continue at the University.

B.Sc. Programs

Students must have a Grade Point Average (GPA) of at least 3.5 to continue in a three-level B.Sc. program. Students with a GPA between 3.0 to 3.4, may continue on academic probation for one reviewing period. Students may be on academic probation only once. Students with a GPA below 3.0 may not continue at the University.

Honours B.A.Sc. Programs

Students must have a Grade Point Average (GPA) of at least 5.0 to continue in an Honours B.A.Sc. program. Students with a GPA between 4.5 to 4.9, may remain in the Honours B.A.Sc. program, but will be placed on program probation. Students may be on program probation for only one reviewing period. Students with a GPA between 3.0 to 4.4, must transfer to another program for which they qualify. Students with a GPA below 3.0 may not continue at the University. Graduation from an Honours B.A.Sc. program requires a Grade Point Average of at least 5.0.

Honours M.R.Sc. Program

Students must complete all the course requirements prescribed for Level I Medical Radiation Sciences by the end of Winter Term of Level I, with a Grade Point Average (GPA) of at least 5.0 or permission of the Committee of Instruction (Chair Medical Radiation Sciences (Mohawk), Coordinator Medical Radiation Sciences (McMaster), Coordinator Radiation Therapy Specialization, Coordinator Radiography Specialization, Coordinator Ultrasonography Specialization). For additional program-specific regulations, see the School of Interdisciplinary Science (SIS) in the Faculty of Science section of this Calendar.

Graduation

The following minimum Cumulative GPA are required to graduate:

- B.A. - 3.5
- B.A. (Honours) - 5.0
- B.S.W. (Honours), B.A. /B.S.W. and B.S.W. - 6.0
- B.Arts Sc. and B.Arts Sc. (Honours) - 5.0
- B.A.Sc. (Faculty of Engineering) - 4.0
- B.A.Sc. (Honours) (Faculty of Science) - 5.0
- B.Com. - 4.0
- B.Com. (Honours) - 5.0
- B.Eng., B.Eng.BME., B.Eng.Biosciences, B.Eng.Mgt., B.Eng.Society - 4.0
- B.F.A. (Honours) - 5.0
- B.H.Sc. - 3.5
- B.H.Sc. (Honours) - 5.0
- B.H.Sc. (Midwifery) - 6.0
- B.H.Sc. (Honours) (HESE Specialization) - 4.0
- B.M.R.Sc. (Honours)***** - 5.0
- B.Mus. (Honours) - 5.0
- B.Sc. - 3.5
- B.Sc. (Honours) - 5.0
- B.Sc.Kin. (Honours) - 5.0
- B.Sc.N. - 5.0
- B.Tech** - 3.5
- *All requirements must be completed within five years from the time of registration in Level 2.*

***Excluding students in the Software Engineering Technology Co-op Program. GPA requirement does not apply to the Software Engineering Technology Program Co-op.*

Prior to convocation, graduating students must complete their profile in the graduation tile in Mosaic by the appropriate deadline in their final term of study. Students wishing to graduate with a Minor must complete the application in the Minor/Certificate Application Centre.
Degrees will be conferred at the Convocation immediately following the completion of the degree. Students unable to attend the convocation ceremony who wish to attend a later ceremony should consult the *Policy on Deferral of Attendance at Convocation* and must contact the Office of the Registrar within the prescribed deadlines.

Parchments, Diplomas and Certificates

Diplomas will not be released to students with an outstanding financial account with the University. Diplomas are held for a period of 12 months following the Convocation date before being destroyed. Students requesting diplomas after this period are required to pay a replacement fee.
Graduates may request a duplicate or replacement degree parchment, diploma or certificate (fees apply). A duplicate copy will be issued when requested by a graduate or when the original document has been lost or destroyed.
The words *duplicate copy* or *reissued* will be affixed to all degree parchments, diplomas or certificates requested in this manner and will bear the signatures of the current Chancellor, President and Vice-Chancellor, and Registrar.
Damaged parchments must be returned to the Office of the Registrar before the new parchment, diploma or certificate is issued.

Senate Policy Statements

The University has defined its expectations of students in both the academic and non-academic life of the University community and has developed procedures to ensure that all members of the community receive equitable

treatment. Policies that govern academic and student life at McMaster can be found on the University Secretariat's Policies, Procedures and Guidelines webpage at the following address: https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/.
As policies are reviewed and revised on a regular basis, students are advised to check the *Policies, Procedures and Guidelines* webpage for the most up-to-date information (on the website select "students" in the Categories search field). Following are some of the policies most relevant to undergraduate students, available at the website above:

- Academic Accommodation of Students with Disabilities
- Academic Accommodation for Religious, Indigenous and Spiritual Observances (RISO)
- Academic Integrity Policy
- Alcohol Policy
- Code of Student Rights and Responsibilities
- Discrimination and Harassment Policy
- First Year Experience (Orientation and Transition) for Undergraduate Students, Policy
- McMaster Student Absence Form Policy (MSAF Policy)
- Research Integrity Policy
- Residence Admissions Policies and Priorities
- Sexual Violence Policy
- Storm Emergency Policy
- Student Appeal Procedures
- Student Groups (Recognition, Risk Assessment and Event Planning), Policy on
- Tobacco & Smoke Free University Policy
- Undergraduate Course Management Policy
- Undergraduate Examination Policy
- University Aid and Awards Policy

Academic Integrity

The *Academic Integrity Policy* explains the expectations the University has of its scholars. Some departments and instructors have also developed more specific rules and regulations designed to maintain scholarly integrity. It is the responsibility of each instructor to make students aware of these expectations. The main purpose of a university is to encourage and facilitate the pursuit of knowledge and scholarship. The attainment of this purpose requires the individual integrity of all members of the University community, including all graduate and undergraduate students.
The University states unequivocally that it demands scholarly integrity from all its members. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; furthermore, it is unfair and discouraging to those students who pursue their studies honestly.
Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. In an academic setting, this may include any number of forms such as:

- copying or the use of unauthorized aids in tests, examinations and laboratory reports,
- plagiarism, i.e., the submission of work that is not one's own or for which previous credit has been obtained, unless the previously submitted work was presented as such to the instructor of the second course and was deemed acceptable for credit by the instructor of that course,
- aiding and abetting another student's dishonesty,
- giving false information for the purposes of gaining admission or credit,
- giving false information for the purposes of obtaining deferred examinations or extension of deadlines, and
- forging or falsifying McMaster University documents.

For a complete definition and examples, please refer to the *Academic Integrity Policy*, Appendix 3. Students are encouraged to view: www.mcmaster.ca/academicintegrity for further information on academic integrity and how to avoid academic dishonesty. Allegations of academic dishonesty will be handled according to the procedures described in the *Academic Integrity Policy*. Penalties may be imposed on students who have been found guilty of academic dishonesty. Examples of penalties include a mark of zero on an assignment, zero for the course with a transcript notation, and suspension or expulsion from the University, etc.

Research Integrity

The *Research Integrity Policy* explains the expectations the University has of its institutional personnel to maintain research integrity.
One of the main purposes of a university is to encourage and facilitate the pursuit of research (e.g., an undertaking intended to extend knowledge through a disciplined inquiry or systematic investigation). The University states unequivocally that it demands research integrity from all of its members. Research misconduct, in whatever form, is ultimately destructive to the values of the University; furthermore, it is unfair and discouraging to those who conduct their research with integrity.
This Policy applies to all faculty, postdoctoral fellows, graduate students and undergraduate students taking part in research, directly or indirectly, and other research support staff (for complete definition of Institutional Personnel please see page 43 of the *Research Integrity Policy*).
All institutional personnel who are involved in research have a responsibility to report what they, in good faith, believe to be research misconduct. The Office of Academic Integrity is the appropriate office to receive concerns and questions regarding an allegation of research misconduct. Responsible allegations, or information related to responsible allegations, should be sent directly to the Office of Academic Integrity in writing.
For the complete definitions and examples, please refer to the *Research Integrity Policy*: **www.mcmaster.ca/academicintegrity**

Financial Information

Upon receiving official acceptance from the Registrar's Office and upon submission of registration, you are responsible for the payment of all fees as defined in this Calendar. Payment of academic fees does not imply your acceptance to the University. Academic requirements have to be fulfilled before your enrollment is completed.
If you are a new student, you may not forward academic fees to Financial Services until you have both: accepted your Offer of Admission before the stated deadline and enrolled in courses.
You should not send residence fees unless you have received notification of acceptance.
You are responsible for the full fees for each academic term. No fee credits can be transferred from one academic session to another.
It is the policy of the University not to accept enrolment until all previous accounts are paid in full. Any payments received are, therefore, first applied to previous debts and any balances to the most recent debts.
The following fees and regulations were the most recent available at the time of publication. All fees are subject to approval by the Board of Governors. For the most current fee information, please visit https://registrar.mcmaster.ca/fees/. The University reserves the right to amend the fees and regulations at any time.
For information on student awards and financial aid, please refer to Aid & Awards sections of this Calendar.

Undergraduate Fees

If you are a full-time student, fees cover your portion of the tuition cost, enrolment, library, campus health services, student organizations, and athletics, and are payable by all students.

No caution deposits are required, but students will be assessed for any unwarranted loss or breakage.

The University reserves the right to assess other supplementary fees or charges in some courses or programs to recover - in part or in full - the cost of providing course materials, accommodation and transportation for field trips, and the costs of breakages.

Fees charged by the University are approved annually by the Board of Governors for the academic year beginning September 1.

Fees shown below are for 2022-2023. The fee schedules are available on the Office of the Registrar website at **https://registrar.mcmaster.ca/fees/** and are updated in spring each year.

Tuition fees include a base per unit fee plus mandatory non-tuition related supplementary fees.

Base Per Unit Tuition Per Faculty

Below is a breakdown of Canadian, International (new admissions for 2012-2013 onward). Fees shown below are for 2024-2025. The fee schedules for will also be available on the Office of the Registrar website at **https://registrar.mcmaster.ca/fees/** in the spring.

FACULTY/PROGRAM	DOMESTIC STATUS ($ per unit)	OUT OF PROVINCE (OOP) ($ per unit)	INTERNATIONAL STATUS ($ per unit)
Arts & Science Level 1	201.42	240.15	1,584.51
Arts & Science Level 2	199.96	231.46	1,599.60
Arts & Science Level 3	198.51	218.85	1,614.83
Arts & Science Level 4	198.51	208.43	1,556.11
Bachelor of Integrated Arts (iArts) Level 1	201.42	240.15	1,505.28
Bachelor of Integrated Arts (iArts) Level 2	199.96	231.46	1,519.61
Bachelor of Integrated Arts (iArts) Level 3	198.51	218.85	1,534.09
Bachelor of Integrated Arts (iArts) Level 4	198.51	208.43	1,478.30
B.Com. Integrated Business and Humanities Level 1	336.38	401.06	1,940.25
B.Com. Integrated Business and Humanities Level 2	336.38	389.38	1,869.70
B.Com. Integrated Business and Humanities Level 3	336.38	370.84	1,767.71
B.Com. Integrated Business and Humanities Level 4	332.21	348.82	1,671.29
B.HSc. Biochemistry Level 1	201.42	240.15	1,584.51
B.HSc. Biochemistry Level 2	199.96	231.46	1,599.60
B.HSc. Biochemistry Level 3	198.51	218.85	1,614.83
B.HSc. Biochemistry Level 4	198.51	208.43	1,556.11
B.HSc. Integrated Rehabilitation and Humanities Level 2	199.96	231.46	1,817.73
B.HSc. Integrated Rehabilitation and Humanities Level 3	198.51	218.85	1,835.05
B.HSc. Integrated Rehabilitation and Humanities Level 4	198.51	208.43	1,768.31
Commerce Level 1	311.83	371.79	1,666.78
Commerce Level 2	311.83	360.97	1,635.33
Commerce Level 3	311.83	343.79	1,604.48
Commerce Level 4	307.97	323.36	1,574.20
Engineering Level 1	336.38	401.06	1,874.42
Engineering Level 2	336.38	389.38	1,839.06
Engineering Level 3	336.38	370.84	1,804.35
Engineering Level 4	332.21	348.82	1,770.32
Engineering Level 5	332.21	332.21	1,547.49
Eng. Mgt. Level 2	336.38	389.38	1,582.46
Eng. Mgt. Level 3	336.38	370.84	1,582.46
Eng. Mgt. Level 4	332.21	348.82	1,582.46
Eng. Mgt. Level 5	327.15	327.15	1,582.46
Eng. B.Tech. Level 1	265.77	316.87	1,649.50
Eng. B.Tech. Level 2	265.77	307.65	1,618.38
Eng. B.Tech. Level 3	265.77	293.00	1,587.85
Eng. B.Tech. Levels 4, 5	262.47	275.59	1,557.88
Eng. Computer Science Level 1	303.60	317.83	1,874.42
Eng. Computer Science Level 2	303.60	308.58	1,839.06
Eng. Computer Science Level 3	266.58	293.89	1,804.35
Eng. Computer Science Level 4	263.28	276.44	1,770.32
Health Sciences (Honours) Level 1	201.42	240.15	1,800.58
Health Sciences (Honours) Level 2	199.96	231.46	1,817.73
Health Sciences (Honours) Level 3	198.51	218.85	1,835.05
Health Sciences (Honours) Level 4	198.51	208.43	1,768.31
Humanities Level 1	201.42	240.15	1,505.28
Humanities Level 2	199.96	231.46	1,519.61
Humanities Level 3	198.51	218.85	1,534.09

FACULTY/PROGRAM	DOMESTIC STATUS ($ per unit)	OUT OF PROVINCE (OOP) ($ per unit)	INTERNATIONAL STATUS ($ per unit)
Humanities Level 4	198.51	208.43	1,478.30
IBEHS Engineering and Biomedical Engineering Level 1	336.38	401.06	1,874.42
IBEHS Engineering and Biomedical Engineering Level 2	336.38	389.38	1,839.06
IBEHS Engineering and Biomedical Engineering Level 3	336.38	370.84	1,804.35
IBEHS Engineering and Biomedical Engineering Level 4	332.21	348.82	1,770.32
IBEHS Engineering and Biomedical Engineering Level 5	327.15	327.15	1,736.91
IBEHS Health, Engineering Science and Entrepreneurship Level 1	336.38	401.06	1,980.66
IBEHS Health, Engineering Science and Entrepreneurship Level 2	336.38	389.38	1,999.53
IBEHS Health, Engineering Science and Entrepreneurship Level 3	336.38	370.84	2,018.57
IBEHS Health, Engineering Science and Entrepreneurship Level 4	332.21	348.82	1,945.17
IBEHS Health, Engineering Science and Entrepreneurship Level 5	327.15	327.15	1,874.42
Nursing Level 1	201.42	240.15	1,724.48
Nursing Level 2	199.96	231.46	1,724.48
Nursing Level 3	198.51	218.85	1,724.48
Nursing Level 4	198.51	208.43	1,724.48
All Science Level 1 programs	201.42	240.15	1,584.51
All Science Level 2	199.96	231.46	1,599.60
All Science Level 3	198.51	218.85	1,614.83
All Science Level 4	198.51	208.43	1,556.11
Social Sciences Level 1	201.42	240.15	1,505.28
Social Science Level 2	199.96	231.46	1,519.61
Social Science Level 3	198.51	218.85	1,534.09
Social Science Level 4	198.51	208.43	1,478.30
Wilson College of Leadership & Civic Engagement Level 1	201.42	213.68	1,433.60
Wilson College of Leadership & Civic Engagement Level 2	199.96	220.44	1,447.26
Wilson College of Leadership & Civic Engagement Level 3	198.51	208.43	1,394.63
Wilson College of Leadership & Civic Engagement Level 4	198.51	198.51	1,343.92

Supplementary Fees

Fees shown below are for 2022-2023. The fee schedules for 2025-2026 will be available on the Office of the Registrar website at https://registrar.mcmaster.ca/fees/ in the spring of 2025.

STUDENTS TAKING 1 TO 17 UNITS PAY (PER UNIT):

Academic Fee	$2.64	
Career Services Fee	$0.75	
Student Building Fee	$0.40	
Athletics and Recreation Activity Fee	$6.41	
Transcript, Letters, Tax Form & Certificates Fee	$1.50	
Auxiliary Fee	$0.71	
Basic Health Resources	$2.43	
Handbook Fee	$0.36	
Newsletter Fee	$0.09	
Student Tax Returns	$0.13	
Total Charge per unit	$15.42	

Nursing Students Add:

Learning Resource Fee	$9.75	
Communicable Disease Screening	$30.15	
Respiratory Mask Fitting Fee	$24.66	

STUDENTS TAKING 18 UNITS OR MORE PAY:

Students registered in 18 or more units at ANY time during the session (**including cancelled courses**) will be responsible for the following fees.

Student Service Fee	$439.88	
SOLAR Car	$1.15	
Ontario Public Interest Research Group (OPIRG)	$5.69	
Engineers Without Borders	$0.41	

Note: If you do not wish to support the work of McMaster OPIRG you can claim

a full refund by bringing your student card to the OPIRG Office within three weeks after the completion of the drop and add period.

MCMASTER STUDENT UNION FEES:

Student Organization Fee	$138.38	
Health Plan Premium*	$110.00	
Dental Plan Premium*	$136.00	
H.S.R. Bus Pass	$250.63	
WUSC Student Refugee Fee	$1.94	
Ancillary Fee for CFMU-FM	$16.26	
Incite Publication	$1.21	
McMaster Marching Band	$1.17	

***Note:** Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan and Dental Plan Premiums. For deadline dates and detailed information, students should consult the MSU Insurance Plans web site at **https://msumcmaster.ca/info/health-dental-insurance/opt-out/**.

PLUS:

- McMaster Student Union's University Student Centre Building fee ($0.69 per unit), to a maximum of $20.70
- Administrative Services Fee ($1.30 per unit), to a maximum of $39
- Athletics and Recreation Building Fee ($8.17 per unit), to a maximum of $243.00
- Student Wellness Centre of $111.11
- Career Services - Student Success Centre of $80.65
- University Athletics and Recreation Activity fee $264.30

AND FACULTY SPECIFIC SOCIETY/SUPPORT FEES AS FOLLOWS:

Arts & Science	$34.95	
Bachelor of Health Sciences (Honours)	$32.61	
Commerce	$204.16	
Engineering	$197.70	
Humanities	$60.49	
Medical Radiation Science Collaborative Fee	$160.78	
Nursing	$160.01	
	If you're in full-time nursing, add $183.82 (Nursing Learning Resource) to $160.01. If part-time, multiple units enrolled by $10.21 and add $160.01.	
Science	$57.64	
Social Sciences	$68.89	
Wilson College	$100.00	

Canadian Citizens, Landed Immigrant and Visa Students

The fee schedules for 2022-2023 will be available on the Office of the Registrar website at **https://registrar.mcmaster.ca/fees/**.

Student Health Services Fees

The McMaster Students Union Health Plan Premium fee of $103.72 includes reimbursement of expenses resulting from an accident incurred during the academic year, where such expenses are not recoverable under the Ontario Health Insurance Plan. The McMaster Students Union Dental Plan Premium fee of $129.90 provides a dental plan for all full-time undergraduates students enrolled in 18 units or more.

For details concerning coverage, contact the McMaster Students Union Office at ext. 22003 or visit their website at **https://msumcmaster.ca/info/health-dental-insurance/**

Note: Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan and Dental Plan Premiums. For deadline dates and detailed information, students should consult the MSU Insurance Plans web site at **https://msumcmaster.ca/info/health-dental-insurance/opt-out/**.

Co-op Fees

Co-op students attending the full academic term (September-April) should add a $1,309.10 Co-op Fee to the regular 30 unit Science fee. Co-op students attending one academic term should pay half the 30 unit Science fee plus a $654.55 Co-op Fee. Faculty of Engineering Admin Co-op Fee is $100.00 and B-Tech Co-op Fee (per work term) is $600.00.

Listeners

You may register as a Listener in some degree courses. The cost is equivalent to a regular course but the student simply audits the course and does not receive a grade. Listener status is not available in limited enrolment classes. For any degree course, written permission to attend must be obtained from the course instructor before registration is finalized by the Office of the Registrar. Listeners withdrawing from a course may do so without penalty up to five working days before the first session. After that and before the second class, an administrative fee of $60.00 applies. There is no refund after the second class. This category excludes currently registered students, who may audit a course. See *Admission Requirements* section in this Calendar for details.

Persons Aged 65+

Subject to meeting admission and prerequisite requirements, if you will be aged 65 or over during the academic session for which you are enrolling, you may enrol without payment of tuition and supplementary fees.

Residence and Meal Plan Fees

Regular Session

If you live on campus, your residence fees cover the period, from Labour Day weekend to 5 p.m. on the day following your final April examination, and excludes the December holiday break.

The fees below are those for 2022-2023.

Add to the fees below the Residence Life Activity fee of 40.00 per student. For more information, visit http://www.mcmaster.ca/residence-life.html.

RESIDENCES

Residence (other than Apartment and Suite) - Single	$8,700.00
Residence (other than Apartment and Suite) - Double	$7,775.00
Residence (other than Apartment and Suite) - Triple	$7,000.00

Residence (other than Apartment and Suite) - Quad	$6,875.00
Residence (other than Apartment and Suite) - Single/Washroom	$9,325.00
Residence (other than Apartment and Suite) - Double/Washroom	$8,275.00
Residence (other than Apartment and Suite) - Single/Single-User Washroom	$8,975.00
Residence (other than Apartment and Suite) - Double/Single-User Washroom	$7,975.00
Apartment - 4/6 person (Single Room)	$9,250.00
Apartment - 2 person (Double Room)	$9,250.00
Suite - 4 person (Single Room)	$9,625.00
Double/Connected Shared Washroom	$8,675.00
Double Twin Bed/Connected Shared Washroom	$8,375.00
Single/Connected Shared Washroom	$9,425.00
Super Single/Connected Shared Washroom	$9,625.00

MEAL PLANS

The Residence Meal Plan is an integral component of living in any of the McMaster University residences and all students living in residence must purchase a mandatory meal plan.

If you are living in a traditional residence, you must purchase a meal plan from Group A. Students living in Bates and the Mary E. Keyes Residence must purchase a meal plan from *either* Group A *or* Group B.

The fees below are those for 2022-2023.

GROUP A FULL MEAL PLAN (AVAILABLE TO ALL RESIDENCE STUDENTS)		**GROUP B REDUCED MEAL PLAN (AVAILABLE TO BATES AND MARY E. KEYES RESIDENCE STUDENTS ONLY)**	
Mandatory Meal Plan 1	$4,595.00	Mandatory Meal Plan 1	$3,175.00
Optional Meal Plan 2	$4,795.00	Optional Meal Plan 2	$3,375.00
Optional Meal Plan 3	$4,995.00	Optional Meal Plan 3	$3,575.00
Optional Meal Plan 4	$5,195.00	Optional Meal Plan 4	$3,775.00

For more information on meal plans visit our web page at **http://hospitality.mcmaster.ca/** or contact Mac Express, Commons Building, Room 128, telephone (905) 525 9140, ext. 27448, email **express@mcmaster.ca**.

For information regarding applying to residence visit the Housing web page at **http://housing.mcmaster.ca/** or contact Residence Admissions, Commons Building, Room 101, telephone (905) 525 9140, ext. 24342, email **resnote@mcmaster.ca**.

Summer Residence

McMaster University offers residence accommodation for summer students and casual guests from early May to late August each year.

For further information, contact Conference Services, McKay Residence, Room 124, telephone (905) 525-9140, ext. 24781.

Payment of Fees

Payment deadline dates:

Tuition fees are due in full on the following dates:

- Fall term - September 25 (for all students)
- Winter term - January 25 (for all students)
- Spring/Summer terms - May 25 Spring Session and July 25 Summer Session (for all students)

For fee dates, please visit Office of the Registrar: Fees web site at https://registrar.mcmaster.ca/fees/

Residence/Meal plan fees are due in full on the following dates:

- September 1 (September 22 for OSAP students)

Our web site at https://registrar.mcmaster.ca/fees/ contains valuable information about your fees and important deadline dates.

Students who do not pay in full by the deadline dates provided in their account on MOSAIC will find balances subject to interest charges, late fees and in time, suspended privileges. Interest is charged at an annual rate of 14.4% (1.2% per month) subject to change. A full month's interest is calculated on any unpaid balance on the second-to-last working day of each month. Past-due balances are subject to collections activity.

In addition, if you refuse to pay fees, or any part of the fees, you may be refused admission to the University or you may be requested to withdraw with all privileges suspended. Fees to the date of withdrawal will be assessed. If you wish to re-register within the same academic session, you will also be assessed a $100.00 reinstatement fee.

It is the policy of the University not to accept enrolment until all previous accounts are paid in full. Any payments received are, therefore, first applied to previous debts and any balances to the most recent debts.

You will not be eligible for any grades, examination results, transcripts, diplomas or the payment of awards of any kind, until fees and any other accounts owed to the University are paid in full.

Note: Graduands who have outstanding accounts with the University will be permitted to attend convocation, but will not receive their diplomas until their accounts have been cleared in full.

Refunds

If you are forced, by illness or other personal reasons, to withdraw from courses, you will be charged a partial fee for courses that are cancelled. The charge is determined by the date on which the course is cancelled. It is important that you review the fee cancellation schedule. It will be available on the Registrar's Office website at https://registrar.mcmaster.ca/fees/ in the spring of each year.

Miscellaneous Fees

The following fees were in effect for the 2022-2023 academic year, and are over and above assessed academic fees, supplementary fees, and residence fees and meal plan fees.

Academic User Fees

Applications for re-admission	$100.00
Applications to Part-Time Studies	$100.00
Certification of Enrolment Fee	No fee
Challenge of Credit	Equal to tuition
Diploma Delivery Fee (not charged for pick-up at University)	$25.00
Examination Reread (Refunded if grade increases by 3 points)	$50.00
Graduation Fee (Service) for those attending	$45.00
Letter of Permission	No fee
Notarizing Fee (plus $0.50 per page over 10 pages)	No fee
Replacement of Diploma	$50.00
Verification of Student I.D. Card at Exams	$30.00
Replacement of Student I.D. Card	$30.00

Rush Transcript Fee (24 hour rush service)	$15.00
External Exam Administration Fee	$110.00
On Demand Transcript Request (immediate production of official transcripts)	$20.00
Transcript per copy (students who are not covered under Service Fee agreements)	$15.00
Supplementary Application Processing Fee	$95.00

Students writing deferred examinations at another centre are responsible for payment of fees, which may be assessed by the other examination centre.

Financial/Administrative User Fees

Certificate Replacement Fee	
Income Tax Receipt/Education Credit Certificate	No fee
Certification of Fee Payment	No fee
Interest Charge on Unpaid Accounts - per month	1.20%
Meal Plan Withdrawal Fee	$50.00
Meal Card Misuse Fine	$25.00
Returned Cheque Charge (NSF, Stopped Payment)	
First Occurrence	$55.00
Each Subsequent Occurrence (Additional)	$15.00
Option to use Credit Card to pay Student Account	2.25%
Late Payment Fee - per term	$75.00
Personal Cheque Handling Fee	$15.00
Reinstatement Fee	$100.00
Library Charges	
Overdue Recalled Books (per day)	$5.00
Overdue Reserve Material (per hour)	$5.00
Overdue multimedia equipment or room key (per hour). Daily maximum of $250	$20.00
Classroom audiovisual rental for data projectors and camcorders (per hour). Daily Maximum of $65	$25.00
Replacement Cost (up to); list of item costs will be posted for users	$2,500.00
Non-refundable Administration fee for Replacement Cost	$25.00

Expenses

COSTS OTHER THAN FEES FOR STUDENTS IN CLINICAL COURSES

You must buy uniforms, shoes and uniform accessories, for clinical practice. If you are a Nursing student, your uniform and accessories are ordered under the direction of the School of Nursing. The approximate cost is $200.00. Level 1 Nursing students are also required to purchase a stethoscope at approximately $100.00 and a basic blood pressure cuff at approximately $40.00.

REGISTRATION EXAMINATIONS

Graduates of the B.Sc.N. program can expect to pay fees (currently, approximately $600.00) to write the comprehensive registration examinations administered by the College of Nurses of Ontario.

INSURANCE OF PERSONAL PROPERTY ON UNIVERSITY PREMISES

The University cannot assume any responsibility for the personal property of any employees, faculty members, or students, nor does the University carry any insurance that would cover their personal property. In most cases, personal fire insurance policies provide an automatic 10% extension covering property away from home. You should inspect your insurance policies to be certain that this is the case.

DEATH AND DISMEMBERMENT INSURANCE

The University considers that the purchase of insurance coverage for death and dismemberment is the individual responsibility of its students. There are various insurance plans available, and although the University does not specifically endorse any one of these plans, it has no objection to explanatory brochures and literature being posted on bulletin boards or distributed in appropriate places. If you are involved in laboratory or field work, you are particularly encouraged to investigate such coverage.

Faculties, Programs and Schools

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Arts & Science Program

L.R. Wilson Hall, Room 3038, ext. 24655, 23153
http://artsci.mcmaster.ca
DIRECTOR
Elizabeth Marquis/B.A., M.A., Ph.D.
ACADEMIC PROGRAM ADMINISTRATORS
S. Anderson
R. Bishop/B.A.
COUNCIL OF INSTRUCTORS AS OF JANUARY 15, 2025
Aytak Akbari-Dibavar *(Gender & Social Justice; Global Peace & Social Justice)*
David Clark *(English and Cultural Studies)*
Mary Crea Arsenio *(Global Health)*
James Gillett *(Health, Aging and Society)*
David Goutor *(Labour Studies)*
Megumi Harada *(Mathematics and Statistics)*
Basit Iqbal *(Anthropology)*
Alexander Leferman *(Philosophy)*
David Lozinski *(Mathematics and Statistics)*
Elizabeth Marquis *(Arts & Science; School of the Arts)*
Inder Marwah *(Political Science)*
Anastasios Papanastasiou *(Economics)*
P.K. Rangachari *(Medicine)*
Maikel Rheinstädter *(Physics and Astronomy)*
Mat Savelli *(Health, Aging and Society)*
Manuel Vasquez Villavicencio *(Arts & Science; Philosophy)*
Jean Wilson *(Arts & Science; Linguistics and Languages)*

The Arts & Science Program provides students with a broad-based, liberal education. By means of electives, the Program also allows for substantial specialization in a particular discipline or area. The interdisciplinary Program has been designed for students who wish to further their intellectual growth through the study of significant achievements in both the arts and the sciences and through practice in methods of inquiry.

The integrated curriculum consists of courses offered by the Council of Instructors of the Arts & Science Program, together with other courses offered by departments across the University. The curriculum is designed to meet three major objectives:

1. to enable substantial work in both the arts and the sciences;
2. to develop skills in writing, speaking, and critical thinking;
3. to foster the art of scholarly inquiry into issues of public concern.

Meeting the last of these objectives is the particular aim of inquiry courses, which begin in Level I and continue in Upper Levels. To investigate with skill and insight a complex public issue, such as world population growth in relation to food supply, requires an understanding of the methods and findings of many disciplines; it calls on a liberal education. Moreover, acquiring skill in such investigations requires practice in formulating questions, searching out evidence, and bringing the insights of academic disciplines to bear on the interpretation of evidence.

The Program offers preparation for advanced study in many professional schools, including those of business, dentistry, health administration, journalism, law, medicine, occupational therapy, and teaching; and for research in many disciplines and interdisciplinary areas.

Students in this program who wish to prepare for graduate study in an academic discipline should consult with the appropriate department concerning requirements. In general, preparation for graduate study may be accomplished by combining the core Honours Arts & Science curriculum with a concentration of electives in the intended area of graduate study. Combined Honours Programs, which are available in many subjects, combine the core curriculum of the Arts & Science Program with a prescribed set of courses in a subject and can typically be expected to satisfy course requirements for admission to graduate study in the particular subject.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca account.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca account.

The Arts & Science Program is governed by the General Academic Regulations *of the University, (See the General Academic Regulations section in this Calendar) and the regulations described below.*

The Program begins in Level I and leads to the degree, Bachelor of Arts & Science (Honours) on completion of Level IV. The four-level program provides an opportunity for specialization through electives and through an individual study or thesis course.

Students who decide to conclude their studies in the program on completion of Level III may qualify to graduate with the degree, Bachelor of Arts & Science (B.Arts Sc.). Students must have a GPA of at least 6.0 to continue in the program. In the case of some Combined Honours programs, the average must include specified courses.
Registration in Level I of the Arts & Science Program is limited to approximately 70 students.

Inquiry Seminar Requirements

Inquiry courses include ARTSSCI 1C06 A/B and a set of Upper-Level Inquiry seminars on a variety of topics. ARTSSCI 1C06 A/B must be completed in Level I. Twelve units of Upper-Level ARTSSCI Inquiry are required and are taken in Level III or IV. At least nine of these twelve units of Upper-Level Inquiry must be Level IV ARTSSCI Inquiry courses.

Combined Honours Programs

Students in the Arts & Science Program may undertake Combined Honours Programs in many disciplines within the Faculties of Business, Engineering, Health Sciences, Humanities, Science, and Social Sciences. See *Arts & Science and Another Subject* for a list of combined programs that are already established. **On-line application for Admission to Level II (April) is required for all Combined Honours Programs.**

Individual Study/Thesis

Students in the B.Arts Sc. (Honours) Program are required to complete an individual study or thesis (ARTSSCI 4A06 A/B or 4C06 A/B). Students in many Combined Honours Programs are also required to complete an individual study or thesis, often through a course in the discipline of their Combined Honours Program (offered by the relevant department). Students should consult the Combined Honours Program description for specific requirements (http://artsci.mcmaster.ca).
For further information, please see *Academic Standing and Program Requirements* in the *General Academic Regulations* section in this Calendar.

Minors

Students in the Arts & Science Program may elect to complete a Minor. Normally, a Minor requires students to complete a minimum of 24 units in the Minor subject. Students are responsible for ensuring that the courses taken meet the requirements for a Minor. Students who have the necessary requirements may apply for recognition of that Minor when they graduate. If granted, this recognition will be recorded on the student's transcript.
Within the Arts & Science Program, Minors are available to students provided that the subject area of the Minor is not integral to the requirements of their degree program. Unless otherwise specified, at least 18 units toward the Minor must be considered elective to the degree. At least 18 units must be completed at McMaster. A maximum of 6 units can be counted toward two separate Minors. No single course may be counted toward program requirements and two separate Minors.
Please see Minors in the General Academic Regulations section of this Calendar for further information. All courses have an enrolment capacity and the Program cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Workload

Students are expected to avoid timetable conflicts among their courses, and students on a full academic load should ensure the number of courses is balanced in each term. Students who wish to take more courses than recommended for a single level of their program may request to do so if their Grade Point Average on completion of the previous Fall/Winter Terms is at least 7.0. Students are permitted to overload by up to three units during Fall or Winter Term with permission of the Director. Students registered in the final level of their program may request permission to overload by up to six additional units (three units per Term) in order to become eligible to graduate. Students wishing to enrol in more than 12 units during the Spring/Summer Session or more than six units in either term of that Session may do so with the permission of the Director. Additional academic fees will be assessed for overload work.

International/Canadian Exchange Programs

One calendar year before study abroad: Interested students should consult the Director, Arts & Science Program.
Calendar year of planned travel: No later than the end of December, students must propose a program of study for approval by the Director. Credit will be confirmed only after transcripts are received and academic achievements are reviewed on the student's return.
To be eligible for study abroad students must have completed 60 units with a GPA of at least 7.0. The B.Arts Sc. (three-year) degree is not granted on the basis of international study; the 30 final units of work must be done at McMaster.
Information concerning student exchanges can also be found in the General Academic Regulations section of this Calendar under the heading "Exchange (Study Abroad)" and on the McMaster Exchange Program website (https://studentsuccess.mcmaster.ca/global/study-abroad/). Inquiries can be directed to the International Student Services office at:
International Student Services and Global Opportunities
Gilmour Hall, Room 110
https://studentsuccess.mcmaster.ca/global/study-abroad/
Telephone: (905) 525-9140, extension 27874

Bachelor of Arts & Science (Honours)

COMBINED HONOURS PROGRAM IN ARTS & SCIENCE AND ANOTHER SUBJECT

Established Combined Honours Programs are listed below. Application for Admission to Level II (early-April) is required for all Combined Honours Programs. Combined Honours Program descriptions are available on the web (http://artsci.mcmaster.ca) or from the Arts & Science Program Office.

Combined Honours Programs, Arts & Science and:

- Anthropology
- Biochemistry
- Biology
- Molecular Biology and Genetics
- Business
- Chemical Biology
- Chemistry
- Sustainable Chemistry
- Communication Studies
- Computer Science
- Economics
- English and Cultural Studies
- Environment & Society
- Environmental Sciences
- French
- Global Peace and Social Justice
- Greek and Roman Studies
- Health and Society
- Health and Society (Mental Health and Addiction Specialization)
- History
- iArts (Integrated Arts)
- Indigenous Studies
- Linguistics
- Mathematics
- Media Arts
- Music
- Philosophy
- Physics
- Political Science
- Psychology, Neuroscience & Behaviour
- Psychology, Neuroscience & Behaviour (Music Cognition Specialization)
- Society, Culture & Religion
- Sociology
- Work and Labour Studies

HONOURS ARTS & SCIENCE (B.ARTS SC.)

Notes

1. Six units from the following list are required: ARTSSCI 3B03, 3BB3, 3RL3/3S03. Students who choose to take ARTSSCI 3RL3 or 3S03 may only use one of those courses towards satisfying 3 units of the requirement. Additional units from this list may be included as an elective with permission of the Director.
2. Twelve units of Upper-Level ARTSSCI Inquiry beyond Level I are required. Of these 12 units, only 3 units can come from Level III Inquiry courses (ARTSSCI 3C03, 3CL3, 3CU3, 3EH3, 3GJ3, 3TR3); at least 9 units of Level IV Inquiry courses (ARTSSCI 4CB3, 4CD3, 4CF3, 4CI3, 4CP3, 4CT3, 4DS3, 4EP3, 4GS3, 4HS3, 4LI3, 4LT3, 4MB3, 4ST3, 4VC3) are required. Additional units of Upper-Level ARTSSCI Inquiry may be included as an elective with the permission of the Director.
3. Students who are planning to combine Arts & Science with Physics are strongly advised to take PHYSICS 1C03 and 1CC3 in Level I, in lieu of ARTSSCI 2D06 A/B in Level II.
4. Six units of individual study or thesis are required. Special permission may be granted to take 9 units (ARTSSCI 4A09 A/B, 4C09 A/B). Electives will be adjusted accordingly.

Course List 1

- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II
- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

Requirements

120 units total (Levels I-IV), of which 48 units may be Level I

24 UNITS
- ARTSSCI 1A03 - Practices of Knowledge
- ARTSSCI 1AA3 - Contemporary Indigenous Studies
- ARTSSCI 1B03 - Writing
- ARTSSCI 1BB3 - Argumentation
- ARTSSCI 1C06 A/B - Global Challenges Inquiry
- ARTSSCI 1D06 A/B - Calculus

6 UNITS
- from *Course List 1* (requirement must be completed by the end of Level II)

18 UNITS
- ARTSSCI 2A06 A/B - Social and Political Thought
- ARTSSCI 2D06 A/B - Physics
- ARTSSCI 2E03 - Economics: Principles and Policy
- ARTSSCI 2R03 - Applied Statistical Inference

6 UNITS

from
- ARTSSCI 3B03 - Technology and Society I
- ARTSSCI 3BB3 - Technology and Society II
- ARTSSCI 3RL3 - Religion and Law **OR**
- ARTSSCI 3S03 - The East Asian Religious Tradition

(See *Note 1)*

3 UNITS
- Level III or IV ARTSSCI Inquiry (See *Note 2)*

9 UNITS
- Level IV ARTSSCI Inquiry (See *Note 2)*

6 UNITS

from
- ARTSSCI 4A06 A/B - Individual Study
- ARTSSCI 4C06 A/B - Thesis

(See *Note 4)*

48 UNITS
- Electives

DeGroote School of Business

DeGroote School of Business, Room A102, ext. 24433
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buscom@mcmaster.ca
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ASSOCIATE DEAN, UNDERGRADUATE STUDIES
Aaron Schat
FACULTY AS OF JANUARY 15, 2025
ACTING CHAIR, ACCOUNTING AND FINANCIAL MANAGEMENT SERVICES AREA
Sue McCracken
CHAIR, FINANCE AND BUSINESS ECONOMICS AREA
Ronald Balvers
CHAIR, HEALTH POLICY AND MANAGEMENT AREA
Glen Randall
CHAIR, HUMAN RESOURCES AND MANAGEMENT AREA
Baniyelme D. Zoogah
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Maryam Ghasemaghaei
CHAIR, MARKETING AREA
Mandeep Malik
CHAIR, OPERATIONS MANAGEMENT AREA
Kai Huang
CHAIR, STRATEGIC MANAGEMENT AREA
Nick Bontis

UNIVERSITY SCHOLAR

Maryam Ghasemaghaei (2022-2026)
Trish Ruebottom (2024-2028)

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Yao Yao/B.BA. *(Renmin University of China)*, M.Sc. *(London School of Economics and Political Science)*, Ph.D. *(Toronto)/(Human Resources and Management)*
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MANAGER, UNDERGRADUATE PROGRAMS

G. Rombough/M.B.A., C.P.A., C.M.A.

OPERATIONS MANAGER

L. Barty/M.A, M.Ed

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A. Bassi/B.Com
E. Blanchard/B.A.
A. Fortino/B.A.
L. Johnston/B.Sc.

ADMISSIONS AND RECRUITMENT OFFICER

S. Rai/B.Sc.

B.COM. STUDENT EXPERIENCE ASSOCIATE

V. Lam

B.COM. ACADEMIC SUPPORT SPECIALIST

E. Wagner

Faculty of Business Degree Programs

Honours Bachelor of Commerce Program

The Honours Bachelor of Commerce (B.Com. (Honours) requires the completion of 120 units, including specific courses from each level of the program.

The Honours Bachelor of Commerce allows substantial concentration in business subjects beyond the essential core of studies. Students must apply and qualify for the Honours Bachelor of Commerce program. Please see the admission requirements below to qualify for the Honours Bachelor of Commerce program listed for each year of entry.

Honours Bachelor of Commerce Program with Internship

The Honours Bachelor of Commerce with Internship, B.Com. (Honours), requires the completion of 120 units, including specific courses from each level of the program and successful completion of an approved 12-16 month full-time internship. Enrolment in this program is limited and admission occurs following Level II. The internship is designed to provide students with an opportunity to engage in a career-oriented work experience with one host employer, following their third year of study, for a period of 12 - 16 months. Students compete for opportunities with participating employers through multiple recruitment cycles

facilitated by Career & Professional Development office.

Bachelor of Commerce Program

The Bachelor of Commerce program requires the successful completion of 120 units, including specific courses from each level of the program. The Bachelor of Commerce program provides students with the same core business courses as the Honours Bachelor of Commerce, but focuses elective work on courses outside of the business discipline and Faculty.

Integrated Business and Humanities Program

The Integrated Business & Humanities program leads to an Honours Bachelor of Commerce degree. Students will be exposed to a variety of learning opportunities via coursework and co-curricular activities, with an emphasis on responsible leadership and management tactics for the changing global economy. The program also focuses on community engagement and sustainable business practices. The Integrated Business & Humanities program is a limited enrolment program and students begin the program in their first year of studies.

Integrated Business and Humanities Program with Internship

The Integrated Business & Humanities program leads to an Honours Bachelor of Commerce degree and requires the completion of 120 units, including specific courses from each level of the program and successful completion of an approved 12-16 month full-time internship. Enrolment in this program is limited and occurs following Level II. The internship is designed to provide students with an opportunity to engage in a career-oriented work experience with one host employer, following their third year of study, for a period of 12 - 16 months. Students compete for opportunities with participating employers through multiple recruitment cycles facilitated by Career & Professional Development office.

Engineering and Management Programs

In addition, the School of Business and the Faculty of Engineering offer nine five-level joint programs for the Bachelor of Engineering and Management (B.Eng.Mgt.) degree.

For the **Honours Arts & Science and Business program (B.Arts.Sc.)**, see *Arts & Science Program*.

For the **Certificate in Business Technology Management (BTM)**, see *Certificates and Diplomas: Concurrent Certificates*.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. To ensure the greatest access to courses, students may not have active enrolment in the same course in more than one term. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in the DeGroote School of Business, in addition to meeting the General Academic Regulations of the University, shall be subject to additional Faculty Regulations.

Change of Program

Business students may be permitted to transfer between programs, or students in other Faculties may apply to transfer to a program in the Faculty of Business, provided they have obtained a GPA of at least 5.0 and have completed the necessary admission requirements as described on the Faculty undergraduate website. However, students cannot transfer into the Honours Bachelor of Commerce with Internship Program nor either of the Integrated Business and Humanities programs.

Exchange Programs

There are a number of official exchange programs offered to undergraduate students registered in the School of Business. The countries involved include Australia, China, Denmark, France, Germany, Japan, the Netherlands, New Zealand, Norway, India, Ireland, Mexico, Singapore, and the United Kingdom. Official exchange programs offer students the most inexpensive means of studying abroad as students participating in these exchanges avoid the foreign student fees by paying fees to McMaster. All students must be in good standing with a cumulative Grade Point Average of at least 7.0 to be eligible to participate in an exchange. In most cases, students who participate in exchange programs go abroad for Level III of their program. Students are only permitted to take one exchange opportunity, regardless of whether it is a one or two term exchange. Information is available from the Student Experience - Academic Office, DeGroote School of Business, Room A102.

Additional information may be found under *International Study* in the *General Academic Regulations* section of this Calendar.

Inquiries can be directed to the office at:
Student Success Centre
Gilmour Hall, Room 110
Telephone: (905) 525-9140, extension 24254
https://studentsuccess.mcmaster.ca/global-opportunities/study-abroad

International/Cross-Cultural/Language Menu for Students in the Honours Bachelor of Commerce and Bachelor of Commerce Programs

The School of Business emphasizes the importance of breadth of knowledge. Students who entered Business I prior to September 2020 are required to take courses in a variety of business disciplines, thus giving them a sound understanding of business functions and their relationships. They also obtain exposure to international and cross-cultural issues. This will provide them with the knowledge needed for the world of global organizations. Prior to graduation, students who entered prior to September 2020 are required to successfully complete **two courses** from an International/Cross-Cultural/Language menu. **Note:** Students who participate in an official McMaster University exchange are required to successfully complete one course from an International/Cross-Cultural/Language menu prior to graduation. Students must satisfy the normal prerequisites for the courses listed on the menu. Students follow the menu requirements of the Calendar in force when they enter Business I, however, when a later Calendar expands the menu options, students may choose from those additional courses as well.

The menu for 2023-2024 is as follows:

- All Anthropology courses
- All courses in the Faculty of Humanities open to Commerce students, with the exception of all Multimedia courses, PHILOS 2N03 and English courses other than those listed below.
- All Indigenous Studies courses
- All Political Science courses, except POLSCI 4O06 A/B
- All Religious Studies courses
- All Society, Culture & Religion (SCAR) courses
- CSCT 1CS3
- ECON 3H03 - International Monetary Economics
- ECON 3HH3 - International Trade
- ECON 3T03 - Economic Development
- ENGLISH 1CS3 - Studying Culture: A Critical Introduction
- ENGLISH 2C03 - Contemporary Canadian Fiction
- ENGLISH 3D03 - Science Fiction
- ENGLISH 3EE3 - African American Literature
- ENGLISH 3Y03 - Children's Literature
- ENVSOCTY 1HA3 - Society, Culture and Environment (or GEOG 1HA3)
- ENVSOCTY 1HB3 - Population, Cities and Development (or GEOG 1HB3)
- ENVSOCTY 3RW3 - Regional Geography of a Selected World Region (or GEOG 3RW3)
- ENVSOCTY 3UR3 - Urban Social Geography (or GEOG 3UR3)
- SOCIOL 3Z03
- All courses included under the *Minor in Global Peace and Social Justice* (offered by the Faculty of Humanities)

Continuing Students

Graduates of a DeGroote undergraduate Business program, or one of the Engineering and Management programs may take, as part-time students, Commerce courses (to a maximum of 18 units), subject to space availability.

Second Undergraduate Degree

A student with an undergraduate degree will not be admitted or readmitted to any DeGroote undergraduate program. Such a student may wish to apply for admission to the M.B.A. program.

Credit Towards Professional Designations

Educational requirements toward professional designations can be met in varying degrees within the Honours and non-Honours Bachelor of Commerce programs, as well as the Engineering and Management programs. The professional accounting designation Chartered Professional Accountant (C.P.A.) is awarded by the Chartered Professional Accountants of Ontario. The designation C.H.R.P. is awarded by the Human Resources Professionals Association. The Certified Financial Planner (C.F.P) designation is awarded by FP Canada. Further opportunities for meeting educational requirements for professional designations are available to students in all Business and Engineering and Management programs. Additional course work may be taken while in the program provided the student is satisfying all course requirements for their degree. Further units of credit may also be taken after graduation (See *Continuing Students* above). Information concerning credit towards these professional designations can be obtained from the Student Experience - Academic Office in the School of Business (DSB A102).

Minor

A Minor is an option available to a student enrolled in a four- or five-level program. A Minor consists of at least 18 units of Level II, III or IV courses beyond the designated Level I course(s) that meet the requirements set out in the program description of that Minor. A student is responsible for ensuring that the courses taken fulfill these requirements. Those who have completed the necessary courses may apply for recognition of that Minor when they graduate. If recognition is granted for a Minor, a notation to that effect will be recorded on the student's transcript. For further information, please refer to *Minors* in the *General Academic Regulations* section of this Calendar.

Qualifying for The Honours Bachelor of Commerce Program (For Students Entering Business I in September 2020 or Later)

To be considered for entry to the Honours Commerce program, students must have successfully completed Business I (as described in the *Program Notes for Students who Enter Business I in 2020 or Later)* with a cumulative Grade Point Average of at least 5.0.

Qualifying for The Honours Bachelor of Commerce Program (For Students Entering Business I in September 2016-2019)

To be considered for entry to the Honours Commerce program, students must have successfully completed Business I (as described in the *Program Notes for Students who Enter Business I in 2016-2019)* with a cumulative Grade Point Average of at least 5.0.

Workload

A full-time student must complete minimum 9-unit load in each Fall and Winter term. Advance credit and credit earned during the Spring/Summer term may not be used to reduce this load requirement. Such reductions will be applied as late as possible in a student's program.
Students who wish to take more courses than recommended for a single Level of their program may do so only if their Fall-Winter Average in the immediately preceding review period is at least 7.0. Students registered in the final Level of their program are permitted to overload by up to six additional units during the Fall and Winter terms, with **no more than three units of overload per term**, in order to become eligible to graduate.

Deferred Examinations

See the heading *Deferred Examinations* under *Examinations* in the *General Academic Regulations* section of the Calendar for application procedures. Students who are in a precarious position with respect to achieving the minimum GPA or otherwise meeting the Commerce program requirements for continuation in the program will not necessarily be permitted to undertake further work before clearing deferred examinations.

Level I Courses

Students are not permitted to take more than 48 units of Level I courses in their program.

Level of Registration

A student enrolled in a program in the Faculty of Business is required to register in the lowest level for which more than six units of work is incomplete. Work of the next higher level may be undertaken only when necessary to fill a program load.

Readmission

A student in Level II, III or IV of an undergraduate Business program, who becomes ineligible to continue in the School of Business, may apply for readmission to their respective program in a subsequent calendar year up to a maximum of five years following the year in which the student becomes ineligible to continue. **Readmission is not guaranteed.**
Application for readmission must be made in writing to the Undergraduate Recruitment, Admissions, and Student Affairs Committee by June 30 for entry in September. This application should explain why the applicant would expect to succeed in the program if readmitted. Forms for this purpose may be obtained from the Student Experience - Academic Office in the DeGroote School of Business, Room A102.
A student who is readmitted after having become ineligible to continue in an undergraduate Business program must repeat all the courses of the level at which they became ineligible to continue unless specific course exemptions or credits are granted. The earliest possible term for readmission is the term starting in September of the year following the year in which the student became ineligible to continue.
Former undergraduate Business program students who have not been registered in an undergraduate Business program within the past five years, including those who were in good standing at the time of their most recent registration, must apply for readmission through the Office of the Registrar.

Reinstatement

BUSINESS I
A student who May Not Continue at the University may apply for reinstatement.
There are two categories of students who may apply for reinstatement to Business I:

1. Applicants who have been registered in Business I within the past five years, have exceptional or extraordinary circumstances that affected their performance*****, and have not been registered in another McMaster program or at another University during that time, or
2. Applicants from other Faculties.

INTEGRATED BUSINESS & HUMANITIES I
An IBH student who May Not Continue at the University may apply for reinstatement.
Applicants must have been registered in IBH I within the past five years, have exceptional or extraordinary circumstances that affected their performance*, and have not been registered in another McMaster program or at another University during that time.
Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar. The completed form and the $100 fee must be submitted to the Office of the Registrar by June 30 for entry in September.
*****The application must clearly demonstrate extraordinary circumstances which caused inadequate performance and indicate whether the circumstances surrounding their academic situation have been resolved. The application should also include relevant supporting documentation. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and after admission to McMaster, as well as the nature of the reasons cited in the application letter and the accompanying documentation. Such exceptional cases will be considered on their merit. **Reinstatement is not guaranteed.**
Upon reinstatement, the Grade Point Average for a student is reset to 0.0 on zero units. If at any review after reinstatement the student's cumulative Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Former Students from the Faculty of Business

A student who was previously registered in a DeGroote undergraduate Business program, was in good standing and did not attend in the preceding year, but did attend another post-secondary institution must write to the Student Experience - Academic Office to seek readmission. The letter should describe the student's activities (academic and otherwise) since they were last registered.
If five years have passed since the student was last registered at McMaster, they should consult the heading *Readmission* in the *Admission Requirements* section of this Calendar.

Inquiries Regarding Academic Regulations

A student seeking relief from the School of Business academic regulations must apply in writing to the Undergraduate Recruitment, Admissions, and Student Affairs Committee with appropriate documentation attached. Guidelines for such requests may be obtained from the Student Experience - Academic Office, in the DeGroote School of Business, Room A102.

A. Programs for Students who Enter Business I in September 2021 or Later

Program Notes

1. For entry into the Honours Commerce Program, a Business 1, student:
    - Must have a Grade Point Average (GPA) of at least 5.0
    - Must have passed a minimum of 24 units of course work for Business I
    - May repeat failed courses in order to qualify for Level II. Please refer to the McMaster Repeat Policy.
2. Students seeking a Minor in Mathematics and Statistics must take MATH 1A03 and should refer to the *Faculty of Science* section of this Calendar for the requirements for a Minor in Mathematics and Statistics. Students neither seeking this Minor nor planning on a transfer to the Faculty of Science, are advised to take MATH 1MM3.
3. Transfer students may be admitted from other universities or from other Faculties within McMaster University. Academic requirements for admission of transfer students will be more demanding than those for Business I students.
4. Courses that are cross-listed with Commerce courses are considered Commerce electives for the purposes of fulfilling program requirements. This is the case regardless of the course code the student has enrolled under.
5. Non-Commerce students may enrol in specific upper-year Commerce courses if they have been accepted into a Specialized Minor offered by

the Faculty of Business or can demonstrate that they are pursuing an *Interdisciplinary Minor* for which the specific Commerce courses are included.

BUSINESS I

LEVEL I: 30 UNITS

Students admitted to Business I must complete 30 units as follows:

1 course

- COMMERCE 1GR0 A/B - DeGroote Student Experience and Development I

15 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1DA3 - Business Data Analytics
- COMMERCE 1E03 - Business Environment and Organization
- COMMERCE 1MA3 - Introduction to Marketing

6 units

- ECON 1B03 - Introductory Microeconomics (or ECON 1BX3)
- ECON 1BB3 - Introductory Macroeconomics

3 units

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

(See *Program Note 2* regarding the Minor in Mathematics.)

6 units

- Non-Commerce electives to total 30 units

HONOURS COMMERCE

Requirements for continuation in the Honours B.Com. Program are specified in the *General Academic Regulations* section of this Calendar.

Students who are currently registered in this program should refer to their advisement reports in Mosaic Student Centre or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level II: 30 Units

1 course

- COMMERCE 2GR0 - DeGroote Student Experience and Development II

24 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2DA3 - Decision Making with Analytics
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2NG3 - Negotiations
- COMMERCE 2OC3 - Operations Management

6 units

- Electives from non-Commerce courses

Level III: 30 Units

1 course

- COMMERCE 3GR0 - DeGroote Student Experience and Development III

3 units

- COMMERCE 3MC3 - Applied Marketing Management

12 units

- Electives from Commerce courses

6 units

- Electives from non-Commerce courses

9 units

- Open electives

Level IV: 30 Units

9 units

- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

6 units

- Electives from non-Commerce courses

15 units

- Open electives

HONOURS COMMERCE WITH INTERNSHIP

ADMISSION

Enrolment in this program is limited. Applications for admission into the Honours B.Com. with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website).

Only full-time Honours B.Com. students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed at least 54 units (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Honours B.Com. with Internship degree program. Selection into the program is competitive and will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Honours B.Com. with Internship program, students must maintain a cumulative Grade Point Average of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

30 units

Completed prior to admission in the program

Level II: 30 Units

30 units

Completed prior to admission in the program

Level III: 30 Units

1 course

- COMMERCE 3GR0 - DeGroote Student Experience and Development III

3 units

- COMMERCE 3MC3 - Applied Marketing Management

12 units

- Electives from Commerce courses

6 units

- Electives from non-Commerce courses

9 units

- Open electives

Level IV: Work term

Commerce Internship Work Term (12-16 months)

Work term

3-4 courses

from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (See *Note 2* above.)
- COMMERCE 4ID0 - Internship Final Term (See *Note 3* above.)

Level V: 30 Units

9 units

- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

6 units

- Electives from non-Commerce courses

15 units

- Open electives

COMMERCE (B.COM.)

Requirements for continuation in the B.Com. Program are specified in the *General Academic Regulations* section of this Calendar.

Students who are currently registered in this program should refer to their advisement reports or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level III: 30 Units

1 course

- COMMERCE 3GR0 - DeGroote Student Experience and Development III

3 units

- COMMERCE 3MC3 - Applied Marketing Management

6 units

from

- Electives from Commerce courses

12 units

from

- Electives from non-Commerce courses

9 units

- Open electives

Level IV: 30 Units

9 units

- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

9 units

- Electives from non-Commerce courses

12 units

- Open electives

B. Programs for Students who Entered Business I in September 2020

Program Notes

1. To be considered for entry into the Honours Commerce Program, a Business I student must have met all of the following:
   - achieved a GPA of at least 5.0 on a minimum of 24 units of course work for Business I and these must include all required courses of the Business I program;
   - successfully completed all Business I required courses (See Business I Requirements). An exception to this condition is that no more than a single failure of a Business I required course is allowed for students with a GPA of at least 5.0 on a minimum of 24 units of course work for Business I. These students must successfully complete the failed course at the earliest possible opportunity or they will not be able to continue in the program;
   - successfully completed ALL required units of Business I course work and successfully completed enough units of elective course work where the total of successful units of course work equals 24 units.
2. Students seeking a Minor in Mathematics and Statistics must take MATH 1A03 and should refer to the Faculty of Science section of this Calendar for the requirements for a Minor in Mathematics and Statistics. Students neither seeking this Minor nor planning on a transfer to the Faculty of Science, are advised to take MATH 1M03.
3. Transfer students may be admitted from other universities or from other Faculties within McMaster University. Academic requirements for admission of transfer students will be more demanding than those for Business I students.
4. Courses that are cross-listed with Commerce courses are considered Commerce electives for the purposes of fulfilling program requirements. This is the case regardless of the course-code the student has enrolled under.
5. Non-Commerce students may enrol in specific upper-year Commerce courses if they have been accepted into a Specialized Minor offered by the Faculty of Business or can demonstrate that they are pursuing an interdisciplinary minor for which the specific Commerce courses are included.

BUSINESS I

LEVEL I: 30 UNITS

Students admitted to Business I must complete 30 units as follows:

1 course

- COMMERCE 1GR0 A/B - DeGroote Student Experience and Development I

15 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1DA3 - Business Data Analytics
- COMMERCE 1E03 - Business Environment and Organization
- COMMERCE 1MA3 - Introduction to Marketing

6 units

- ECON 1BB3 - Introductory Macroeconomics
- ECON 1BX3

3 units

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1M03

(See *Program Note 2* regarding the Minor in Mathematics)

0-3 units

- MATH 1F03 - Introduction to Calculus and Analytic Geometry (for those students without Grade 12 Calculus and Vectors U or equivalent)

3-6 units

- Non-Commerce electives to total 30 units

HONOURS COMMERCE

Requirements for continuation in the Honours B.Com. Program are specified in the General Academic Regulations section of this Calendar.
Students who are currently registered in this program should refer to their advisement reports in Mosaic Student Centre or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level II: 30 Units

1 course

- COMMERCE 2GR0 A/B - DeGroote Student Experience and Development II

21 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2DA3 - Decision Making with Analytics
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2OC3 - Operations Management

6 units

- Electives from non-Commerce courses

3 units

- Open electives

Level III: 30 Units

1 course

- COMMERCE 3GR0 - DeGroote Student Experience and Development III

6 units

- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3S03 - Management Skills Development

12 units

- Electives from Commerce courses

6 units

- Electives from non-Commerce courses

6 units

- Open electives

Level IV: 30 Units

9 units

- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

6 units

- Electives from non-Commerce courses

15 units

- Open electives

HONOURS COMMERCE WITH INTERNSHIP

ADMISSION

Enrolment in this program is limited. Applications for admission into the Honours B.Com. with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website).
Only full-time Honours B.Com. students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed all Level II required courses (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Honours B.Com. with Internship degree program. Selection into the program will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Honours B.Com. with Internship program, students must maintain a cumulative Grade Point Average of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

30 units

Completed prior to admission in the program

Level II: 30 Units

30 units

Completed prior to admission in the program

Level III: 30 Units

1 course

- COMMERCE 3GR0 - DeGroote Student Experience and Development III

6 units

- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3S03 - Management Skills Development

12 units

- Electives from Commerce courses

6 units

- Electives from non-Commerce courses

6 units

- Open electives

Level IV: Work term

Commerce Internship Work Term (12-16 months)

Work term

3-4 courses

from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (see *Note 2* above.*)*
- COMMERCE 4ID0 - Internship Final Term (see *Note 3* above.)

Level V: 30 Units

9 units
- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

6 units
- Electives from non-Commerce courses

15 units
- Open electives

COMMERCE (B.COM.)

Requirements for continuation in the B.Com. Program are specified in the *General Academic Regulations* section of this Calendar.
Students who are currently registered in this program should refer to their advisement reports or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level III: 30 Units

1 course
- COMMERCE 3GR0 - DeGroote Student Experience and Development III

6 units
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3S03 - Management Skills Development

6 units

from
- Electives from Commerce Courses

12 units
- Electives from non-Commerce courses

6 units
- Open electives

Level IV: 30 units

9 units
- COMMERCE 4GR3 - DeGroote Student Experience and Development IV
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

9 units
- Electives from non-Commerce courses

12 units
- Open electives

C. Programs for Students who Entered Business I in September 2016-2019

Program Notes

1. Students have only one opportunity to be reviewed for entry to a Commerce program. Other options may be pursued through the Student Experience - Academic Office (DSB-112).
2. To be considered for entry into the Honours Commerce Program, a Business I student must have met all of the following:
   - achieved a GPA of at least 5.0 on a minimum of 24 units of course work for Business I (on first attempts only) and these must include all required courses of the Business I program;
   - successfully completed, on first attempts only, all Business I required courses (See *Business I Requirements).* An exception to this condition is that no more than a single failure of a Business I required course is allowed for students with a GPA of at least 5.0 on a minimum of 24 units of course work for Business I. These students must successfully complete the failed course at the earliest possible opportunity or they will not be able to continue in the program;
   - successfully completed ALL required units of Business I course work and successfully completed enough units of elective course work where the total of successful units of course work equals 24 units.
3. Refer to Workload under the Academic Regulations section in the School of Business for information on full-time and part-time Business I course loads.
4. Students seeking a Minor in Mathematics and Statistics must take MATH 1A03 (or 1LS3) and should refer to the Faculty of Science section of this Calendar for the requirements for a Minor in Mathematics and Statistics. Students neither seeking this Minor nor planning on a transfer to the Faculty of Science, are advised to take MATH 1M03.
5. Transfer students may be admitted from other universities or from other Faculties within McMaster University. Academic requirements for admission of transfer students will be more demanding than those for Business I students.
6. Courses that are cross-listed with Commerce courses are considered Commerce electives for the purposes of fulfilling program requirements. This is the case regardless of the course-code the student has enrolled under.
7. Students who have been granted Faculty permission to take COMMERCE 4EL3 in Level III Commerce will have this course applied against the program requirements for Level IV Commerce as three of the six required units of Level III or IV Commerce courses. See the *DeGroote School of Business (Faculty of Business)* program requirements section of this calendar.

BUSINESS I

LEVEL I: 30 UNITS

Students admitted to Business I must complete 30 units as follows:

1 course
- COMMERCE 1DE0 - Business I Orientation

9 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1E03 - Business Environment and Organization

6 units
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

3 units

from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1M03

(See *Program Note 4* regarding the Math Minor)

0-3 units
- MATH 1F03 - Introduction to Calculus and Analytic Geometry (for those students without Grade 12 Calculus and Vectors U or equivalent)

0-3 units
- STATS 1L03

(for those students without Grade 12 Mathematics of Data Management U or equivalent)

9-12 units
- Electives to total 30 units. See also the *International/Cross-Cultural/ Language Menu*

HONOURS COMMERCE

Requirements for continuation in the Honours B.Com. Program are specified in the *General Academic Regulations* section of this Calendar.
Students who are currently registered in this program should refer to their advisement reports in Mosaic Student Centre or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level II: 30 units

24 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2MA3 - Introduction to Marketing
- COMMERCE 2OC3 - Operations Management
- COMMERCE 2QA3 - Applied Statistics for Business
- COMMERCE 3FA3 - Managerial Finance

6 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu).*

Level III: 30 units

9 units

- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3QA3 - Management Science for Business
- COMMERCE 3S03 - Management Skills Development

12 units

- Level III or IV Commerce courses

9 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu.)*

Level IV: 30 units

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

15 units

from

- Level III or IV Commerce courses
- Electives from non-Commerce courses

9 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu).*

HONOURS COMMERCE WITH INTERNSHIP

ADMISSION

Enrolment in this program is limited. Applications for admission into the Honours B.Com. with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website).

Only full-time Honours B.Com. students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed all Level II required courses (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Honours B.Com. with Internship degree program. Selection into the program will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Honours B.Com. with Internship program, students must maintain a cumulative Grade Point Average of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

30 units

Completed prior to admission in the program

Level II: 30 Units

30 units

Completed prior to admission in the program

Level III: 30 Units

9 units

- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3QA3 - Management Science for Business
- COMMERCE 3S03 - Management Skills Development

12 units

- Electives from Commerce courses

9 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu.*)

Level IV: Work term

Commerce Internship Work Term (12-16 months)

Work term

3-4 courses

from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (see *Note 2* above.)
- COMMERCE 4ID0 - Internship Final Term (see *Note 3* above.)

Level V: 30 Units

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

9 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu.*)

15 units

- Open electives

COMMERCE (B.COM.)

Requirements for continuation in the B.Com. Program are specified in the *General Academic Regulations* section of this Calendar.

Students who are currently registered in this program should refer to their advisement reports reports in Mosaic Student Centre or contact the Student Experience - Academic Office (DSB-A102) to discuss their program requirements.

REQUIREMENTS

Level III: 30 units

9 units

- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3QA3 - Management Science for Business
- COMMERCE 3S03 - Management Skills Development

3 units

from

- Level III or IV Commerce courses

18 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu).*

Level IV: 30 units

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business

9 units

from

- Level III or IV Commerce courses
- Electives from non-Commerce courses

15 units

- Electives from non-Commerce courses (See also the *International/Cross-Cultural/Language Menu).*

D. Programs for Students who Entered the Integrated Business & Humanities Program (IBH Program) in 2022 or Later

On this page:

- Integrated Business and Humanities
- Integrated Business and Humanities with Internship Program

INTEGRATED BUSINESS AND HUMANITIES

PROGRAM NOTES

1. Students cannot take elective work until Level III of the program.
2. Students have only one opportunity to be reviewed for entry to Level II. Other options may be pursued through the Student Experience - Academic Office.
3. To be considered for entry into Level II of the IBH Program, students must have met all of the following:
   - achieved a cumulative GPA of at least 5.0 on a minimum of 24 units of the required course work for Level I (on first attempts only).
   - cannot have failed more than one required course. These students must successfully complete the failed course at the earliest possible opportunity or they will not be able to continue in the program.
4. Students are responsible for ensuring that their course selection is meeting the requirements of their degree.

REQUIREMENTS

Level I: 30 Units

1 course

- IBH 1LD0 - Leadership Development - Self Awareness

24 units

- IBH 1AA3 - Financial Accounting
- IBH 1AB3 - Perspectives on Canadian Business
- IBH 1AC3 - Introduction to Language and Society
- IBH 1AD3 - IBH in the Community
- IBH 1BA3 - Organizational Behaviour
- IBH 1BB3 - Insight and Inquiry: Examining Ourselves and the World around Us
- IBH 1BC3 - Fundamentals of Ethics
- IBH 1BD3 - Introduction to Peace Studies for IBH

6 units

- ECON 1BB3 - Introductory Macroeconomics
- ECON 1B03 - Introductory Microeconomics

Level II: 30 Units

1 course

- IBH 2LD0 - Leadership Development - Leadership Emergence

30 units

- IBH 2AA3 - Introduction to Marketing
- IBH 2AB3 - Information Systems in Management
- IBH 2AC3 - Talent Management
- IBH 2AD3 - Statistical Data Analysis
- IBH 2AE3 - Critical Thinking
- IBH 2AF3 - Global Business Experience
- IBH 2BA3 - Managerial Accounting
- IBH 2BB3 - Introduction to Finance
- IBH 2BD3 - Moral Issues
- IBH 2BF3 - History of Capitalism

Level III: 30 Units

1 course

- IBH 3LD0 - Leadership Development - Leadership Effectiveness

27 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IBH 3BD3 - Interpersonal Communication
- IBH 3BE3 - Operations Management

3 units

- Open electives

Level IV: 30 Units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4CE3 - Community Engagement Capstone
- IBH 4LD3 - Leadership Development - Leadership Capstone
- IBH 4SE3 - Social Entrepreneurship Capstone

18 units

- Open electives

INTEGRATED BUSINESS AND HUMANITIES WITH INTERNSHIP PROGRAM

ADMISSION

Enrolment in this program is limited. Applications for admission into the Integrated Business and Humanities with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website). Only full-time IBH students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed at least 54 units (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Integrated Business and Humanities with Internship degree program. Selection into the program is competitive and will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Integrated Business and Humanities with Internship program, students must maintain a cumulative GPA of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

Completed prior to admission in the program

Level II: 30 Units

Completed prior to admission in the program

Level III: 30 Units

1 course

- IBH 3LD0 - Leadership Development - Leadership Effectiveness

27 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IBH 3BD3 - Interpersonal Communication
- IBH 3BE3 - Operations Management

3 units

- Open electives

Level IV: Work term

Commerce Internship Work Term (12-16 months)

- Work term

3-4 courses

from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (See *Note 2* above.)
- COMMERCE 4ID0 - Internship Final Term (See *Note 3* above.)

Level V: 30 Units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4CE3 - Community Engagement Capstone
- IBH 4LD3 - Leadership Development - Leadership Capstone
- IBH 4SE3 - Social Entrepreneurship Capstone

18 units

- Open electives

E. Programs for Students who Entered the Integrated Business & Humanities Program (IBH Program) in September 2019-2021

INTEGRATED BUSINESS AND HUMANITIES

PROGRAM NOTES

1. Students cannot take elective work until Level III of the program.
2. Students have only one opportunity to be reviewed for entry to Level II. Other options may be pursued through the Student Experience - Academic Office (DSB-A102.)
3. To be considered for entry into Level II of the IBH Program, students must have met all of the following:
   - achieved a cumulative GPA of at least 5.0 on a minimum of 24 units of the required course work for Level I (on first attempts only.)
   - cannot have failed more than one required course. These students must successfully complete the failed course at the earliest possible opportunity or they will not be able to continue in the program.
4. Students are responsible for ensuring that their course selection is meeting the requirements of their degree.

REQUIREMENTS

Level I: 30 Units

24 units

- IBH 1AA3 - Financial Accounting
- IBH 1AB3 - Perspectives on Canadian Business
- IBH 1AC3 - Introduction to Language and Society
- IBH 1AD3 - IBH in the Community
- IBH 1BA3 - Organizational Behaviour
- IBH 1BB3 - Insight and Inquiry: Examining Ourselves and the World around Us
- IBH 1BC3 - Fundamentals of Ethics
- IBH 1BD3 - Introduction to Peace Studies for IBH

6 units

- ECON 1B03 - Introductory Microeconomics (or 1BX3)
- ECON 1BB3 - Introductory Macroeconomics

Level II: 30 Units

30 units

- IBH 2AA3 - Introduction to Marketing
- IBH 2AB3 - Information Systems in Management
- IBH 2AC3 - Talent Management
- IBH 2AD3 - Statistical Data Analysis
- IBH 2AE3 - Critical Thinking
- IBH 2AF3 - Global Business Experience
- IBH 2BA3 - Managerial Accounting
- IBH 2BB3 - Introduction to Finance
- IBH 2BD3 - Moral Issues
- IBH 2BF3 - History of Capitalism

Level III: 30 Units

27 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History

- IBH 3BD3 - Interpersonal Communication
- IBH 3BE3 - Operations Management

3 units

- Open electives

Level IV: 30 Units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4BA3
- IBH 4AB6 A/B

18 units

- Open electives

INTEGRATED BUSINESS AND HUMANITIES WITH INTERNSHIP PROGRAM

ADMISSION

Enrolment in this program is limited. Applications for admission into the Integrated Business and Humanities with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website).

Only full-time IBH students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed all Level II required courses (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Integrated Business and Humanities with Internship degree program. Selection into the program will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Integrated Business and Humanities with Internship program, students must maintain a cumulative GPA of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

30 units

Completed prior to admission in the program

Level II: 30 Units

30 units

Completed prior to admission in the program

Level III: 30 Units

27 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IBH 3BD3 - Interpersonal Communication
- IBH 3BE3 - Operations Management

3 units

- Open electives

Level IV: Work term

Commerce Internship Work Term (12-16 months)

Work term

3-4 courses

from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (See *Note 2* above.)
- COMMERCE 4ID0 - Internship Final Term (See *Note 3* above.)

Level V: 30 Units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4BA3
- IBH 4AB6 A/B

18 units

- Open electives

F. Programs for Students who Entered the Integrated Business & Humanities Program (IBH Program) Prior to 2019

INTEGRATED BUSINESS AND HUMANITIES

PROGRAM NOTES

1. Students cannot take elective work until Level III of the program.

2. Students have only one opportunity to be reviewed for entry to Level II. Other options may be pursued through the Student Experience - Academic Office (DSB-A102.)

3. To be considered for entry into Level II of the IBH Program, students must have met all of the following:

- achieved a cumulative Grade Point Average of at least 5.0 on a minimum of 24 units of the required course work for Level I (on first attempts only.)
- cannot have failed more than one required course. These students must successfully complete the failed course at the earliest possible opportunity or they will not be able to continue in the program.

4. Students are responsible for ensuring that their course selection is meeting the requirements of their degree.

REQUIREMENTS

Level I: 30 units

Students admitted to the Integrated Business & Humanities Program must complete 30 units as follows:

24 units

- IBH 1AA3 - Financial Accounting
- IBH 1AB3 - Perspectives on Canadian Business
- IBH 1AC3 - Introduction to Language and Society
- IBH 1AD3 - IBH in the Community

- IBH 1BA3 - Organizational Behaviour
- IBH 1BB3 - Insight and Inquiry: Examining Ourselves and the World around Us
- IBH 1BC3 - Fundamentals of Ethics
- IBH 1BD3 - Introduction to Peace Studies for IBH

6 units

- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

Level II: 30 units

30 units

- IBH 2AA3 - Introduction to Marketing
- IBH 2AB3 - Information Systems in Management
- IBH 2AC3 - Talent Management
- IBH 2AD3 - Statistical Data Analysis
- IBH 2AE3 - Critical Thinking
- IBH 2BA3 - Managerial Accounting
- IBH 2BB3 - Introduction to Finance
- IBH 2BD3 - Moral Issues

Level III: 30 Units

24 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IBH 3BD3 - Interpersonal Communication

6 units

- Open electives

Level IV: 30 units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4BA3
- IBH 4AB6 A/B

18 units

- Open electives

INTEGRATED BUSINESS AND HUMANITIES WITH INTERNSHIP PROGRAM

ADMISSION

Enrolment in this program is limited. Applications for admission into the Integrated Business and Humanities with Internship will be accepted at the end of the Spring/Summer term and prior to the start of the Fall term (specific deadline dates will vary each year and will be communicated in the Undergraduate Faculty of Business Bulletin, OSCARplus and on DeGroote's website).

Only full-time IBH students in good standing with a minimum cumulative Grade Point Average of 7.0 at the time of application, who have completed all Level II required courses (and who will have at least 18 units of course work left to complete following their internship) and have passed COMMERCE 2IN0 - Career Development Course, will be eligible to apply for the Integrated Business and Humanities with Internship degree program. Selection into the program will be based on academic achievement, statement of interest, work and volunteer experience and interview.

PROGRAM NOTES

1. To remain in the Integrated Business and Humanities with Internship program, students must maintain a cumulative Grade Point Average of 7.0, and remain in good academic standing.
2. Only students completing an approved 16-month internship will enroll in COMMERCE 4IC0.
3. Students should refer to the table below to plan their enrolment for their work term.
4. Students enrolled in a DSB Internship program must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term).

Work Term	Spring/ Summer	Fall	Winter	Spring/ Summer
16-month	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4IC0	COMMERCE 4ID0
12-month beginning Spring term	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0	-
12-month beginning Fall term	-	COMMERCE 4IA0	COMMERCE 4IB0	COMMERCE 4ID0

REQUIREMENTS

Level I: 30 Units

30 units

Completed prior to admission in the program

Level II: 30 Units

30 units

Completed prior to admission in the program

Level III: 30 Units

24 units

- IBH 3AA3 - Relationship Management
- IBH 3AB3 - Applied Marketing Management
- IBH 3AC3 - Corporate Finance
- IBH 3AD3 - Cross-Cultural Communication
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IBH 3BD3 - Interpersonal Communication

6 units

- Open electives

Level IV: Work term

Commerce Internship Work Term (12-16 months)

Work Term

3-4 courses from

- COMMERCE 4IA0 - Internship 1
- COMMERCE 4IB0 - Internship 2
- COMMERCE 4IC0 - Internship 3 (see *Note 2* above.)
- COMMERCE 4ID0 - Internship Final Term (see *Note 3* above.)

Level V: 30 Units

12 units

- IBH 4AA3 - Critical Seeing
- IBH 4BA3
- IBH 4AB6 A/B

18 units

- Open electives

MINOR IN ACCOUNTING AND FINANCIAL MANAGEMENT SERVICES

The School of Business will admit a maximum of 30 students to the Minor in Accounting and Financial Management Services each year. Admission decisions are made on behalf of the Undergraduate Recruitment, Admissions, and Student Affairs Committee of the DeGroote School of Business.

Notes

1. To apply for admission into the minor, students must email their interest to the Business Faculty Office at buscom@mcmaster.ca before April 30th each year.
2. Students seeking the Minor must have completed ECON 1B03 and 1BB3 with an average of at least 7.0.
3. The Minor is not open to students registered in any Commerce or Engineering and Management program.

Requirements

30 units total

6 UNITS

- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

12 UNITS

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 3AB3 - Intermediate Financial Accounting I
- COMMERCE 3AC3 - Intermediate Financial Accounting II

12 UNITS

from

- COMMERCE 4AA3 - Managerial Accounting II
- COMMERCE 4AC3 - Advanced Financial Accounting
- COMMERCE 4AD3 - Introduction to Auditing
- COMMERCE 4AF3 - Accounting Theory
- COMMERCE 4AX3
- COMMERCE 4SB3 - Introduction to Canadian Taxation
- COMMERCE 4SC3 - Advanced Canadian Taxation

MINOR IN BUSINESS

Notes

1. The Minor is not open to students registered in any Commerce or Engineering and Management program.
2. For purposes of the Business Minor, ECON 2I03 will be accepted as a substitute for COMMERCE 2FA3. All courses listed as anti-requisite for COMMERCE 1DA3 (or 2QA3) in the *Course Listings* section of the Undergraduate Calendar will be accepted as a substitute for COMMERCE 1DA3 (or 2QA3).

Requirements

24 units total

24 UNITS

from

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1DA3 - Business Data Analytics (or 2QA3)
- COMMERCE 1MA3 - Introduction to Marketing (or 2MA3)
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2DA3 - Decision Making with Analytics
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance (or 3FA3)
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2NG3 - Negotiations
- COMMERCE 2OC3 - Operations Management
- COMMERCE 3MC3 - Applied Marketing Management
- ECON 1B03 - Introductory Microeconomics

MINOR IN FINANCE

The School of Business will admit a maximum of 30 students to the Minor in Finance each year. Admission decisions are made on behalf of the Undergraduate Recruitment, Admissions, and Student Affairs Committee of the DeGroote School of Business.

Notes

1. The Minor is not open to students registered in any Commerce or Engineering and Management program.
2. To apply for admission into the minor, students must email their interest to the Business Faculty Office at buscom@mcmaster.ca before April 30th each year.
3. Students seeking the Minor must have completed ECON 1B03 and 1BB3 with an average of at least 7.0.
4. Students seeking to obtain the Minor must complete both ECON 2B03 and 2H03 before undertaking any Level III or Level IV Finance courses.
5. COMMERCE 4FW3 and COMMERCE 4FP3 do not count towards the Minor.

Requirements

30 units total

6 UNITS

- ECON 1B03 - Introductory Microeconomics (or 1BX3)
- ECON 1BB3 - Introductory Macroeconomics

6 UNITS

- ECON 2B03 - Analysis of Economic Data

9 UNITS

from

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 2FA3 - Introduction to Finance (or ECON 2I03)
- COMMERCE 2FB3 - Managerial Finance (or 3FA3)

9 UNITS

- Levels III, IV Finance courses (See *Note 5.)*

MINOR IN INFORMATION SYSTEMS

The School of Business will admit a maximum of 30 students to the Minor in Information Systems each year. Admission decisions are made on behalf of the Undergraduate Recruitment, Admissions, and Student Affairs Committee of the DeGroote School of Business.

Notes

1. The Minor is not open to students registered in Commerce or Engineering and Management.
2. To apply for admission into the minor, students must email their interest to the Business Faculty Office at buscom@mcmaster.ca before April 30th each year.
3. Students seeking the Minor must have completed, with a minimum grade of B-, one of COMPSCI 1JC3, 1TA3, ECON 1B03, 1BX3, ECON 1BB3, or ENGINEER 1P13 A/B.
4. Please note that successful completion of ENGINEER 1P13 A/B will satisfy the requirement of COMPSCI 1TA3 for purposes of this minor

Requirements

24 units total

3 UNITS

from

- COMPSCI 1JC3 - Introduction to Computational Thinking
- COMPSCI 1TA3

3 UNITS

from

- ECON 1B03 - Introductory Microeconomics (or ECON 1BX3)
- ECON 1BB3 - Introductory Macroeconomics

3 UNITS

- COMMERCE 2KA3 - Information Systems in Management

6 UNITS

from

- COMMERCE 3KA3 - System Analysis and Design
- COMMERCE 3KD3 - Database Design Management and Applications
- COMMERCE 3KE3 - Management of Enterprise Data Analytics and Artificial Intelligence

9 UNITS

from

- COMMERCE 4KF3 - Project Management
- COMMERCE 4KH3 - Strategies for Electronic and Mobile Business
- COMMERCE 4KI3 - Business Process Management
- COMMERCE 4KX3 - Special Topics in Information Systems

SPECIALIZED MINOR IN COMMERCE FOR STUDENTS COMPLETING A SINGLE HONOURS B.A. IN HUMANITIES

The Specialized Minor in Commerce for Humanities students is administered by the DeGroote School of Business. A maximum of 30 students will be admitted each year to this Specialized Minor.

Notes

1. For admission, Humanities students (Level 1) must complete an application for admission to the Minor by using the Service Request function in the Student Centre in Mosaic during the Program/Plan Selection process in April.
2. Students must also be admitted to a Single Honours B.A. in one of the following programs: Cognitive Science of Language, Communication Studies, English and Cultural Studies, French, Greek and Roman Studies, History, iARTS (Integrated Arts), Justice, Political Philosophy and Law, Linguistics, Media Arts, or Philosophy.
3. Students seeking the Specialized Minor in Commerce for Humanities must have completed ECON 1B03, and one of MATH 1MM3, ECON 1BB3, COMMERCE 1AA3, 1BA3, 1DA3 or 1MA3.
4. Students must have a Grade Point Average of at least 6.0 to be considered for entry into the Minor.
5. Students planning to apply to the accelerated MBA program at McMaster are strongly encouraged to consult with MBA Admissions at the Ron Joyce Centre regarding admission requirements. In addition to meeting all other admission criteria students must complete, with a minimum grade of B-, the following courses:
    - all three of ECON 1B03, 1BB3, and MATH 1MM3;
    - all level 1 and 2 Commerce courses listed below, with the exception of COMMERCE 2DA3 and 2NG3;
    - COMMERCE 3MC3

Requirements

33 units total

24 UNITS

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1DA3 - Business Data Analytics
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2DA3 - Decision Making with Analytics
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2MA3 - Introduction to Marketing
- COMMERCE 2NG3 - Negotiations
- COMMERCE 2QA3 - Applied Statistics for Business
- COMMERCE 2OC3 - Operations Management
- COMMERCE 3MC3 - Applied Marketing Management
- ECON 1B03 - Introductory Microeconomics

3 UNITS

from

- HUMAN 3LM3
- HUMAN 3CM3
- HUMAN 3EL3 - Emotionally Intelligent Leadership

6 UNITS

- Level III or IV Commerce courses

Faculty of Engineering

John Hodgins Engineering Building, Room H301, ext. 24646
http://www.eng.mcmaster.ca/

DEAN OF ENGINEERING
H. Sheardown/B.Eng. *(McMaster)*, Ph.D. *(Toronto)*, P.Eng.

ASSOCIATE DEAN OF ENGINEERING (UNDERGRADUATE STUDIES)
S. Dickson-Anderson/B.A.Sc., Ph.D. *(Waterloo)*, P.Eng.

ASSOCIATE DEAN OF ENGINEERING (RESEARCH)
C. Filipe/B.S. *(Universidade Catolica Portuguesa)*, Ph.D. *(Clemson)*, L.E.L.

DIRECTOR, W. BOOTH SCHOOL OF ENGINEERING PRACTICE AND TECHNOLOGY
B. Baetz/B.A.Sc., M.A.Sc. *(Toronto)*, Ph.D., *(Duke)*, P.Eng.

DIRECTOR, EXPERIENTIAL LEARNING
C. Churchill/B.Eng., M.Eng.

CO-DIRECTORS, ENGINEERING and MANAGEMENT PROGRAM
V. Leung/B.Eng Biosci., M.A.Sc., Ph.D. *(McMaster),* P. Eng.
P. Snowdon/B.A., B.A.Sc., M.Sc., DBA *(University of Reading)*

DIRECTOR, ENGINEERING and SOCIETY PROGRAM
C. Churchill/B.Eng., M.Eng.

ASSISTANT DEAN (STUDIES)
M. White/B.Sc. (Hon.)

ACADEMIC ADVISORS
D. Abuzaid/ B.A. Hon.
B. Conry/B.A.
D. Hayward/B.A.
S. Lee/B.Sc., M.Sc.
R. Patil/B.Comp Sci, M.Sc.
J. Taylor/B.Sc.
S. Williams/B.A.

Engineering is a profession concerned with the creation of new and improved systems, processes and products to serve human needs. The central focus of engineering is design, an art entailing the exercise of ingenuity, imagination, knowledge, skill, discipline and judgment based on experience. The practice of professional engineering requires a mastery of engineering methodology together with a sensitivity to the physical properties of materials, to the

logic of mathematics, to the constraints of human, physical and financial resources, to the minimization of risk, and to the protection of the public and the environment.

Bachelor of Applied Science Programs

The Faculty of Engineering offers a four-year Computer Science programs leading to the Bachelor of Applied Science (B.A.Sc.) degree:

- Honours Computer Science

Admission procedures and criteria can be obtained from the Office of the Associate Dean, Academic.

Bachelor of Technology Programs

McMaster University's Faculty of Engineering and Mohawk College's School of Engineering Technology have partnered since 1997 to deliver the unique Bachelor of Technology program in response to the needs of today's innovation-based organizations. The Bachelor of Technology programs operate within the Faculty of Engineering's W. Booth School of Engineering Practice and Technology. This type of program is targeted to individuals whose technological interests are applications-oriented.

The programs being offered are of two kinds:

1. **A four-year degree program** (leading to both a Bachelor of Technology degree from McMaster and both an Advanced Diploma in Technology and a Business Management Certificate from Mohawk College) with entry directly from high school and
2. **A degree completion** program (leading to both a Bachelor of Technology degree from McMaster and a Business Management Certificate from Mohawk College) for graduates of the Mohawk College Advanced Diploma in Technology (or graduates of similar programs at other Colleges).

A major thrust of all of the programs is the inclusion of a significant component of management education in order to ensure that graduates are able to perform supervisory and management responsibilities as they advance in their technical careers. The management component is designed to form a cohesive segment which complements the technical program content.

For information concerning the Bachelor of Technology programs, please see the *Programs for the* **Bachelor of Technology (B.Tech.) Degree in this section of this Calendar.**

Bachelor of Engineering Programs

A five-year program leading to a Bachelor of Engineering in Biomedical Engineering (B.Eng.BME) is offered in Integrated Biomedical Engineering and Health Sciences (IBEHS) Program.

Four-year programs are offered leading to the Bachelor of Engineering degree (B.Eng.) in the following fields of specialization:

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Physics
- Materials Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Software Engineering

Five-year programs, leading to the Bachelor of Engineering and Society degree (B.Eng.Soc), are offered in:

- Chemical Engineering and Society
- Civil Engineering and Society
- Computer Engineering and Society
- Engineering Physics and Society
- Electrical Engineering and Society
- Materials Engineering and Society
- Mechanical Engineering and Society
- Mechatronics Engineering and Society
- Software Engineering and Society

In addition, and in conjunction with the School of Business, five-year programs leading to the Bachelor of Engineering and Management degree (B.Eng.Mgt) are offered in:

- Chemical Engineering and Management
- Civil Engineering and Management
- Computer Engineering and Management
- Electrical Engineering and Management
- Engineering Physics and Management
- Materials Engineering and Management
- Mechanical Engineering and Management
- Mechatronics Engineering and Management
- Software Engineering and Management

A five-year program leading to the Bachelor of Engineering and Biosciences (B.Eng.BioSci) is offered in:

- Chemical Engineering and Bioengineering

In addition, and in conjunction with Faculty of Health Sciences, five-year programs leading to the Bachelor of Engineering and Biomedical (B.Eng.BME) are offered in:

- Chemical and Biomedical Engineering
- Civil and Biomedical Engineering
- Engineering Physics and Biomedical Engineering
- Electrical and Biomedical Engineering
- Materials and Biomedical Engineering
- Mechanical and Biomedical Engineering
- Mechatronics and Biomedical Engineering
- Software and Biomedical Engineering

All programs have limitations on enrolment. Students are admitted to the program following successful completion of Engineering I or IBEHS I. Admission procedures and criteria can be obtained from the Office of the Associate Dean, Academic. The B.Eng., B.Eng.Biosciences, B.Eng.Mgt., B.Eng. Society and B.Eng.BME programs are honours degree programs. McMaster baccalaureate degree programs in Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers.

At McMaster, Engineering students take a common Level I program comprised of Mathematics, Materials, Physics, Chemistry, Engineering Graphics, Introduction to Professional Engineering and Design, Computation and complementary studies electives. Integrated Biomedical Engineering & Health Sciences I students take a separate common Level I program comprised of Mathematics, Materials, Physics, Chemistry, Cellular and Molecular Biology, Introduction to Professional Engineering and Design, Computation and complementary studies electives. The specialized programs are entered at Level II. Students interested in the Engineering and Management programs must take ECON 1B03 as one of their complementary studies electives in Level I. Students interested in one of the Engineering and Society programs are advised to choose the six units complementary studies in Level I to be consistent with their chosen focus of the program. Students interested in one of the Engineering and Biomedical Engineering programs must take IBEHS approved technical electives. Programs offered by the Faculty of Engineering include five types of elective courses, which are governed by regulations, as follows:

Complementary Studies Electives are broadening courses with subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences.

The Associate Dean (Undergraduate Studies) must authorize each student's complementary studies elective courses. An approved list is published each spring and is available from the Office of the Associate Dean (Undergraduate Studies). Engineering I students should refer to the Degrees and Programs

section of this Calendar to determine which Level I Complementary Studies electives are possible (http://www.eng.mcmaster.ca/documents/electives.pdf).
Technical Electives are Engineering or Applied Science courses in subjects relevant to the particular program. A list is available in each Engineering Department office.
Commerce Electives are required in Level V of Engineering and Management programs.
Engineering and Society Focus Electives are courses offered by various departments throughout the University. These courses are selected in consultation with the Director of the Engineering and Society program, such that they form a proper sequence of the focus electives.
IBEHS Technical Electives are approved courses offered by the Integrated Biomedical Engineering & Health Sciences (IBEHS) program or various departments throughout the University in subjects relevant to the particular program. A list is available on ibiomed.mcmaster.ca.
Health Sciences Electives are courses administered by the Bachelor of Health Sciences (Honours) Program in subjects relevant to the health sciences, including immunology, molecular biology, infectious disease, neurosciences, behavioural sciences, clinical epidemiology, health economics and health policy. Students must meet course pre-requisites. Health sciences electives are required in the IBEHS program.

Engineering Co-op Program

Undergraduate students in the Faculty of Engineering or registered in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program can enroll in a Co-op version of each program. Students enrolled in the former will be required to complete 12 months of industrial/practical experience prior to graduation. The 12 months experience may be acquired through a combination of four-month experience terms, or a combination of a four-month and eight-month experience terms, or an experience term of 12 or 16 months in duration. Full-time students in good academic standing may enter the Co-op version of their program at any time up to the beginning of Term 2 of their next-to-last level of undergraduate studies.
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER/IBEHS 1EE0 prior to their first work term.
To be eligible to register a co-op work term, a student must be designated as full-time status in the academic term that immediately precedes the work term and must be returning to full-time status in the academic term that immediately follows the work term.

ENGINEERING CO-OP FEES

An Engineering Co-op fee will be charged for students registered in a Faculty of Engineering Co-op Program and the Integrated Biomedical Engineering & Health Sciences (IBEHS) Co-op Program.

Exchange Programs

Formal exchange programs with a number of universities in other countries are available for B.Eng. students wishing to attend a foreign university and receive credit at McMaster. For further information please see International Study in the General Academic Regulations section in this Calendar. Information concerning student exchanges can also be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading International Student Services.

Minor

In partnership with the DeGroote School of Business, the Faculty of Engineering offers a Interdisciplinary Minor in Innovation.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to make every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority will be given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the University provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in the Faculty of Engineering programs or Integrated Biomedical Engineering & Health Sciences (IBEHS) program, in addition to meeting the General Academic Regulations of the University, shall be subject to the following Faculty Regulations.

Engineering I

Admission to Level II Programs

All Level I students who wish to be reviewed for admission to a Level II program in the Faculty of Engineering for the following Fall/Winter term must submit an Application of Admission to Level II through MOSAIC by the University stated deadline. Students rank up to twelve program choices. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.
Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses before the start of the Level II program. Students must maintain a minimum Cumulative Grade Point Average (GPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II program is competitive. The admission into each Level II program is determined by the Cumulative Grade Point Average (GPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (GPA) up to the time of Level II program admission review. Grades earned in a Spring and/or Summer term, (after program admission review) will not change student Level II program eligibility. A student in Engineering I with a Grade Point Average (GPA) less than 4.0 can no longer continue in the Faculty of Engineering. Students must follow the program requirements of the Academic Calendar year in effect when they enter Level II. Admission to a B.Eng.Mgt. program is competitive and will be based on Cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a

minimum grade of 5.0 (63%). Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Computer Science I

To be eligible for Level II Computer Science a student requires an overall Grade Point Average (GPA) of 4.0 and must also have passed all non-elective Computer Science I courses. See the program listings under Programs for the B.A.Sc. Degree for specific information on admission requirements for each program.
A student in Computer Science I whose Grade Point Average (GPA) is less than 4.0 may no longer continue in the Faculty.

Integrated Biomedical Engineering & Health Sciences I

All Level I students who wish to be reviewed for admission to a Level II program in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program for the following Fall/Winter term must submit an Application of Admission to Level II through MOSAIC by the University stated deadline. Students in the IBEHS program must rank both degree options in order of preference, and are permitted to rank up to twelve program choices in total. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices. Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II program is competitive. The admission into each Level II program is determined by the Cumulative Grade Point Average (GPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (GPA) up to the time of Level II program admission review. Grades earned in summer school, after program admission review, will not change student Level II program eligibility. A student in IBEHS I with a Grade Point Average (GPA) less than 4.0 can no longer continue in the Integrated Biomedical Engineering and Health Sciences
(IBEHS) program.
Students must follow the program requirements of the Calendar in effect when they enter Level II.

Bachelor of Technology I

To be eligible for any Level II Bachelor of Technology program, a student requires an overall Grade Point Average (GPA) of 3.5 or above and must have 24 units of Bachelor of Technology I courses. See the program listings under Programs for the Four-Year Bachelor of Technology degree for specific information on admission requirements for each program.

Sequence of Courses

Courses must be taken in the sequence specified in the Calendar for the program. Students must register for all outstanding work of one level before attempting work for a higher level.

Repeated Courses

All failed courses must be repeated if they are required courses for the Engineering program or may be replaced if the courses are not explicitly required.

Level of Registration

A student is required to register in the lowest level for which more than six units of work is incomplete. Work of a higher level may be undertaken only with the permission of the Associate Dean of Engineering.

Reinstatement to Faculty of Engineering, or Integrated Biomedical Engineering & Health Sciences

A student who is ineligible to continue in the Faculty of Engineering or Integrated Biomedical Engineering & Health Sciences or who May not continue at the university may normally not apply for reinstatement for one full academic year. Exceptions may be made when there are extenuating circumstances which are supported by documentation.
Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar or the Office of the Associate Dean of Engineering. The completed form and the $100 fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. **Reinstatement is not guaranteed.**
A student who is reinstated after being ineligible to continue at a given level must repeat all the courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on academic probation, and calculation of their Cumulative Grade Point Average (GPA) will begin anew. If at any review after reinstatement the student's Cumulative Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Transfers

Students in good standing in other Faculties can apply to transfer directly to Engineering I, Integrated Biomedical Engineering and Health Sciences I (IBEHS I), Computer Science I, and/or Bachelor of Technology I, provided they have completed the necessary admission requirements. Eligible internal transfer positions to Engineering I, IBEHS I, Computer Science I, and Bachelor of Technology I are limited, and entry is competitive. Applicants who meet the necessary admission requirements are ranked based on cumulative GPA. Transfer credit will be given for courses completed that are equivalent to courses in the Engineering I, IBEHS I, Computer Science I, and Bachelor of Technology I programs. Students who anticipate making such a transfer should consult with an Academic Advisor in the Office of the Associate Dean of Engineering (Academic) to discuss process and the assessment of transfer credit.

Program Changes

All program changes must be made through the Office of the Associate Dean, Academic.

Transferring to Graduate with a B.A.Sc. Degree from one of the B.Eng.BME Biomedical Engineering programs of the Integrated Biomedical Engineering and Health Sciences

Program

Students who successfully complete at least 90 units including all admission requirements and program-specific course requirements up to the end of at least Level III of one of the B.Eng.BME Biomedical Engineering programs of the Integrated Biomedical Engineering and Health Sciences Program, with a minimum Grade Point Average of 4.0 may request permission from the Office of the Associate Dean of Engineering (Undergraduate Studies) for transfer to graduate with the B.A.Sc. (exit) degree.

Level I Programs

Bachelor of Applied Science

COMPUTER SCIENCE I/COMPUTER SCIENCE I CO-OP (B.A.SC.)

30 units total

Requirements

15 UNITS

- COMPSCI 1DM3 - Discrete Mathematics for Computer Science
- COMPSCI 1JC3 - Introduction to Computational Thinking
- COMPSCI 1MD3 - Introduction to Programming
- COMPSCI 1XC3 - Computer Science Practice and Experience: Development Basics
- COMPSCI 1XD3 - Computer Science Practice and Experience: Introduction to Software Design Using Web Programming

9 UNITS

- MATH 1B03 - Linear Algebra I
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A

6 UNITS

- Electives

2 COURSES

- ENGINEER 1A00 or
- WHMIS 1A00 - Introduction to Health and Safety
- ENGINEER 1EE0 - Introduction to Career Planning & Employment

Bachelor of Engineering

ENGINEERING I/ENGINEERING I CO-OP

37 units total

Requirements

3 UNITS

- CHEM 1E03 - General Chemistry for Engineering I

13 UNITS

- ENGINEER 1P13 A/B - Integrated Cornerstone Design Projects in Engineering

9 UNITS

- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A
- MATH 1ZC3 - Engineering Mathematics II-B

6 UNITS

- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

6 UNITS

- approved complementary studies electives.

(See *Elective Courses Available To Level I Students* in *Degrees, Programs and Courses*.)

2 COURSES

from

- WHMIS 1A00 - Introduction to Health and Safety
- ENGINEER 1EE0 - Introduction to Career Planning & Employment

Bachelor of Engineering and Biomedical Engineering

INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I/INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I CO-OP

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4 month work term.
2. Admission to Level II Engineering and Biomedical Engineering programs requires completion of all 34 units of required IBEHS I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the students Cumulative Grade Point Average. A student in IBEHS I whose Grade Point Average (GPA) is less than 4.0 can no longer continue in IBEHS.
3. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to 8-units of research project or independent study courses. A full listing can be found on the IBEHS website.
4. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

37 units total

LEVEL I: 37 UNITS

16 units

- IBEHS 1EP6 A/B - Entrepreneurship in Biomedical Innovation: From Bench to Market
- IBEHS 1P10 A/B - Health Solutions Design Projects I: Introduction to Engineering Fundamentals and Design

3 units

- CHEM 1E03 - General Chemistry for Engineering I

9 units

- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A
- MATH 1ZC3 - Engineering Mathematics II-B

6 units

- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 units

- Complementary Studies

(See *Elective Courses Available To Level I Students)*

3 courses

- BIOSAFE 1BS0 - Biosafety Training
- WHMIS 1A00 - Introduction to Health and Safety
- IBEHS 1EE0 - Introduction to Career Planning & Employment

Bachelor of Technology

B.TECH. I

Automation Systems Engineering Technology I Co-op (B.Tech.)

30 units total

REQUIREMENTS

15 units
- ENGTECH 1CH3 - Chemistry
- ENGTECH 1EL3 - Electricity and Electronics I
- ENGTECH 1MC3 - Mathematics I
- ENGTECH 1MT3 - Mathematics II
- ENGTECH 1PH3 - Physics

6 units
- GENTECH 1BZ3 - Foundations of Business
- GENTECH 1PC3 - Professional Communications

9 units
- ENGTECH 1AC3 - Analytical Chemistry
- ENGTECH 1CP3 - C++ Programming
- ENGTECH 1PR3 - Object-Oriented Programming

2 courses
- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- WHMIS 1A00 - Introduction to Health and Safety

Automotive and Vehicle Engineering Technology I Co-op (B.Tech.)

30 units total

REQUIREMENTS

15 units
- ENGTECH 1CH3 - Chemistry
- ENGTECH 1EL3 - Electricity and Electronics I
- ENGTECH 1MC3 - Mathematics I
- ENGTECH 1MT3 - Mathematics II
- ENGTECH 1PH3 - Physics

6 units
- GENTECH 1BZ3 - Foundations of Business
- GENTECH 1PC3 - Professional Communications

9 units
- ENGTECH 1ME3 - Statics and Mechanics of Materials
- ENGTECH 1CP3 - C++ Programming
- ENGTECH 1PR3 - Object-Oriented Programming

2 courses
- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- WHMIS 1A00 - Introduction to Health and Safety

Biotechnology I Co-op (B.Tech.)

30 units total

REQUIREMENTS

15 units
- ENGTECH 1CH3 - Chemistry
- ENGTECH 1EL3 - Electricity and Electronics I
- ENGTECH 1MC3 - Mathematics I
- ENGTECH 1MT3 - Mathematics II
- ENGTECH 1PH3 - Physics

6 units
- GENTECH 1BZ3 - Foundations of Business
- GENTECH 1PC3 - Professional Communications

9 units
- ENGTECH 1AC3 - Analytical Chemistry
- ENGTECH 1BI3 - Biology
- ENGTECH 1PP3 - Python Programming

2 courses
- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- WHMIS 1A00 - Introduction to Health and Safety

Department of Chemical Engineering

Faculty of the Department of Chemical Engineering, as of January 15, 2025

CHAIR

Jake Nease

ASSOCIATE CHAIR GRADUATE

Li Xi

ASSOCIATE CHAIR UNDERGRADUATE

Shelir Ebrahimi

ASSOCIATE CHAIR RESEARCH

Todd Hoare

DISTINGUISHED UNIVERSITY PROFESSOR

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Todd Hoare/B.Sc. *(Queen's)*, Ph.D. *(McMaster)*, P.Eng.

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Prashant Mhaskar/B.Tech *(IIT)*, M.S. *(Louisiana State)*, Ph.D. *(California-Los Angeles)*, P.Eng.

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Heather Sheardown/B.Eng. *(McMaster)*, Ph.D. *(Toronto)*, P.Eng.

Christopher L. E. Swartz/B.Sc.Eng. *(Cape Town)*, Ph.D. *(Wisconsin)*, P.Eng./ ArcelorMittal Dofasco Chair in Process Automation and Information Technology

Michael Thompson/B.Sc., B.Eng., M.Eng. *(McMaster)*, Ph.D. *(Waterloo)*, P.Eng.

ADJUNCT PROFESSORS

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Lyndon W.J. Jones/B.Sc. *(Wales)*, Ph.D. *(Aston)*

Marko D. Saban/Dipl. Ing., M.Sc., Ph.D. *(Belgrade)*

Guerino G. Sacripante/B.Sc., Ph.D. *(McGill)*

Wen-Jun Wang/B.Eng, M.Eng., Ph.D. *(Zhejiang)*

Yiliang Wu/B.Sc. *(Sichuan)*, M.Sc. *(University of Science and Technology, China)*, Ph.D. *(Tokyo Institute of Technology)*

Thomas Adams II/B.S *(Michigan State)*, Ph.D. *(Pennsylvania)*, P.Eng.

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Li Xi/B.Eng. *(Zhejiang)*, Ph.D. *(Wisconsin-Madison)*, P.Eng.

Boyang Zhang/B.Sc. *(Georgia Institute of Technology)*, Ph.D. *(University of Toronto)*

Jake Nease/B.Eng.Mgmt., Ph.D. *(McMaster)*, P.Eng.

Kamil Khan/B.S.E. *(Princeton)*, M.S.CEP., Ph.D. *(MIT)*

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Theodora Kourti/Dipl. Eng. *(Chemical)(Aristotle)*, Ph.D. *(McMaster)*
Qiang Liu/B.S, MS., *(University of Science and Technology, China)*, Ph.D. *(Laval)*
David McDonald/B.Sc. *(Toronto)*, M.Sc. *(McMaster)*
ASSISTANT PROFESSORS
Shelir Ebrahimi/B.A.Sc., Ph.D. *(UBC)*, P.Eng.
Drew Higgins/B.A.Sc. *(Waterloo)*, M.A.Sc. *(Waterloo)*, Ph.D. *(Waterloo)*, P.Eng.
Vincent Leung/ B.Eng Biosci., M.A.Sc., Ph.D. *(McMaster)*
Stuart Linley/B.A.Sc., Ph.D. *(Waterloo)*
Giancarlo Dalle Ave/B.Eng., M.A.Sc. *(McMaster)*, Ph.D. *(Technical University of Dortmund)*
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Robert Black/B.Sc. *(Waterloo)*, Ph.D. *(Waterloo)*
Roozbeh Mafi/B.Sc., M.Sc. *(Tehran Polytechnic)*, Ph.D. *(McMaster)*
Niels Smeets/B.Sc., M.Sc., Ph.D. *(Eindhoven)*
Danielle Zyngier/B.Sc. *(Rio de Janeiro)*, M.Sc. *(Rio de Janeiro)*, Ph.D. *(McMaster)*
ASSOCIATE MEMBERS
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Jose M. Moran-Mirabel*/(Chemistry and Chemical Biology)* B.Sc., M.Sc. *(Instituto Tecnológico y de Estudios Superiores de Monterrey)*, M.Sc., Ph.D. *(Cornell)*
Ishwar K. Puri/B.Sc. *(Delhi)*, M.S., Ph.D. *(California-San Diego)*

Bachelor of Engineering

CHEMICAL ENGINEERING, CHEMICAL ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students may choose to follow a stream of recommended technical elective courses.
   - **Process Systems Engineering (PSE) Stream:**

Required Courses: Three of CHEMENG 4H03, 4E03, 4G03, 4K03, and 4L03 (at least one PSE laboratory completed). Other courses may be substituted with permission of the Department Chair.

   - **Polymer Materials and Manufacturing (PMM) Stream:**

Required Courses: Three of CHEMENG 3Q03, 4B03, 4H03, 4X03, 4Z03; and 4L03 (at least one PMM laboratory completed). Other courses may be substituted with permission of the Department Chair.

   - **Sustainable Energy and Environmental Technologies (SEET) Stream:**

Required Courses: CHEMENG 4A03, 4M03, 4L03 (at least one SEET laboratory completed) and one of ENGINEER 4V04 or CIVENG 4V04. Other courses may be substituted with permission of the Department Chair.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4-month work term.

Requirements

LEVEL II: 38 UNITS

17 units
- CHEMENG 2D04 - Chemical Engineering Principles I
- CHEMENG 2DW1 - Problem Solving Strategies
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- CHEMENG 2F04 - Chemical Engineering Principles II
- CHEMENG 2O04 - Fluid Mechanics

3 units
- ENGINEER 2PX3 - Engineering Communications

3 units
- CHEM 1AA3 - Introductory Chemistry II

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units
- MATLS 3J03 - Statistical Methods for Materials Engineers

6 units
- approved complementary studies electives

LEVEL III: 35 UNITS

29 units
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3P04 - Process Control
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations

6 units total from the following two subsections

3-6 units

from
- CHEM 2E03 - Introductory Organic Chemistry

or both
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

0-3 units

from
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMENG 3Q03 - Introduction to Polymer Science

LEVEL IV: 34-36 UNITS

13 units
- CHEMENG 4L03 - Advanced Laboratory Skills
- CHEMENG 4N04 - Engineering Economics and Problem Solving
- CHEMENG 4W06 A/B - Chemical Plant Design and Capstone Project

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

15-16 units

from
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering

- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4E03 - Modern Methods for Process Control
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4G03 - Optimization in Chemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Y04 A/B - Senior Independent Project
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only two courses from List B (Chem Eng Sci/Math courses) can be taken over the course of the program

3-4 units

- Level III or IV technical electives from approved List A (Interdisciplinary engineering courses) or permission of the Department of Chemical Engineering

Bachelor of Engineering and Biomedical Engineering

CHEMICAL AND BIOMEDICAL ENGINEERING, CHEMICAL AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. Students may choose to follow a stream of recommended technical elective courses.
    - **Process Systems Engineering (PSE) Stream:**

Required Courses: Three of CHEMENG 4H03, 4E03, 4G03, 4K03, and 4L03 (at least one PSE laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Polymer Materials and Manufacturing (PMM) Stream:**

Required Courses: Three of CHEMENG 3Q03, 4B03, 4H03, 4X03, 4Z03; and 4L03 (at least one PMM laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Sustainable Energy and Environmental Technologies (SEET) Stream:**

Required Courses: Three of CHEMENG 4A03 (or 3TP6), 4EC3, 4M03 (or 3TP6), 4L03 (at least one SEET laboratory completed) and one of ENGINEER 4V04 or CIVENG 4V04. Other courses may be substituted with permission of the Department Chair.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4-month work term.
3. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to 8-units of research project or independent study courses. A full listing can be found on the IBEHS website.
4. Students enrolled in a B.Eng.BME program wishing to enroll in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 39 UNITS

13 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

23 units

- CHEMENG 2D04 - Chemical Engineering Principles I
- CHEMENG 2DW1 - Problem Solving Strategies
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- CHEMENG 2F04 - Chemical Engineering Principles II
- CHEMENG 2O04 - Fluid Mechanics
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units

- Health Sciences Electives

LEVEL III: 37 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

13 units

- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management

- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

18 units
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3TP6 - Transport Phenomena

3 units
- Complementary Studies

LEVEL IV: 36-37 UNITS

13 units
- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

11 units
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3P04 - Process Control
- CHEMENG 3U04 - Unit Operations

3 units
from
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Z03 - Interfacial Engineering

3 units
from
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units
- Approved IBEHS Technical Elective

3 units
from
- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMENG 3Q03 - Introduction to Polymer Science

LEVEL V: 34-36 UNITS

6 units
- CHEMBME 5P06 A/B - Integrated Chemical & Biomedical Engineering Capstone Design Project

10 units
- CHEMENG 4L03 - Advanced Laboratory Skills
- CHEMENG 4N04 - Engineering Economics and Problem Solving
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units
from
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

9-10 units from
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4E03 - Modern Methods for Process Control
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4G03 - Optimization in Chemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Y04 A/B - Senior Independent Project
- CHEMENG 4Z03 - Interfacial Engineering

3-4 units
- approved IBEHS Technical Elective

3 units
- Complementary Studies

Bachelor of Engineering and Biosciences

CHEMICAL ENGINEERING AND BIOENGINEERING, CHEMICAL ENGINEERING AND BIOENGINEERING CO-OP (B.ENG.BIOSCI.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Note

1. Students may choose to follow a stream of recommended technical elective courses.
    - **Process Systems Engineering (PSE) Stream:**

Required Courses: Three of CHEMENG 4H03, 4E03, 4G03, 4K03, and 4L03 (at least one PSE laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Polymer Materials and Manufacturing (PMM) Stream:**

Required Courses: Three of CHEMENG 3Q03, 4B03, 4H03, 4X03, 4Z03; and 4L03 (at least one PMM laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Sustainable Energy and Environmental Technologies (SEET) Stream:**

Required Courses: Three of CHEMENG 4A03 (or 3TP6), 4M03 (or 3TP6), 3TP6,

4EC3, 4L03 (at least one SEET laboratory completed) and one of ENGINEER 4V04 or CIVENG 4V04. Other courses may be substituted with permission of the Department Chair.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4-month work term.

Requirements

LEVEL II: 38 UNITS

17 units

- CHEMENG 2D04 - Chemical Engineering Principles I
- CHEMENG 2DW1 - Problem Solving Strategies
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- CHEMENG 2F04 - Chemical Engineering Principles II
- CHEMENG 2O04 - Fluid Mechanics

3 units

- ENGINEER 2PX3 - Engineering Communications

3 units

- CHEM 1AA3 - Introductory Chemistry II

3 units

- BIOLOGY 1A03 - Cellular and Molecular Biology

6 units

- HTHSCI 2L03 - Anatomy and Physiology I: Communication
- HTHSCI 2LL3 - Anatomy and Physiology II: Homeostasis

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 39 UNITS (2025-2026 ONLY)

31 units

- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine

3 units

- CHEM 2E03 - Introductory Organic Chemistry

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOLOGY 2B03 - Cell Biology
- HTHSCI 2K03 - Inquiry II: Cell Biology

LEVEL III: 40 UNITS (EFFECTIVE 2026-2027)

31 units

- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine

3 units

- CHEM 2E03 - Introductory Organic Chemistry

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOLOGY 2B03 - Cell Biology
- HTHSCI 2K03 - Inquiry II: Cell Biology

3 units

- approved complementary studies electives

LEVEL IV: 34-35 UNITS

13 units

- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 3P04 - Process Control
- CHEMENG 4L03 - Advanced Laboratory Skills

6 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 3LT3 - Fundamental and Applied Biochemical Techniques

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

from

- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMENG 3Q03 - Introduction to Polymer Science

3 units

- MATLS 3J03 - Statistical Methods for Materials Engineers

3 units

- approved complementary studies electives

3-4 units

- approved technical electives from biosciences or bioengineering

LEVEL V: 35-37 UNITS

10 units

- CHEMENG 4N04 - Engineering Economics and Problem Solving
- CHEMENG 4W06 A/B - Chemical Plant Design and Capstone Project

15-16 units

from

- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4E03 - Modern Methods for Process Control
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4G03 - Optimization in Chemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Y04 A/B - Senior Independent Project
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

4 units

- CIVENG 4V04 - Biological Aspects of Wastewater Treatment

3-4 units

- approved technical electives from biosciences or bioengineering

3 units

- approved complementary studies electives

Bachelor of Engineering and Management

CHEMICAL ENGINEERING AND MANAGEMENT, CHEMICAL ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students may choose to follow a stream of recommended technical elective courses.
    - **Process Systems Engineering (PSE) Stream:**

Required Courses: Three of CHEMENG 4H03, 4E03, 4G03, 4K03, and 4L03 (at least one PSE laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Polymer Materials and Manufacturing (PMM) Stream:**

Required Courses: Three of CHEMENG 3Q03, 4B03, 4H03, 4X03, 4Z03; and 4L03 (at least one PMM laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Sustainable Energy and Environmental Technologies (SEET) Stream:**

Required Courses: CHEMENG 4A03, 4M03, 4L03 (at least one SEET laboratory completed) and one of ENGINEER 4V04 or CIVENG 4V04. Other courses may be substituted with permission of the Department Chair.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I

LEVEL II: 35 UNITS

17 units
- CHEMENG 2D04 - Chemical Engineering Principles I
- CHEMENG 2DW1 - Problem Solving Strategies
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- CHEMENG 2F04 - Chemical Engineering Principles II
- CHEMENG 2O04 - Fluid Mechanics

3 units
- CHEM 1AA3 - Introductory Chemistry II

6 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 2FA3 - Introduction to Finance

3 units
- ENGNMGT 2AA3 - Communication Skills

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 37 UNITS (2025-2026 ONLY)

25 units
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations

12 units
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 1MA3 - Introduction to Marketing

LEVEL III: 37 UNITS (EFFECTIVE 2026-2027)

25 units
- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations

9 units
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I

3 units
- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

LEVEL IV: 34-37 UNITS (2025-2026 AND 2026-2027 ONLY)

4 units
- CHEMENG 3P04 - Process Control

3 units
- MATLS 3J03 - Statistical Methods for Materials Engineers

6 units
from
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only one course from List B (Chem Eng Sci/Math courses) can be taken over the course of the program.

9 units
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3-6 units

- CHEM 2E03 - Introductory Organic Chemistry

or both

- CHEM 2OA3 - Organic Chemistry I and
- CHEM 2OB3 - Organic Chemistry II

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMENG 3Q03 - Introduction to Polymer Science

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

LEVEL IV: 37 UNITS (EFFECTIVE 2027-2028)

4 units

- CHEMENG 3P04 - Process Control

3 units

- MATLS 3J03 - Statistical Methods for Materials Engineers

6 units

from

- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only one course from List B (Chem Eng Sci/Math courses) can be taken over the course of the program.

9 units

- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- CHEM 2E03 - Introductory Organic Chemistry

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMENG 3Q03 - Introduction to Polymer Science

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 34-39 UNITS

13 units

- CHEMENG 4L03 - Advanced Laboratory Skills
- CHEMENG 4N04 - Engineering Economics and Problem Solving
- CHEMENG 4W06 A/B - Chemical Plant Design and Capstone Project

6 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 4PA3 - Business Policy: Strategic Management

6-7 units

from

- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4E03 - Modern Methods for Process Control
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4G03 - Optimization in Chemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Y04 A/B - Senior Independent Project
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only one course from List B (Chem Eng Sci/Math courses) can be taken over the course of the program

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3-6 units

- Commerce electives selected from Level III or IV Commerce

3-4 units

- Level III or IV technical electives from approved List A or permission of the Department of Chemical Engineering

Bachelor of Engineering and Society

CHEMICAL ENGINEERING AND SOCIETY, CHEMICAL ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

PROGRAM DIRECTOR, ENGINEERING & SOCIETY
C. Churchill *(Civil Engineering)* B.Eng., M.Eng. *(McMaster)*

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students may choose to follow a stream of recommended technical elective courses.
    - **Process Systems Engineering (PSE) Stream:**

Required Courses: Three of CHEMENG 4H03, 4E03, 4G03, 4K03, and 4L03 (at least one PSE laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Polymer Materials and Manufacturing (PMM) Stream:**

Required Courses: Three of CHEMENG 3Q03, 4B03, 4H03, 4X03, 4Z03; and 4L03 (at least one PMM laboratory completed). Other courses may be substituted with permission of the Department Chair.

- **Sustainable Energy and Environmental Technologies (SEET) Stream:**

Required Courses: CHEMENG 4A03, 4M03, 4L03 (at least one SEET laboratory completed), and one of ENGINEER 4V04 or CIVENG 4V04. Other courses may be substituted with permission of the Department Chair.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.
3. A minimum of 18 units of focus elective courses is required for the program. This does not include the six units of complementary studies elective in Level I.

Requirements

LEVEL II: 35 UNITS

17 units

- CHEMENG 2D04 - Chemical Engineering Principles I
- CHEMENG 2DW1 - Problem Solving Strategies
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- CHEMENG 2F04 - Chemical Engineering Principles II
- CHEMENG 2O04 - Fluid Mechanics

3 units

- CHEM 1AA3 - Introductory Chemistry II

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

6 units

- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units

- Engineering and Society focus electives

LEVEL III: 34-37 UNITS

25 units

- CHEMENG 3D04 - Chemical Engineering Thermodynamics
- CHEMENG 3G04 - Chemical Process Design and Simulation
- CHEMENG 3K04 - Introduction to Reactor Design
- CHEMENG 3L03 - Intermediate Laboratory Skills
- CHEMENG 3TP6 - Transport Phenomena
- CHEMENG 3U04 - Unit Operations

3-6 units

- CHEM 2E03 - Introductory Organic Chemistry

or both

- CHEM 2OA3 - Organic Chemistry I and
- CHEM 2OB3 - Organic Chemistry II

6 units

- Engineering and Society focus electives

LEVEL IV: 34 UNITS

4 units

- CHEMENG 3P04 - Process Control

3 units

- MATLS 3J03 - Statistical Methods for Materials Engineers

9 units

from

- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4TA3 A/B - Research and Practice in Engineering Education
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only one course from List B (Chem Eng Sci/Math courses) can be taken over the course of the program

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMENG 3Q03 - Introduction to Polymer Science

9 units

- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Y03 - Technology and Society
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6 units

- Engineering and Society focus electives

LEVEL V: 31-33 UNITS

13 units

- CHEMENG 4L03 - Advanced Laboratory Skills
- CHEMENG 4N04 - Engineering Economics and Problem Solving
- CHEMENG 4W06 A/B - Chemical Plant Design and Capstone Project

6-7 units

from

- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4B03 - Polymer Reaction Engineering
- CHEMENG 4E03 - Modern Methods for Process Control
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CHEMENG 4G03 - Optimization in Chemical Engineering
- CHEMENG 4H03 - Big Data Methods and Modeling in Chemical and Materials Engineering
- CHEMENG 4K03 - Reactor Design for Heterogeneous Systems: Principles and machine learning perspective
- CHEMENG 4M03 - Industrial Separation Processes
- CHEMENG 4T03 - Applications of Chemical Engineering in Medicine
- CHEMENG 4X03 - Polymer Processing
- CHEMENG 4Y04 A/B - Senior Independent Project
- CHEMENG 4Z03 - Interfacial Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design

Note: Only one course from List B (Chem Eng Sci/Math courses) can be taken over the course of the program

3-4 units

- Level III or IV technical electives from approved List A (Interdisciplinary engineering courses) or permission of the Department of Chemical Engineering

3 units

- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units

- ENGSOCTY 4Y03 - Society Capstone Design

3 units

- Engineering and Society focus electives

Department of Civil Engineering

John Hodgins Engineering Building, Room 301, ext. 24287 or 24315
http://www.eng.mcmaster.ca/civil/

Faculty of the Department of Civil Engineering, as of January 15, 2025

CHAIR

Lydell Wiebe (Acting)

ASSOCIATE CHAIR GRADUATE

Robin Zhao

ASSOCIATE CHAIR UNDERGRADUATE

Michael Tait

PROFESSORS

Samir E. Chidiac/B.Eng., M. Eng., Ph.D. *(McMaster)*, P.Eng.
Paulin Coulibaly/B.A.Sc., M.A.Sc. *(Nice)*, Ph.D. *(Laval)*, P.Eng.
Sarah Dickson-Anderson/B.A.Sc., Ph.D. *(Waterloo)*, P.Eng.
Wael El-Dakhakhni/B.Sc. *(Ain Shams)*, M.Sc., Ph.D. *(Drexel)*, P.Eng./Martini, Mascarin and George Chair in Masonry Design
Peijun Guo/B.Sc., M.Sc., Ph.D. *(SWJTU)*, Ph.D. *(Calgary)*, P.Eng.
Yiping Guo/B.Sc. *(Zhejiang)*, M.A.Sc., Ph.D. *(Toronto)*, P.Eng.
Younggy Kim/B.E., M.S. *(Korea)*, Ph.D. *(Texas-Austin)*, L.E.L.
Saiedeh N. Razavi/B.Sc. *(Sharif)*, M.Sc. *(Tehran)*, Ph.D. *(Waterloo)*/Chair in Heavy Construction
Michael J. Tait/B.E.Sc., Ph.D. *(Western Ontario)*, P.Eng./Joe Ng-JNE Consulting Chair in Design, Construction and Management of Infrastructure Renewal
Susan Tighe/B.Sc. *(Queen's)*, M.A.Sc., Ph.D. *(Waterloo)*, P.Eng.
Lydell Wiebe/B.Sc. *(Toronto)*, M.Sc. *(ROSE)*, Ph.D. *(Toronto)*, P.Eng./ Endowed Chair in Effective Design of Structures

ASSOCIATE PROFESSORS

Mohamed Ezzeldin/B.Sc., M.Sc.*(Ain Shams)*, PhD. *(McMaster)*
Mohamed Hussein/B.Sc., M.Sc. *(Ain Shams)*, Ph.D. *(UBC)*, P.Eng.
Zhong (Zoe) Li/B. Eng. *(Bejing Normal)*, M.A.Sc., Ph.D., *(Regina)*, P.Eng.
Moataz Mohamed/B.E. *(Egypt)*, M.A.Sc. *(Rome)*, Ph.D. *(Ulster)*
Benzhong (Robin) Zhao/ B.A.Sc. *(Waterloo)*, M.Sc., Ph.D. *(M.I.T.)*

ASSISTANT PROFESSORS

Adedapo Awolayo/B.Tech. *(LAUTECH)*, M.Sc. *(Khalifa)*, Ph.D. *(Calgary)*
Cameron J. Churchill/B.Eng., M.A.Sc. *(McMaster)*, L.E.L.
Sonia Hassini/B.Eng.*(Tunisia)*, M.Eng.*(Waterloo)*, PhD. *(McMaster)*
Ousmane Hisseine/B.Sc., M.Sc. *(Sharjah)*, Ph.D. *(Sherbrooke)*
Ramla Qureshi/B.Eng. *(Pakistan)*, M.Sc., Ph.D. *(Buffalo)*
Cancan Yang/B.Sc. *(Chongqing, China)*, M.S., PhD. *(Buffalo)*
Hao Yang/B.Sc. *(China)*, M.S., PhD. *(California-Irvine)*

Bachelor of Engineering

CIVIL ENGINEERING, CIVIL ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0. Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students entering Level II will register in the Civil Engineering program following the requirements outlined below. Students entering Levels III and IV should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program for which they are registered in and to consult with the Department of Civil Engineering for further information.
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.
3. Before the end of Level III, students must complete a Civil Engineering electives form, and ensure that it has been reviewed by the Department before completing Level IV Registration.
4. To meet the capstone project requirement, all students in their final level must take CIVENG 4X06 A/B.

Requirements

LEVEL II: 37 UNITS

31 units

- CIVENG 2A03 - Surveying and Measurement for Transportation and Construction
- CIVENG 2B04 - Principles of Environmental Engineering
- CIVENG 2C04 - Structural Mechanics
- CIVENG 2E03 - Computer Applications in Civil Engineering
- CIVENG 2J03 - Engineering Geology
- CIVENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials
- CIVENG 2X03 - Introduction to Civil Engineering
- ENGINEER 2PX3 - Engineering Communications

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 40 UNITS

33 units

- CIVENG 3A03 - Geotechnical Engineering I
- CIVENG 3B03 - Geotechnical Engineering II
- CIVENG 3C03 - Engineering Systems
- CIVENG 3G04 - Structural Analysis
- CIVENG 3J04 - Reinforced Concrete Design

- CIVENG 3K03 - Introduction to Transportation Engineering
- CIVENG 3L03 - Water Quality
- CIVENG 3M03 - Municipal Hydraulics
- CIVENG 3P04 - Civil Engineering Materials and Design
- ENGINEER 3PX3 - Engineering Economics

4 units

- STATS 3J04 - Probability and Statistics for Civil Engineering

3 units

- approved complementary studies electives

LEVEL IV: 38-40 UNITS

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

4 units

- CIVENG 4N04 - Steel Structures

3 units

- approved complementary studies electives

6 units

- CIVENG 4X06 A/B - Design and Synthesis Project in Civil Engineering

19-20 units

- from approved list of Level IV Civil Engineering technical electives.

3-4 units

- Level III or IV technical elective from approved List A (Interdisciplinary engineering courses)

Bachelor of Engineering and Biomedical Engineering

CIVIL AND BIOMEDICAL ENGINEERING, CIVIL AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4 month work term.
2. Students entering Level II will register in the Civil Engineering program following the requirements outlined below. Students entering Levels III, IV and V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program for which they are registered in and to consult with the Department of Civil Engineering for further information.
3. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been reviewed by the Department before completing Level V Registration.
4. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to 8-units of research project or independent study courses. A full listing can be found on the IBEHS website.
5. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 37 UNITS

10 units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

24 units

- CIVENG 2B04 - Principles of Environmental Engineering
- CIVENG 2C04 - Structural Mechanics
- CIVENG 2J03 - Engineering Geology
- CIVENG 2P04 - Statics and Mechanics of Materials
- CIVENG 2X03 - Introduction to Civil Engineering
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units

- Complementary Studies

LEVEL III: 39 UNITS

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

23 units

- CIVENG 2A03 - Surveying and Measurement for Transportation and Construction
- CIVENG 2E03 - Computer Applications in Civil Engineering
- CIVENG 2O04 - Fluid Mechanics
- CIVENG 3A03 - Geotechnical Engineering I
- CIVENG 3B03 - Geotechnical Engineering II
- CIVENG 3L03 - Water Quality
- CIVENG 3P04 - Civil Engineering Materials and Design

LEVEL IV: 36 UNITS (2025-2026 AND 2026-2027 ONLY)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

14 units

- CIVENG 3C03 - Engineering Systems
- CIVENG 3G04 - Structural Analysis
- CIVENG 3J04 - Reinforced Concrete Design
- CIVENG 3M03 - Municipal Hydraulics

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

LEVEL IV: 39 UNITS (EFFECTIVE 2027-2028)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

14 units

- CIVENG 3C03 - Engineering Systems
- CIVENG 3G04 - Structural Analysis
- CIVENG 3J04 - Reinforced Concrete Design
- CIVENG 3M03 - Municipal Hydraulics

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3 units

- Health Sciences Electives

LEVEL V: 35-38 UNITS

6 units

- CIVBME 5P06 A/B - Integrated Civil & Biomedical Engineering Capstone Design Project

10 units

- CIVENG 3K03 - Introduction to Transportation Engineering
- CIVENG 4N04 - Steel Structures
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

6-8 units

from

- approved IBEHS Technical Electives

7-8 units

from

- approved list of Level IV Civil technical electives

3 units

- Complementary Studies

Bachelor of Engineering and Management

CIVIL ENGINEERING AND MANAGEMENT, CIVIL ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students entering Level II will register in the Civil Engineering program following the requirements outlined below. Students entering Levels III, IV and V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program for which they are registered in and to consult with the Department of Civil Engineering for further information.
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each four month work term.
3. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been reviewed by the Department before completing Level V Registration.
4. To meet the capstone project requirement, all students in their final level must take CIVENG 4X06 A/B.

Requirements

LEVEL II: 40 UNITS

25 units

- CIVENG 2A03 - Surveying and Measurement for Transportation and Construction
- CIVENG 2B04 - Principles of Environmental Engineering
- CIVENG 2C04 - Structural Mechanics
- CIVENG 2J03 - Engineering Geology
- CIVENG 2O04 - Fluid Mechanics

- CIVENG 2P04 - Statics and Mechanics of Materials
- CIVENG 2X03 - Introduction to Civil Engineering

6 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1MA3 - Introduction to Marketing

3 units

- ENGNMGT 2AA3 - Communication Skills

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 38-39 UNITS

16 units

- CIVENG 2E03 - Computer Applications in Civil Engineering
- CIVENG 3A03 - Geotechnical Engineering I
- CIVENG 3B03 - Geotechnical Engineering II
- CIVENG 3G04 - Structural Analysis
- CIVENG 3M03 - Municipal Hydraulics

12 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 3MC3 - Applied Marketing Management

3 units

- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

4 units

- STATS 3J04 - Probability and Statistics for Civil Engineering

3-4 units

- Level III or IV technical elective from approved List A (Interdisciplinary engineering courses)

LEVEL IV: 39 UNITS (2025-2026 ONLY)

20 units

- CIVENG 3C03 - Engineering Systems
- CIVENG 3J04 - Reinforced Concrete Design
- CIVENG 3K03 - Introduction to Transportation Engineering
- CIVENG 3L03 - Water Quality
- CIVENG 3P04 - Civil Engineering Materials and Design
- ENGINEER 3PX3 - Engineering Economics

12 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

4 units

- from approved list of Level IV Civil Engineering technical electives.

LEVEL IV: 39 UNITS (EFFECTIVE 2026-2027)

20 units

- CIVENG 3C03 - Engineering Systems
- CIVENG 3J04 - Reinforced Concrete Design
- CIVENG 3K03 - Introduction to Transportation Engineering
- CIVENG 3L03 - Water Quality
- CIVENG 3P04 - Civil Engineering Materials and Design
- ENGINEER 3PX3 - Engineering Economics

9 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

4 units

- from approved list of Level IV Civil Engineering technical electives.

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 36-40 UNITS (UNTIL AND INCLUDING 2026-2027)

3 units

- COMMERCE 4PA3 - Business Policy: Strategic Management

3-6 units

- Commerce electives selected from Level III or IV Commerce

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3 units

- Level III or IV technical elective from approved List A (Interdisciplinary engineering courses)

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

4 units

- CIVENG 4N04 - Steel Structures

6 units

- CIVENG 4X06 A/B - Design and Synthesis Project in Civil Engineering

11-12 units

- from approved list of Level IV Civil Engineering technical electives.

LEVEL V: 33-37 UNITS (EFFECTIVE 2027-2028)

3 units

- COMMERCE 4PA3 - Business Policy: Strategic Management

3-6 units

- Commerce electives selected from Level III or IV Commerce

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

4 units

- CIVENG 4N04 - Steel Structures

6 units

- CIVENG 4X06 A/B - Design and Synthesis Project in Civil Engineering

11-12 units

- from approved list of Level IV Civil Engineering technical electives.

Bachelor of Engineering and Society

CIVIL ENGINEERING AND SOCIETY, CIVIL ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Students entering Level II will register in the Civil Engineering program following the requirements outlined below. Students entering Levels III, IV and V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program for which they are registered in and to consult with the Department of Civil Engineering for further information.
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.
3. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been reviewed by the Department before completing Level V Registration.
4. To meet the capstone project requirement, all students in their final level must take CIVENG 4X06 A/B.
5. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)

Requirements

LEVEL II: 37 UNITS

22 units
- CIVENG 2B04 - Principles of Environmental Engineering
- CIVENG 2C04 - Structural Mechanics
- CIVENG 2J03 - Engineering Geology
- CIVENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials
- CIVENG 2X03 - Introduction to Civil Engineering

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units
- Engineering and Society focus electives

LEVEL III: 35 UNITS

19 units
- CIVENG 2A03 - Surveying and Measurement for Transportation and Construction
- CIVENG 2E03 - Computer Applications in Civil Engineering
- CIVENG 3A03 - Geotechnical Engineering I
- CIVENG 3B03 - Geotechnical Engineering II
- CIVENG 3G04 - Structural Analysis
- CIVENG 3M03 - Municipal Hydraulics

4 units
- STATS 3J04 - Probability and Statistics for Civil Engineering

3 units
- ENGSOCTY 3Y03 - Technology and Society

9 units
- from Engineering and Society focus electives

LEVEL IV: 35-36 UNITS

20 units
- CIVENG 3C03 - Engineering Systems
- CIVENG 3J04 - Reinforced Concrete Design
- CIVENG 3K03 - Introduction to Transportation Engineering
- CIVENG 3L03 - Water Quality
- CIVENG 3P04 - Civil Engineering Materials and Design
- ENGINEER 3PX3 - Engineering Economics

3-4 units
- Level III or IV technical elective from approved List A (Interdisciplinary engineering courses)

6 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6 units
- Engineering and Society focus electives

LEVEL V: 34-35 UNITS

6 units
- CIVENG 4X06 A/B - Design and Synthesis Project in Civil Engineering

4 units
- CIVENG 4N04 - Steel Structures

15-16 units
- from approved list of Level IV Civil Engineering technical electives

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

3 units
- Engineering and Society focus electives

Department of Computing and Software

Faculty of the Department of Computing and Software as of January 15, 2025

CHAIR

Richard Paige

PROFESSORS

Antoine Deza/M.Eng. *(Ecole Nationale des Ponts et Chaussées, Paris)*, Ph.D. *(Tokyo Institute of Technology)*, P.Eng.
Douglas G. Down/B.A.Sc., M.A.Sc. *(Toronto)*, Ph.D. *(Illinois-Urbana)*, P.Eng.
William M. Farmer/B.A. *(Notre Dame)*, M.A., M.S., Ph.D. *(Wisconsin-Madison)*, P.Eng.
Frantisek Franek/M.Sc., R.N.Dr. *(Charles, Prague)*, Ph.D. *(Toronto)*, L.E.L.
Wenbo He/B.S. *(Harbin)*, M.S. *(Tsinghua)*, Ph.D. *(Illinois-Urbana)*
Ryszard Janicki/M.Sc. *(Warsaw)*, Ph.D., D.Hab. *(Polish Acad. Sci.)*
Wolfram Kahl/M.Sc. *(Oxford)*, Dr.rer.nat. *(University of the German Armed Forces, Munich)*
Ridha Khedri/Dipl.Eng. *(Tunis)*, M.Sc., Ph.D. *(Laval)*, P.Eng.
Mark S. Lawford/B.Sc. *(Queen's)*, M.A.Sc., Ph.D. *(Toronto)*, P.Eng.
Ned Nedialkov/B.Sc. *(Sofia, Bulgaria)*, M.Sc., Ph.D. *(Toronto)*, L.E.L.
Richard Paige/B.Sc. *(McMaster)*, M.Sc., Ph.D. *(Toronto)*, P.Eng.
Emil Sekerinski/Dipl.Inf., Dr.rer.nat. *(Karlsruhe)*
Alan Wassyng/B.Sc., B.Sc., M.Sc., Ph.D. *(Witwatersrand)*, P.Eng.
Rong Zheng/B.S., M.S. *(Tsinghua)*, Ph.D. *(Illinois-Urbana)*, P. Eng

ASSOCIATE PROFESSORS

Christopher Anand/B.Math. *(Waterloo)*, M.Sc., Ph.D. *(McGill)*, L.E.L.
Hassan Ashtiani/B.Sc., M.Sc. *(Tehran)*, Ph.D. *(Waterloo)*
Jacques Carette/B.Math. *(Waterloo)*, M.Sc. *(Montreal)*, Ph.D. *(Paris-Sud)*, L.E.L.
Fei Chiang/B.Sc. *(Toronto)*, M.Math *(Waterloo)*, Ph.D. *(Toronto)*, L.E.L.
George Karakostas/Dipl. Eng. *(Patras)*, M.S.A., Ph.D. *(Princeton)*, P.Eng.
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Mehdi Moradi/B.Sc. *(Amirkabir Univ of Technology)*, M.Sc. *(Tehran)*, Ph.D. *(Queen's)*, P.Eng.
Sebastien Mosser/DEUG, Ing CTI, Ph.D. *(Nice)*, P.Eng.
Sivan Sabato/B.Sc. *(Hebrew Univ)*, M.Sc. *(Israel Inst of Technology)*, Ph.D.

(Hebrew Univ)
Samuel Scott/B.Sc. *(Queen's)*, B.Ed. *(Toronto)*, M.CS. *(Ottawa)*, Ph.D. *(Carleton)*
Spencer Smith/B.Eng.C.S., M.Eng., Ph.D., *(McMaster)*, P.Eng.
Martin von Mohrenschildt/Dipl.Math., Dr.Sc.Math. *(ETH-Zürich)*, P.Eng.
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Shahab Asoodeh/B.Sc. *(Shahid Beheshti)*, M.Sc. *(ETH Zurich)*, M.Sc., Ph.D. *(Queen's)*
Christian Brodbeck/M.Sc. *(Zurich)*, Ph.D. *(New York)*
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Istvan David/B.Sc., M.Sc., M.Sc. *(Budapest U Tech and Economics)*, Ph.D. *(Antwerp)*
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Denise Geiskkovitch/B.Sc. *(Manitoba)*, M.Sc. *(Georgia Institute of Technology)*, Ph.D. *(Manitoba)*
Matthew Giamou/B.A.Sc. *(Toronto)*, M.S. *(M.I.T.)*, Ph.D. *(Toronto)*
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Neerja Mhaskar/B.Tech. *(JNTU, India)*, M.S. *(Louisiana State)*, Ph.D. *(McMaster)*
Swati Mishra/B.Tech. *(Dr. APJ Abdul Kalam TU)*, M.Sc. *(Indiana)*, M.Sc., Ph.D. *(CornelI)*
Onaizah Onaizah/B.Sc. *(Toronto)*, M.Sc. *(Western)*, Ph.D. *(Toronto)*
Yingying Wang/B.Sc., M.Eng *(Nanjing)*, Ph.D. *(California, Davis)*
Charles Welch/B.Sc. *(Kettering)*, M.Sc., Ph.D. *(Michigan)*
Irene Ye Yuan/ B.A. *(St, Olaf College)*, M.HCI *(Washington)*, M.Sc., Ph.D. *(Minnesota)*
Angela Zavaleta Bernuy/B.Sc. *(Toronto-Scarborough)*, M.Sc *(Toronto)*, Ph.D. *(Pending - Toronto)*

Notes

1. All programs in the Department of Computing and Software have limited enrolment.
2. For the purpose of admission to Level II B.A.Sc. programs, the two courses MATH 1A03, and MATH 1AA3 together are considered equivalent to MATH 1ZA3, and MATH 1ZB3, and MATH 1ZC3 is considered equivalent to MATH 1B03.

For the Arts & Science and Computer Science (B.Arts.Sc.) program, see *Arts & Science Program*
For the Honours Economics and Computer Science (B.A.) program, see *Faculty of Social Sciences, Department of Economics*
For the Honours Mathematics and Computer Science (B.Sc.) program, see *Faculty of Science, Department of Mathematics and Statistics*

Bachelor of Applied Science

HONOURS COMPUTER SCIENCE AS A SECOND DEGREE (B.A.SC.)

Admission

Completion of a Bachelor's degree from a recognized university in a discipline other than Computer Science with a Grade Point Average of least 7.0 ; and completion of MATH 1ZA3, MATH 1ZB3 and a grade of at least C+ in COMPSCI 1DM3 and 1XC3 or equivalent. As Second Degree candidates, applicants must first apply for admission to the University through the Enrolment Services (Admissions) indicating they wish to apply for the Honours Computer Science B.A.Sc. as a Second Degree program. For the purpose of admission to this program, the two courses MATH 1A03 and MATH 1AA3 together are considered as equivalent to MATH 1ZA3 and MATH 1ZB3.
The Honours B.A.Sc. in Computer Science as a second degree may not be possible if the student's first undergraduate degree is in Business Informatics, Software Engineering, or Computer Engineering. Students wishing further information should consult with the Office of the Associate Dean of Engineering (Undergraduate Studies).

Note

If a student in the program has previously taken a required course (or its equivalent), it is not a requirement to repeat the course. However, if the credit from that course has been used toward completion of a previous degree, the student will be required to take another course with the required number of units. Admission to this program is at Level III.

REQUIREMENTS

Level III: 30 Units

27 units

- COMPSCI 1JC3 - Introduction to Computational Thinking
- COMPSCI 2AC3 - Automata and Computability
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2DB3 - Databases
- COMPSCI 2GA3 - Computer Architecture
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development
- COMPSCI 2SD3 - Concurrent Systems
- COMPSCI 2XC3 - Computer Science Practice and Experience: Algorithms and Software Design

3 units from

- COMPSCI 1XD3 - Computer Science Practice and Experience: Introduction to Software Design Using Web Programming
- Levels III, IV Computer Science, or other approved technical electives from List G (contact the *Department of Computing and Software)*

Level IV: 30 Units

21 units

- COMPSCI 3AC3 - Algorithms and Complexity
- COMPSCI 3MI3 - Principles of Programming Languages
- COMPSCI 3N03 - Computer Networks and Security
- COMPSCI 3SH3 - Computer Science Practice and Experience: Operating Systems
- COMPSCI 3TB3 - Syntax-Based Tools and Compilers
- COMPSCI 4ZP6 A/B - Capstone Project

9 units

- Levels III, IV Computer Science, or other approved technical electives from List G (contact the Department of Computing and Software)

HONOURS COMPUTER SCIENCE, HONOURS COMPUTER SCIENCE CO-OP (B.A.SC.)

Admission to Level II Computer Science Programs

Admission to Level II Honours Computer Science requires completion of all non-elective Computer Science I courses with a minimum Grade Point Average (GPA) of 4.0.

NOTES

1. This program has limited enrolment.
2. For the purpose of admission to Level II B.A.Sc. programs, the three courses MATH 1A03, MATH 1AA3 and MATH 1B03 together are considered equivalent to MATH 1ZA3, MATH 1ZB3, and MATH 1ZC3.

Requirements

LEVEL II: 30 UNITS

24 units

- COMPSCI 2AC3 - Automata and Computability
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2DB3 - Databases
- COMPSCI 2GA3 - Computer Architecture
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development
- COMPSCI 2SD3 - Concurrent Systems
- COMPSCI 2XC3 - Computer Science Practice and Experience: Algorithms and Software Design

6 units

- Electives

LEVEL III: 30 UNITS

15 units

- COMPSCI 3AC3 - Algorithms and Complexity
- COMPSCI 3MI3 - Principles of Programming Languages
- COMPSCI 3N03 - Computer Networks and Security
- COMPSCI 3SH3 - Computer Science Practice and Experience: Operating Systems
- COMPSCI 3TB3 - Syntax-Based Tools and Compilers

3 units

from

- STATS 2D03 - Introduction to Probability
- STATS 3Y03 - Probability and Statistics for Engineering

6 units

from

- Levels III, IV Computer Science, or other approved technical electives from List G (contact the *Department of Computing and Software)*

6 units

- Electives

LEVEL IV: 30 UNITS

6 units

- COMPSCI 4ZP6 A/B - Capstone Project

12 units

from

- Levels III, IV Computer Science, or other approved technical electives from List G (contact the *Department of Computing and Software)*

12 units

- Electives

Bachelor of Engineering

MECHATRONICS ENGINEERING, MECHATRONICS ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Note

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 38 UNITS

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

10 units

- MECHTRON 2MD3 - Data Structures and Algorithms for Mechatronics
- MECHTRON 2MP3 - Programming for Mechatronics
- MECHTRON 2TA4 - Embedded Systems Design I

16 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics

3 units

- MECHENG 2BA3 - Mechanical Engineering Measurements

3 units

- ENGINEER 2PX3 - Engineering Communications

LEVEL III: 36 UNITS

3 units

- SFWRENG 3SH3 - Operating Systems

18 units

- MECHTRON 3DX4 - Dynamic Models and Control of Physical Systems
- MECHTRON 3K04 - Software Development
- MECHTRON 3MX3 - Signals and Systems
- MECHTRON 3TB4 - Embedded Systems Design II
- MECHTRON 3X03 - Scientific Computation

3 units

- MECHENG 2DA3 - Mechanical Engineering Design Elements

3 units

- ENGPHYS 2NE3 - Thermal Systems Design

3 units

- ELECENG 3N03 - Analog Electronics for Measuring Systems

3 units

- ENGINEER 3PX3 - Engineering Economics

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL IV: 37 UNITS

10 units

- MECHTRON 4AA4 - Real-Time Systems and Control Applications
- MECHTRON 4TB6 A/B - Mechatronics Capstone Design Project

6 units

- MECHENG 4H03 - Mechatronics
- MECHENG 4K03 - Robotics

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

6 units

- approved technical electives from List A (Contact the Department of Computing and Software.)

6 units

- approved technical electives from List B (Contact the Department of Computing and Software.)

6 units

- approved complementary studies electives

SOFTWARE ENGINEERING, SOFTWARE ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average.
Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Note

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 35 UNITS

3 units
- MATH 2Z03 - Engineering Mathematics III

26 units
- SFWRENG 2AA4 - Software Design I - Introduction to Software Development
- SFWRENG 2C03 - Data Structures and Algorithms
- SFWRENG 2DA4 - Digital Systems and Interfacing
- SFWRENG 2DM3 - Discrete Mathematics with Applications I
- SFWRENG 2FA3 - Discrete Mathematics and Applications II
- SFWRENG 2GA3 - Computer Architecture
- SFWRENG 2OP3 - Object-Oriented Programming
- SFWRENG 2XC3 - Software Engineering Practice and Experience: Development Basics

3 units
- ENGINEER 2PX3 - Engineering Communications

3 units
- approved complementary studies electives

LEVEL III: 36 UNITS

27 units
- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3DX4 - Dynamic Systems and Control
- SFWRENG 3MX3 - Signals and Systems
- SFWRENG 3O03 - Linear Optimization
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRENG 3S03 - Software Testing

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- approved technical electives from List E (contact the Department of Computing and Software)

LEVEL IV: 37 UNITS

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units
- approved complementary studies electives

25 units
- SFWRENG 4AA4 - Real-Time Systems and Control Applications
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4C03 - Computer Networks and Security
- SFWRENG 4E03 - Performance Analysis of Computer Systems
- SFWRENG 4G06 A/B - Software Design IV - Capstone Design Project
- SFWRENG 4HC3 - Human Computer Interfaces
- SFWRENG 4X03 - Scientific Computation

3 units
- approved technical electives from List E (contact the Department of Computing and Software)

3 units
from
- approved technical electives from List C (contact the Department of Computing and Software)

Bachelor of Engineering and Biomedical Engineering

MECHATRONICS AND BIOMEDICAL ENGINEERING, MECHATRONICS AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.
All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.
Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.
Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.
Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.
Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.
Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in

August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4 month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 36 UNITS

13 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

23 units

- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2P04 - Computational Mechanics: Statics
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV
- MECHENG 2BA3 - Mechanical Engineering Measurements
- MECHTRON 2MD3 - Data Structures and Algorithms for Mechatronics
- MECHTRON 2MP3 - Programming for Mechatronics

LEVEL III: 35 UNITS (2025-26 ONLY)

13 units

- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

22 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2NE3 - Thermal Systems Design
- MECHENG 2DA3 - Mechanical Engineering Design Elements
- MECHTRON 2TA4 - Embedded Systems Design I
- MECHTRON 3K04 - Software Development

LEVEL III: 38 UNITS (EFFECTIVE 2026-27)

13 units

- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

22 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2NE3 - Thermal Systems Design
- MECHENG 2DA3 - Mechanical Engineering Design Elements
- MECHTRON 2TA4 - Embedded Systems Design I
- MECHTRON 3K04 - Software Development

3 units

- Health Sciences Electives

LEVEL IV: 35-36 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

4 units

- MECHTRON 3TB4 - Embedded Systems Design II

3 units

- SFWRENG 3SH3 - Operating Systems

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved IBEHS Technical Elective

3 units

- Complementary Studies

LEVEL V: 37-38 UNITS

6 units

- TRONBME 5P06 A/B - Integrated Mechatronics & Biomedical Engineering Capstone Design Project

16 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering
- MECHENG 4H03 - Mechatronics
- MECHENG 4K03 - Robotics
- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4AA4 - Real-Time Systems and Control Applications

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved IBEHS Technical Elective

3 units

- Complementary Studies

3 units

- approved technical electives from List A (Contact the Department of Computing and Software)

3 units

- approved technical electives from List B (Contact the Department of Computing and Software)

SOFTWARE AND BIOMEDICAL ENGINEERING, SOFTWARE AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each four-month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 39 UNITS

10 units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

29 units

- MATH 2Z03 - Engineering Mathematics III
- SFWRENG 2AA4 - Software Design I - Introduction to Software Development
- SFWRENG 2C03 - Data Structures and Algorithms
- SFWRENG 2DA4 - Digital Systems and Interfacing
- SFWRENG 2DM3 - Discrete Mathematics with Applications I
- SFWRENG 2FA3 - Discrete Mathematics and Applications II
- SFWRENG 2GA3 - Computer Architecture
- SFWRENG 2OP3 - Object-Oriented Programming
- SFWRENG 2XC3 - Software Engineering Practice and Experience: Development Basics

LEVEL III: 36 UNITS

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

17 units

- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRENG 3S03 - Software Testing

3 units

- Health Sciences Electives

LEVEL IV: 37-38 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

9 units

- SFWRENG 3O03 - Linear Optimization
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4C03 - Computer Networks and Security

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved IBEHS Technical Elective

3 units

- Complementary Studies

LEVEL V: 34-35 UNITS

6 units

- SFWRBME 5P06 A/B - Integrated Software & Biomedical Engineering Capstone Design Project

16 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering
- SFWRENG 4AA4 - Real-Time Systems and Control Applications
- SFWRENG 4E03 - Performance Analysis of Computer Systems
- SFWRENG 4HC3 - Human Computer Interfaces
- SFWRENG 4X03 - Scientific Computation

3 units
from
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3 units
- approved technical electives from List E (Contact the Department of Computing and Software)

3-4 units
- approved IBEHS Technical Elective

3 units
- Complementary Studies

Bachelor of Engineering and Management

MECHATRONICS ENGINEERING AND MANAGEMENT, MECHATRONICS ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0.

Requirements

LEVEL II: 38 UNITS

10 units
- MECHTRON 2MD3 - Data Structures and Algorithms for Mechatronics
- MECHTRON 2MP3 - Programming for Mechatronics
- MECHTRON 2TA4 - Embedded Systems Design I

16 units
- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics

3 units
- MECHENG 2BA3 - Mechanical Engineering Measurements

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units
- ENGNMGT 2AA3 - Communication Skills

LEVEL III: 39 UNITS (2025-2026 ONLY)

15 units
- MECHTRON 2TA4 - Embedded Systems Design I
- MECHTRON 3DX4 - Dynamic Models and Control of Physical Systems
- MECHTRON 3K04 - Software Development
- MECHTRON 3MX3 - Signals and Systems

3 units
- SFWRENG 3SH3 - Operating Systems

3 units
- ENGPHYS 2NE3 - Thermal Systems Design

3 units
- MECHENG 2DA3 - Mechanical Engineering Design Elements

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ECON 1BB3 - Introductory Macroeconomics

9 units
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour

LEVEL III: 39 UNITS (EFFECTIVE 2026-2027)

15 units
- MECHTRON 3DX4 - Dynamic Models and Control of Physical Systems
- MECHTRON 3K04 - Software Development
- MECHTRON 3MX3 - Signals and Systems
- MECHTRON 3TB4 - Embedded Systems Design II

3 units
- SFWRENG 3SH3 - Operating Systems

3 units
- ELECENG 3N03 - Analog Electronics for Measuring Systems

3 units
- MECHENG 2DA3 - Mechanical Engineering Design Elements

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

9 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing

LEVEL IV: 35 UNITS (2025-2026 AND 2026-2027 ONLY)

11 units
- MECHTRON 3TB4 - Embedded Systems Design II
- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4AA4 - Real-Time Systems and Control Applications

3 units
- MECHENG 4H03 - Mechatronics

3 units
- ELECENG 3N03 - Analog Electronics for Measuring Systems

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- ENGNMGT 4A03 - Innovation Driven Project Development and Management

9 units
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 3MC3 - Applied Marketing Management

3 units
- approved technical electives from List A (Contact the Department of Computing and Software.)

LEVEL IV: 37 UNITS (EFFECTIVE 2027-2028)

7 units

- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4AA4 - Real-Time Systems and Control Applications

3 units

- MECHENG 4H03 - Mechatronics

3 units

- ENGINEER 3PX3 - Engineering Economics

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

- ENGPHYS 2NE3 - Thermal Systems Design

12 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 3MC3 - Applied Marketing Management

6 units

- approved technical electives from List A (Contact the Department of Computing and Software).

LEVEL V: 36 UNITS

6 units

- MECHTRON 4TB6 A/B - Mechatronics Capstone Design Project

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- MECHENG 4K03 - Robotics

9 units

- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

6 units

- approved technical electives from List B (Contact the Department of Computing and Software.)

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

6 units

- Commerce electives selected from Level III or IV Commerce

SOFTWARE ENGINEERING AND MANAGEMENT, SOFTWARE ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 35 UNITS

3 units

- COMMERCE 1MA3 - Introduction to Marketing

3 units

- ENGNMGT 2AA3 - Communication Skills

3 units

- MATH 2Z03 - Engineering Mathematics III

26 units

- SFWRENG 2AA4 - Software Design I - Introduction to Software Development
- SFWRENG 2C03 - Data Structures and Algorithms
- SFWRENG 2DA4 - Digital Systems and Interfacing
- SFWRENG 2DM3 - Discrete Mathematics with Applications I
- SFWRENG 2FA3 - Discrete Mathematics and Applications II
- SFWRENG 2GA3 - Computer Architecture
- SFWRENG 2OP3 - Object-Oriented Programming
- SFWRENG 2XC3 - Software Engineering Practice and Experience: Development Basics

LEVEL III: 36 UNITS (2025-2026 ONLY)

9 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2FA3 - Introduction to Finance

3 units

- ECON 1BB3 - Introductory Macroeconomics

21 units

- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3DX4 - Dynamic Systems and Control
- SFWRENG 3MX3 - Signals and Systems
- SFWRENG 3RA3 - Software Requirements and Security Considerations

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL III: 39 UNITS (EFFECTIVE 2026-2027)

9 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2FA3 - Introduction to Finance

3 units

- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

24 units

- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3DX4 - Dynamic Systems and Control
- SFWRENG 3MX3 - Signals and Systems
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRENG 3S03 - Software Testing

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL IV: 37 UNITS (2025-2026 AND 2026-2027 ONLY)

9 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

16 units

- SFWRENG 3S03 - Software Testing

- SFWRENG 4AA4 - Real-Time Systems and Control Applications
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4HC3 - Human Computer Interfaces
- SFWRENG 4X03 - Scientific Computation

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

- approved technical electives from List E (Contact the Department of Computing and Software)

3 units

- ENGINEER 3PX3 - Engineering Economics

3 units

- Commerce electives selected from Level III or IV Commerce

LEVEL IV: 37 UNITS (EFFECTIVE 2027-2028)

9 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

16 units

- SFWRENG 4AA4 - Real-Time Systems and Control Applications
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4E03 - Performance Analysis of Computer Systems
- SFWRENG 4HC3 - Human Computer Interfaces
- SFWRENG 4X03 - Scientific Computation

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

- approved technical electives from List E (Contact the Department of Computing and Software)

3 units

- ENGINEER 3PX3 - Engineering Economics

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 33 UNITS (2025-2026 ONLY)

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

12 units

- SFWRENG 4C03 - Computer Networks and Security
- SFWRENG 4G06 A/B - Software Design IV - Capstone Design Project
- SFWRENG 4X03 - Scientific Computation

3 units

- approved technical electives from List E (Contact the Department of Computing and Software)

3 units

- Commerce electives selected from Level III or IV Commerce

3 units

- approved technical electives from List C (contact the Department of Computing and Software)

LEVEL V: 33 UNITS (EFFECTIVE 2026-2027)

9 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

9 units

- SFWRENG 4C03 - Computer Networks and Security
- SFWRENG 4G06 A/B - Software Design IV - Capstone Design Project

3 units

- approved technical electives from List E (Contact the Department of Computing and Software)

3 units

- Commerce electives selected from Level III or IV Commerce

3 units

- approved technical electives from List C (contact the Department of Computing and Software)

Bachelor of Engineering and Society

MECHATRONICS ENGINEERING AND SOCIETY, MECHATRONICS ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 38 UNITS

10 units

- MECHTRON 2MD3 - Data Structures and Algorithms for Mechatronics
- MECHTRON 2MP3 - Programming for Mechatronics
- MECHTRON 2TA4 - Embedded Systems Design I

16 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics

3 units

- MECHENG 2BA3 - Mechanical Engineering Measurements

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I

LEVEL III: 36 UNITS (2025-2026 ONLY)

15 units
- MECHTRON 2TA4 - Embedded Systems Design I
- MECHTRON 3DX4 - Dynamic Models and Control of Physical Systems
- MECHTRON 3K04 - Software Development
- MECHTRON 3MX3 - Signals and Systems

3 units
- SFWRENG 3SH3 - Operating Systems

3 units
- ENGPHYS 2NE3 - Thermal Systems Design

3 units
- MECHENG 2DA3 - Mechanical Engineering Design Elements

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGSOCTY 2Y03 - Case Studies in History and Technology

6 units
- Engineering and Society focus electives

LEVEL III: 36 UNITS (EFFECTIVE 2026-2027)

15 units
- MECHTRON 3DX4 - Dynamic Models and Control of Physical Systems
- MECHTRON 3K04 - Software Development
- MECHTRON 3MX3 - Signals and Systems
- MECHTRON 3TB4 - Embedded Systems Design II

3 units
- SFWRENG 3SH3 - Operating Systems

3 units
- ELECENG 3N03 - Analog Electronics for Measuring Systems

3 units
- ENGPHYS 2NE3 - Thermal Systems Design

3 units
- MECHENG 2DA3 - Mechanical Engineering Design Elements

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units
- Engineering and Society focus electives

LEVEL IV: 35 UNITS (2025-2027 ONLY)

11 units
- MECHTRON 3TB4 - Embedded Systems Design II
- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4AA4 - Real-Time Systems and Control Applications

6 units
- MECHENG 4H03 - Mechatronics
- MECHENG 4K03 - Robotics

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- ELECENG 3N03 - Analog Electronics for Measuring Systems

9 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Y03 - Technology and Society
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

3 units
- Engineering and Society focus electives

LEVEL IV: 34 UNITS (EFFECTIVE 2027-2028)

7 units
- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4AA4 - Real-Time Systems and Control Applications

6 units
- MECHENG 4H03 - Mechatronics
- MECHENG 4K03 - Robotics

3 units
- ENGINEER 3PX3 - Engineering Economics

9 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Y03 - Technology and Society
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

3 units
- approved technical electives from List A (Contact the Department of Computing and Software).

6 units
- Engineering and Society focus electives

LEVEL V: 33 UNITS (2025-2026 ONLY)

9 units
- MECHTRON 3X03 - Scientific Computation
- MECHTRON 4TB6 A/B - Mechatronics Capstone Design Project

3 units
- approved technical electives from List A (Contact the Department of Computing and Software.)

6 units
- approved technical electives from List B (Contact the Department of Computing and Software.)

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

9 units
- Engineering and Society focus electives

LEVEL V: 30 UNITS (EFFECTIVE 2026-2027)

6 units
- MECHTRON 4TB6 A/B - Mechatronics Capstone Design Project

3 units
- approved technical electives from List A (Contact the Department of Computing and Software).

6 units
- approved technical electives from List B (Contact the Department of Computing and Software).

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

9 units
- Engineering and Society focus electives

SOFTWARE ENGINEERING AND SOCIETY, SOFTWARE ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or

the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the 6 units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0.

Requirements

LEVEL II: 35 UNITS

3 units
- MATH 2Z03 - Engineering Mathematics III

26 units
- SFWRENG 2AA4 - Software Design I - Introduction to Software Development
- SFWRENG 2C03 - Data Structures and Algorithms
- SFWRENG 2DA4 - Digital Systems and Interfacing
- SFWRENG 2DM3 - Discrete Mathematics with Applications I
- SFWRENG 2FA3 - Discrete Mathematics and Applications II
- SFWRENG 2GA3 - Computer Architecture
- SFWRENG 2OP3 - Object-Oriented Programming
- SFWRENG 2XC3 - Software Engineering Practice and Experience: Development Basics

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

LEVEL III: 36 UNITS (2025-2026 ONLY)

21 units
- SFWRENG 2DA4 - Digital Systems and Interfacing
- SFWRENG 2GA3 - Computer Architecture
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3DX4 - Dynamic Systems and Control
- SFWRENG 3MX3 - Signals and Systems

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- approved technical electives from List C (contact the Department of Computing and Software)

3 units
- ENGSOCTY 3Y03 - Technology and Society

6 units
- Engineering and Society focus electives

LEVEL III: 33 UNITS (EFFECTIVE 2026-2027)

24 units
- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3BB4 - Software Design II - Concurrent System Design
- SFWRENG 3DB3 - Databases
- SFWRENG 3DX4 - Dynamic Systems and Control
- SFWRENG 3MX3 - Signals and Systems
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRENG 3S03 - Software Testing

3 units
- ENGSOCTY 3Y03 - Technology and Society

6 units
- Engineering and Society focus electives

LEVEL IV: 38 UNITS (2025-2026 AND 2026-2027 ONLY)

17 units
- SFWRENG 3A04 - Software Design III - Large System Design
- SFWRENG 3O03 - Linear Optimization
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRENG 3S03 - Software Testing
- SFWRENG 4AA4 - Real-Time Systems and Control Applications

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

6 units
- approved technical electives from List E (contact the Department of Computing and Software)

6 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6 units
- Engineering and Society focus electives

LEVEL IV: 37 UNITS (EFFECTIVE 2027-2028)

13 units
- SFWRENG 3O03 - Linear Optimization
- SFWRENG 4E03 - Performance Analysis of Computer Systems
- SFWRENG 4X03 - Scientific Computation
- SFWRENG 4AA4 - Real-Time Systems and Control Applications

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGINEER 3PX3 - Engineering Economics

6 units
- approved technical electives from List E (contact the Department of Computing and Software)

6 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6 units
- Engineering and Society focus electives

LEVEL V: 36-39 UNITS (2025-2026 AND 2026-2027 AND 2027-2028 ONLY)

21 units
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4C03 - Computer Networks and Security
- SFWRENG 4E03 - Performance Analysis of Computer Systems
- SFWRENG 4G06 A/B - Software Design IV - Capstone Design Project
- SFWRENG 4HC3 - Human Computer Interfaces
- SFWRENG 4X03 - Scientific Computation

3 units
- approved technical electives from List E (contact the Department of Computing and Software)

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

6-9 units
- Engineering and Society focus electives

LEVEL V: 33 UNITS (EFFECTIVE 2028-2029)

15 units
- SFWRENG 4AL3 - Applications of Machine Learning
- SFWRENG 4C03 - Computer Networks and Security
- SFWRENG 4G06 A/B - Software Design IV - Capstone Design Project
- SFWRENG 4HC3 - Human Computer Interfaces

3 units
- approved technical electives from List C (contact the Department of Computing and Software)

3 units
- approved technical electives from List E (contact the Department of

Computing and Software)

3 units

- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units

- ENGSOCTY 4Y03 - Society Capstone Design

6 units

- Engineering and Society focus electives

Minor(s):

MINOR IN COMPUTER SCIENCE

Students who Entered Level I in or before September 2022:

NOTE

As all courses have enrolment capacities, the Faculty cannot guarantee registration in courses, even when prerequisites have been met. Completion of the Minor in Computer Science may not be possible.

REQUIREMENTS

24 units

- Computer Science courses (at most 6 units from Level 1)

Effective 2024-2025:

The Faculty of Engineering will admit a limited number of students each academic year to the Minor in Computer Science. Admission decisions are made on behalf of the Faculty of Engineering Admissions Committee.

NOTES

- The Minor is not open to students registered in any Computer Science, Software Engineering, Mechatronics Engineering, or Computer Engineering program.
- To apply for admission into the minor, students must email their interest to the Associate Dean's Office of the Faculty of Engineering at engadmin@mcmaster.ca before April 30th each year.
- Students seeking the Minor in Computer Science must have completed (possibly in the summer session after sending the e-mail expressing interest) the two courses COMPSCI 1DM3 and 1JC3, each with a grade of at least B.
- Students must have a Cumulative Grade Point Average of at least 7.0 to be *considered* for entry into the Minor.

REQUIREMENTS: 30 UNITS:

3 units from:

- COMPSCI 1MD3 - Introduction to Programming
- MATH 1MP3 - Introduction to Mathematical Scientific Computation

18 units

- COMPSCI 1DM3 - Discrete Mathematics for Computer Science
- COMPSCI 1JC3 - Introduction to Computational Thinking
- COMPSCI 1XC3 - Computer Science Practice and Experience: Development Basics
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development

9 units from:

- Levels II, III, IV Computer Science

Department of Electrical and Computer Engineering

Faculty as of January 15, 2025

CHAIR

Mohamed Bakr

Shahram Shirani (Acting - effective March 6, 2025)

ASSOCIATE CHAIR (UNDERGRADUATE PROGRAMS)

Xun Li

ASSOCIATE CHAIR (GRADUATE STUDIES)

Shiva Kumar

ASSOCIATE CHAIR (RESEARCH)

Natalia Nikolova

DISTINGUISHED UNIVERSITY PROFESSOR

M. Jamal Deen/B.Sc. *(Guyana)*, M.S., Ph.D. *(Case Western Reserve)*, DEng-hc, Dr-hc, Dr-hc, FRSC, FCAE, MEASA, FNASI, FINAE, FIEEE, FAPS, FECS, FAAAS, FEIC/Canada Research Chair in Information Technology

PROFESSORS

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J. Chen/B.Eng. *(Jiao Tong, Shanghai)*, M.Sc., Ph.D. *(Cornell)*, LEL

T. Davidson/B.Eng. *(Western Australia)*, D. Phil. *(Oxford)*, P.Eng., FIEEE

S. Dumitrescu/B.Sc., Ph.D. *(Bucharest)*, LEL

A. Emadi/B.S., M.S. *(Sharif University of Technology)*, Ph.D. *(Texas A&M)*/ FIEEE, FNAI, Canada Research Chair in Transportation Electrification and Smart Mobility, NSERC/FCA Industrial Research Chair in Electrified Powertrains

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T. Kirubarajan/B.A., M.A. *(Cambridge)*, M.S., Ph.D. *(Connecticut)*

S. Kumar/B.Eng. *(Mysore)*, M.S., Ph.D. *(Indian Institute of Science)*, Ph.D. *(Osaka)*, FOSA, P. Eng.

X. Li/B.S. *(Shandong)*, M.S. *(Wuhan Research Institute of Posts and Telecommunications)*, Ph.D. *(Northern Jiaotong)*, P.Eng.

B. Nahid-Mobarakeh/B.Sc. *(University of Technology, Iran)*, M.Sc. *(University of Tehran)*, Ph.D. *(Institut National Polytechnique de Lorraine)*, FIEEE

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N. Nikolova/Dipl. Ing. *(Technical University of Varna)*, Ph.D. *(University of Electrocommunications, Tokyo)*, P.Eng., FCAE, FIEEE

M. Noseworthy/B.Sc., M.Sc., Ph.D. *(Guelph)*, LEL

M. Schwartz/B.A., M.Sc., Ph.D. *(Technion)*

S. Shirani/B.Sc. *(Isfahan University of Technology)*, M.Sc. *(Amirkabir University of Technology)*, Ph.D. *(British Columbia)*, P.Eng./L.R. Wilson/Bell Canada Enterprises Chair in Data Communications

S. Sirouspour/B.Sc., M.Sc. *(Sharif University of Technology, Iran)*, Ph.D. *(British Columbia)*, P.Eng.

T. D. Todd/B.A.Sc., M.A.Sc., Ph.D. *(Waterloo)*, P.Eng.

X. Wu/B.Sc. *(Wuhan, China)*, Ph.D. *(Calgary)*, FIEEE

D. Zhao/B.S. *(Northern Jiaotong, Beijing)*, Ph.D. *(Waterloo)*, P.Eng.

ADJUNCT PROFESSORS

L. Carney/S.B., *(MIT)*, M.S., Ph.D. *(Wisconsin)*, FASA, FAIMBE

N. Schofield/B.Sc. *(Sheffield)*, Ph.D. *(Sheffield)*

N. Zargari/B. Eng *(Tehran)*, M.A.Sc., Ph.D. *(Concordia)*

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T.E. Doyle/B.Sc., B.E.Sc., M.E.Sc., Ph.D. *(Western Ontario)*, P.Eng.

T.R. Field/B.A. *(Cambridge)*, D. Phil. *(Oxford)*, FInstP, FIMA

Y. Haddara/B.Eng. *(Memorial)*, M.Sc., Ph.D. *(Stanford)*, P.Eng.

M. Howlader/B.Eng. *(Bangladesh)*, M.Sc., Ph.D. *(Kyushu University)*

A. Jeremic/Dipl. Ing. *(Belgrade)*, M.Sc., Ph.D. *(Illinois-Chicago)*

M. Narimani/B.Sc., M.Sc. *(Isfahan University of Technology)*, Ph.D. *(Western Ontario)*, P.Eng.

T. M. N. Ngatched/B.Sc., M.Sc. *(University of Yaoundé)*, M.Eng., Ph.D. *(University of KwaZulu-Natal)*, SIEEE, P.Eng.

ADJUNCT ASSOCIATE PROFESSORS

A. Fatehi/B.Sc. *(Isfahan University)*, M.Sc. *(Tehran University)*, Ph.D. *(Tohoku University)*

ASSISTANT PROFESSORS

A. Abdelhadi/Ph.D. *(British Columbia)*
S. Athar/B.E. *(NUST, Pakistan)*, M.S. *(LUMS, Pakistan)*, Ph.D. *(Waterloo)*, MIEEE
B. Bilgin/B.Sc., M.Sc. *(Istanbul Technical University)*, Ph.D. *(Illinois Institute of Technology)*, P.Eng.
S. Chen/B.A.Sc. (Hons.) *(Simon Fraser)*, D.Phil. *(Waterloo)*, P.Eng.
K. Cheshmi/B.Eng. *(Ferdowsi University of Mashhad)*, M.A.Sc. *(Tehran University)*, D.Phil. *(Toronto)*
M. Elamien/B.Sc. (Highest Honors) *(Sharjah)*, M.Sc. *(Sharjah)*, Ph.D. *(Calgary)*
M. Hassan/B.Sc., M.Sc. *(Cairo)*, Ph.D. *(Waterloo)*
P. Kollmeyer/B.Sc. *(Wisconsin)*, M.A.Sc. *(Wisconsin)*, Ph.D. *(Wisconsin)*
K. Singh/B.Sc. *(Kurukshetra University)*, M.A.Sc. (Meerut University), M.Tech. *(Devi Ahilya University)*, Ph.D. *(Institutnational de la Recherche Scientifique)*
R. Tharmarasa/B.Sc.Eng. *(Moratuwa, Sri Lanka)*, M.Sc., Ph.D. *(McMaster)*

ADJUNCT ASSISTANT PROFESSORS

A. Baronian/B.A. *(Belgrade)*, M.Sc., Ph.D. *(Toronto)*
O. Beik/B.Sc., M.Sc. *(Yazd University)*, Ph.D. *(McMaster)*
R. Haddad/B.Sc. *(Jordan University)*, Ph.D. *(Michigan State)*
W. Jiang/B.Eng. *(Xi'an Jiaotong)*, M.A.Sc. *(Shanghai Jiaotong)*, Ph.D. *(McMaster)*
P. Malysz/B.Eng., M.A.Sc., Ph.D., *(McMaster)*
S. Nalakath/M.Sc. *(Indian Institute of Technology)*, Ph.D. *(McMaster)*
A. A. Qazalbash/B.Sc. *(CECO's University of Science and Technology)*, M.Sc. *(Manchester)*, Ph.D. *(Southampton)*
E. Sayed/B.Sc., M.Sc. *(Benha University)*, Ph.D. *(McMaster)*
M. Taylor/B.Sc., M.Sc. *(McMaster)*, Ph.D. *(Standford)*
A. Zamani/B.Sc., M.Sc. *(Iran University of Science and Technology)*, Ph.D. *(Western)*

ASSOCIATE MEMBERS

M. Alavi/B.Eng. *(K. N. Toosi University of Technology)*, M.A.Sc. *(Sharif University of Technology)*, Ph.D. *(Nanyang Technological University)*
S. Svenningsen/B.M.Sc. *(Western Ontario)*, D.Phil. *(Western Ontario)*

Bachelor of Engineering

COMPUTER ENGINEERING, COMPUTER ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Note

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 37 UNITS

14 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

11 units
- COMPENG 2CF3 - Circuits and Waves
- ELECENG 2CI4 - Introduction to Circuit Analysis
- ELECENG 2EI4 - Electronic Devices and Circuits I

3 units
- ENGINEER 2PX3 - Engineering Communications

3 units
- MATH 2Z03 - Engineering Mathematics III

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- approved complementary studies electives

LEVEL III: 38 UNITS

13 units
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 3DY4 - Computer Systems Integration Project
- COMPENG 3SM4 - Algorithm Design and Analysis

18 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes
- ELECENG 3TR4 - Communication Systems

4 units
- SFWRENG 3K04 - Software Development

3 units
- ENGINEER 3PX3 - Engineering Economics

LEVEL IV: 37-38 UNITS

15 units
- COMPENG 3SK3 - Numerical Methods for Scientific Computing
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DS4 - Embedded Systems

6 units
- ELECENG 4OI6 A/B - Engineering Design

3 units
- approved complementary studies electives

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units
- SFWRENG 3SH3 - Operating Systems

7-8 units
- technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV courses

ELECTRICAL ENGINEERING, ELECTRICAL ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there

be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Note

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 39 UNITS

16 units
- ELECENG 2CI4 - Introduction to Circuit Analysis
- ELECENG 2CJ4 - Circuits and Systems
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 2FH4 - Electromagnetics I

14 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

3 units
- MATH 2Z03 - Engineering Mathematics III

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- ENGINEER 2PX3 - Engineering Communications

LEVEL III: 39 UNITS

4 units
- ELECENG 3EY4 - Electrical Systems Integration Project

3 units
- ENGINEER 3PX3 - Engineering Economics

26 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes
- ELECENG 3TR4 - Communication Systems

6 units
- approved complementary studies electives

LEVEL IV: 33-36 UNITS

6 units
- ELECENG 4OI6 A/B - Engineering Design

14-16 units

from
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DN4 - Advanced Internet Communications
- COMPENG 4DS4 - Embedded Systems
- COMPENG 4SL4 - Fundamentals of Machine Learning
- COMPENG 4TL4 - Digital Signal Processing
- COMPENG 4TS3 - Introduction to Digital Sequences
- COMPENG 4SP4 - High-Performance Programming
- COMPENG 4DV4 - Very Large Scale Integration System Design
- ELECENG 4CL4 - Control System Design
- ELECENG 4EM4 - Photonic Devices and Systems
- ELECENG 4FJ4 - Devices and Antennas for Wireless Systems
- ELECENG 4PK4 - Power Electronics
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PN4 - Electric Motor Drives
- ELECENG 4PP4 - Smart and Micro Grids
- ELECENG 4PR4 - Net-Zero Emission Power Systems
- ELECENG 4QT3 - Advanced Quantum Theory and Technology
- ELECENG 4TK4 - Digital Communications Systems

3 units
- COMPENG 3SK3 - Numerical Methods for Scientific Computing

7-8 units
- technical electives from the approved list of Computer Engineering or Electrical Engineering Level III or IV courses

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

Bachelor of Engineering and Biomedical Engineering

ELECTRICAL AND BIOMEDICAL ENGINEERING, ELECTRICAL AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.
All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.
Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.
Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.
Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.
Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.
Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each four month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 38 UNITS

13 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

22 units

- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms
- ELECENG 2CI4 - Introduction to Circuit Analysis
- ELECENG 2CJ4 - Circuits and Systems
- ELECENG 2FH4 - Electromagnetics I
- MATH 2Z03 - Engineering Mathematics III

3 units

- Health Sciences Electives

LEVEL III: 38 UNITS (2025-26 ONLY)

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

22 units

- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TQ3 - Advanced Probability and Random Processes

LEVEL III: 35 UNITS (EFFECTIVE 2026-2027)

13 units

- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

22 units

- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TQ3 - Advanced Probability and Random Processes

LEVEL IV: 36-37 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

11 units

- COMPENG 3SK3 - Numerical Methods for Scientific Computing
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TR4 - Communication Systems

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved IBEHS Technical Elective

LEVEL V: 35-38 UNITS

6 units

- ELECBME 5P06 A/B - Integrated Electrical & Biomedical Engineering Capstone Design Project

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

8 units

from

- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DN4 - Advanced Internet Communications
- COMPENG 4SL4 - Fundamentals of Machine Learning
- COMPENG 4TL4 - Digital Signal Processing
- COMPENG 4TS3 - Introduction to Digital Sequences
- COMPENG 4SP4 - High-Performance Programming
- COMPENG 4DV4 - Very Large Scale Integration System Design
- ELECENG 4CL4 - Control System Design
- ELECENG 4EM4 - Photonic Devices and Systems
- ELECENG 4FJ4 - Devices and Antennas for Wireless Systems
- ELECENG 4PK4 - Power Electronics
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PN4 - Electric Motor Drives
- ELECENG 4PP4 - Smart and Micro Grids
- ELECENG 4TK4 - Digital Communications Systems

3-4 units

- approved IBEHS Technical Elective

6-8 units

- technical elective from an approved list of Electrical Engineering Level III or IV courses

6 units
- Complementary Studies

Bachelor of Engineering and Management

COMPUTER ENGINEERING AND MANAGEMENT, COMPUTER ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 38 UNITS

12 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FA3 - Introduction to Finance

7 units
- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

7 units
- COMPENG 2CF3 - Circuits and Waves
- ELECENG 2CI4 - Introduction to Circuit Analysis

3 units
- ENGNMGT 2AA3 - Communication Skills

3 units
- MATH 2Z03 - Engineering Mathematics III

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

3 units
- approved complementary studies electives

LEVEL III: 37 UNITS (2025-2026 ONLY)

9 units
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2FA3 - Introduction to Finance

10 units
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes

11 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 3SM4 - Algorithm Design and Analysis

4 units
- SFWRENG 3K04 - Software Development

3 units
- ENGINEER 3PX3 - Engineering Economics

LEVEL III: 37 UNITS (EFFECTIVE 2026-2027)

9 units
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

10 units
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes

11 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 3SM4 - Algorithm Design and Analysis

4 units
- SFWRENG 3K04 - Software Development

3 units
- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

LEVEL IV: 39 UNITS (2025-2026 AND 2026-2027 ONLY)

9 units
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

9 units
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 3DY4 - Computer Systems Integration Project

12 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TR4 - Communication Systems

3 units
- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units
- SFWRENG 3SH3 - Operating Systems

LEVEL IV: 39 UNITS (EFFECTIVE 2027-2028)

3 units
- COMMERCE 2BC3 - Human Resource Management and Labour Relations

9 units
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 3DY4 - Computer Systems Integration Project

12 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TR4 - Communication Systems

3 units
- ENGNMGT 4A03 - Innovation Driven Project Development and Management

6 units
- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- SFWRENG 3SH3 - Operating Systems

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 37-40 UNITS

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

12 units

- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DS4 - Embedded Systems

4 units

- technical electives from the approved list of Computer Engineering or Electrical Engineering Level III or IV courses

6 units

- ELECENG 4OI6 A/B - Engineering Design

3 units

- COMPENG 3SK3 - Numerical Methods for Scientific Computing

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3-6 units

- Commerce electives selected from Level III or IV Commerce

ELECTRICAL ENGINEERING AND MANAGEMENT, ELECTRICAL ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. As well as completing the academic requirements as specifi ed in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each four month work term.

Requirements

LEVEL II: 37 UNITS

9 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2FA3 - Introduction to Finance

7 units

- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

12 units

- ELECENG 2CI4 - Introduction to Circuit Analysis
- ELECENG 2CJ4 - Circuits and Systems
- ELECENG 2EI4 - Electronic Devices and Circuits I

3 units

- ENGNMGT 2AA3 - Communication Skills

3 units

- MATH 2Z03 - Engineering Mathematics III

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL III: 39 UNITS (2025-2026 ONLY)

12 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FA3 - Introduction to Finance

10 units

- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 3SK3 - Numerical Methods for Scientific Computing

14 units

- ELECENG 2FH4 - Electromagnetics I
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes
- ELECENG 3CL4 - Introduction to Control Systems

3 units

- ENGINEER 3PX3 - Engineering Economics

LEVEL III: 39 UNITS (EFFECTIVE 2026-2027)

12 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

10 units

- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 3SK3 - Numerical Methods for Scientific Computing

14 units

- ELECENG 2FH4 - Electromagnetics I
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes
- ELECENG 3CL4 - Introduction to Control Systems

3 units

- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

LEVEL IV: 38 UNITS (2025-2026 AND 2026-2027 ONLY)

9 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

20 units

- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3EY4 - Electrical Systems Integration Project
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TR4 - Communication Systems

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

- Commerce electives selected from Level III or IV Commerce

LEVEL IV: 38 UNITS (EFFECTIVE 2027-2028)

3 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations

20 units

- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3EY4 - Electrical Systems Integration Project
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TR4 - Communication Systems

6 units

- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

3 units

- approved complementary studies electives

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 34-38 UNITS (UNTIL AND INCLUDING 2027-2028)

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

13-17 units

from

- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DN4 - Advanced Internet Communications
- COMPENG 4DS4 - Embedded Systems
- COMPENG 4SL4 - Fundamentals of Machine Learning
- COMPENG 4TL4 - Digital Signal Processing
- COMPENG 4TS3 - Introduction to Digital Sequences
- COMPENG 4SP4 - High-Performance Programming
- COMPENG 4DV4 - Very Large Scale Integration System Design
- ELECENG 4BB3 - Cellular Bioelectricity
- ELECENG 4CL4 - Control System Design
- ELECENG 4EM4 - Photonic Devices and Systems
- ELECENG 4FJ4 - Devices and Antennas for Wireless Systems
- ELECENG 4PK4 - Power Electronics
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PN4 - Electric Motor Drives
- ELECENG 4PP4 - Smart and Micro Grids
- ELECENG 4PR4 - Net-Zero Emission Power Systems
- ELECENG 4QT3 - Advanced Quantum Theory and Technology
- ELECENG 4TK4 - Digital Communications Systems

6 units

- ELECENG 4OI6 A/B - Engineering Design

3 units

- approved complementary studies electives

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3 units

- Commerce electives selected from Level III or IV Commerce

LEVEL V: 31-38 UNITS (EFFECTIVE 2028-2029)

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

13-17 units

from

- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DN4 - Advanced Internet Communications
- COMPENG 4DS4 - Embedded Systems
- COMPENG 4SL4 - Fundamentals of Machine Learning
- COMPENG 4TL4 - Digital Signal Processing
- COMPENG 4TS3 - Introduction to Digital Sequences
- COMPENG 4SP4 - High-Performance Programming
- COMPENG 4DV4 - Very Large Scale Integration System Design
- ELECENG 4BB3 - Cellular Bioelectricity
- ELECENG 4CL4 - Control System Design
- ELECENG 4EM4 - Photonic Devices and Systems
- ELECENG 4FJ4 - Devices and Antennas for Wireless Systems
- ELECENG 4PK4 - Power Electronics
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PN4 - Electric Motor Drives
- ELECENG 4PP4 - Smart and Micro Grids
- ELECENG 4TK4 - Digital Communications Systems
- ELECENG 4PR4 - Net-Zero Emission Power Systems
- ELECENG 4QT3 - Advanced Quantum Theory and Technology

6 units

- ELECENG 4OI6 A/B - Engineering Design

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3-6 units

- Commerce electives selected from Level III or IV Commerce

Bachelor of Engineering and Society

COMPUTER ENGINEERING AND SOCIETY, COMPUTER ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 33 UNITS

11 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

7 units
- COMPENG 2CF3 - Circuits and Waves
- ELECENG 2CI4 - Introduction to Circuit Analysis

3 units
- MATH 2Z03 - Engineering Mathematics III

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units
- Engineering and Society focus electives

LEVEL III: 33 UNITS

10 units
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 3SM4 - Algorithm Design and Analysis
- SFWRENG 3SH3 - Operating Systems

10 units
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes

4 units
- SFWRENG 3K04 - Software Development

6 units
- ENGSOCTY 3Y03 - Technology and Society
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

3 units
- Engineering and Society focus electives

LEVEL IV: 33-36 UNITS (2025-2026 ONLY)

9 units
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 3DY4 - Computer Systems Integration Project

12 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TR4 - Communication Systems

3 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II

9-12 units
- Engineering and Society focus electives

LEVEL IV: 36 UNITS (EFFECTIVE 2026-2027)

9 units
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 3DY4 - Computer Systems Integration Project

12 units
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3TR4 - Communication Systems

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II

9 units
- Engineering and Society focus electives

LEVEL V: 37-38 UNITS

12 units
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DS4 - Embedded Systems

6 units
- ELECENG 4OI6 A/B - Engineering Design

3 units
- COMPENG 3SK3 - Numerical Methods for Scientific Computing

7-8 units
- technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV courses

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

3 units
- Engineering and Society focus electives

ELECTRICAL ENGINEERING AND SOCIETY, ELECTRICAL ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 34 UNITS

14 units
- COMPENG 2DI4 - Logic Design
- COMPENG 2DX3 - Microprocessor Systems Project
- COMPENG 2SH4 - Principles of Programming
- COMPENG 2SI3 - Data Structures and Algorithms

8 units
- ELECENG 2CI4 - Introduction to Circuit Analysis
- ELECENG 2CJ4 - Circuits and Systems

3 units
- MATH 2Z03 - Engineering Mathematics III

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL III: 36-39 UNITS

3 units
- COMPENG 3SK3 - Numerical Methods for Scientific Computing

18 units
- ELECENG 2EI4 - Electronic Devices and Circuits I
- ELECENG 2FH4 - Electromagnetics I
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3TP3 - Signal & Systems
- ELECENG 3TQ3 - Advanced Probability and Random Processes

6 units
- ENGSOCTY 3Y03 - Technology and Society
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

9-12 units
- Engineering and Society focus electives

LEVEL IV: 35 UNITS

20 units
- ELECENG 3EJ4 - Electronic Devices and Circuits II
- ELECENG 3EY4 - Electrical Systems Integration Project
- ELECENG 3FK4 - Electromagnetics II
- ELECENG 3PI4 - Energy Conversion
- ELECENG 3TR4 - Communication Systems

3 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II

9 units
- Engineering and Society focus electives

3 units
- ENGINEER 3PX3 - Engineering Economics

LEVEL V: 34-39 UNITS

6 units
- ELECENG 4OI6 A/B - Engineering Design

13-17 units

from
- COMPENG 3DQ5 - Digital Systems Design
- COMPENG 4DK4 - Computer Communication Networks
- COMPENG 4DM4 - Computer Architecture
- COMPENG 4DN4 - Advanced Internet Communications
- COMPENG 4DS4 - Embedded Systems
- COMPENG 4SL4 - Fundamentals of Machine Learning
- COMPENG 4TL4 - Digital Signal Processing
- COMPENG 4TS3 - Introduction to Digital Sequences
- COMPENG 4SP4 - High-Performance Programming
- COMPENG 4DV4 - Very Large Scale Integration System Design
- ELECENG 4BB3 - Cellular Bioelectricity
- ELECENG 4CL4 - Control System Design
- ELECENG 4EM4 - Photonic Devices and Systems
- ELECENG 4FJ4 - Devices and Antennas for Wireless Systems
- ELECENG 4PK4 - Power Electronics
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PN4 - Electric Motor Drives
- ELECENG 4PP4 - Smart and Micro Grids
- ELECENG 4PR4 - Net-Zero Emission Power Systems
- ELECENG 4QT3 - Advanced Quantum Theory and Technology
- ELECENG 4TK4 - Digital Communications Systems

3-4 units
- technical electives from the approved list of Computer Engineering or Electrical Engineering Level III or IV courses

3 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units
- ENGSOCTY 4Y03 - Society Capstone Design

6 units
- Engineering and Society focus electives

Department of Engineering Physics

Faculty of the Department of Engineering Physics, as of January 15, 2025

CHAIR

Rafael N. Kleiman

ASSOCIATE CHAIR, UNDERGRADUATE

Matthew Minnick

ASSOCIATE CHAIR, GRADUATE

Adrian H. Kitai

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Qiyin Fang/B.S. *(Nankai)*, M.S., Ph.D. *(East Carolina)*, L.E.L.
Niko Hildebrandt/ Dipl. Ing. FH *(Applied Sciences Berlin)*, Ph.D. *(Potsdam)*
Adrian H. Kitai/B.Eng. *(McMaster)*, Ph.D. *(Cornell)*, P.Eng.
Rafael N. Kleiman/SB *(M.I.T.)*, M.Sc., Ph.D. *(Cornell)*, P.Eng.
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Ray R. LaPierre/B.Sc. *(Dalhousie)*, M.Eng., Ph.D. *(McMaster)*, P.Eng.
John C. Luxat/B.Sc., M.Sc. *(Cape Town)*, Ph.D. *(Windsor)*, P.Eng.
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Leyla Soleymani/B.Eng. *(McGill)*, M.S. *(Southern California)*, Ph.D. *(Toronto)*
Chang-qing Xu/B.Sc., M.Sc. *(University of Science and Technology of China)*, D.Eng. *(Tokyo)*, L.E.L.

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Michael J. Welland/B.Sc. *(Queen's)*, Ph.D. *(Royal Military College)*, P.Eng.

ASSISTANT PROFESSORS

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Matthew Minnick/B.Eng., Ph.D. *(McMaster)*, P.Eng.

INDUSTRY PROFESSORS

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Alessandro Petruzzi/M.Sc., Ph.D. *(University of Pisa)*

ADJUNCT PROFESSORS

Pavel Cheben/M.Sc. *(Slovak Technical University)*, Ph.D. *(Complutense University of Madrid)*
Woo Young Kim/B.S., M.E. *(Purdue)*
Jean-Pierre Landesman/Dipl. Ing. *(Ecole Centrale de Paris)*, Ph.D. *(Strasbourg University)*
Laurence Leung/B.A.Sc., M.A.Sc., Ph.D. *(Ottawa)*
Nikola K. Popov/B.Eng. *(Kiril and Metodij)*, M.Sc. *(Belgrade)*, Ph.D. *(Zagreb)*
Christian Reiter/ Dipl., Ph.D. *(München)*
Benjamin Rouben/B.Sc. *(McGill)*, Ph.D. *(M.I.T.)*
Victor G. Snell/B.Sc. *(Manitoba)*, M.Sc., Ph.D. *(Toronto)*
Ayse Turak/B.Sc. (Queen's), Ph.D. (Toronto)
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Jonathon White/ B.Eng., Ph.D. *(McMaster)*
Jeremy Whitlock/B.Sc. *(Waterloo)*, M. Eng., Ph.D. *(McMaster)*
Clara Wren/ B.Sc. *(Sogang)*, Ph.D. *(Kansas State)*
Zhiyi Zhang/B.Sc.E.,M.Sc.E. *(National University of Defense Technology)*, Ph.D. *(Zhongshan University)*

ADJUNCT ASSISTANT PROFESSOR
Derek J. Cappon/B.Eng., Ph.D. *(McMaster)*
Simon Day/B.Sc. *(St. Mary's)*, M.Eng., Ph.D. *(McMaster)*
Mini Thomas/B.Eng. *(Shivaji)*, M.Eng. *(I.I.T. Bombay)*, Ph.D. *(McMaster)*, P.Eng.
ASSOCIATE MEMBERS
Nabil Bassim/*(Materials Science and Engineering)* B.S. *(South Florida)*, M.Sc., Ph.D. *(Florida)*
M. Jamal Deen/*(Electrical and Computer Engineering)* B.Sc. *(Guyana)*, M.Sc., Ph.D. *(Case Western Reserve)*
Joseph E. Hayward/*(Radiology)* B.Eng., M.Eng., Ph.D. *(McMaster)*
Kalaichelvi Saravanamuttu/*(Chemistry)* B.Sc., Ph.D. *(McGill)*
Seshasai Srinivasan/(S.E.P.T.) B.E. *(Bombay)*, M.S., Ph.D. *(Michigan Technological University)*
Tom Wanyama/(S.E.P.T.) B.Sc. *(Makerere)*, M.E.Sc. *(New South Wales)*, Ph.D. *(Calgary)*, P.Eng.

Bachelor of Engineering

ENGINEERING PHYSICS, ENGINEERING PHYSICS CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Approved electives for a total of at least 38 units:
   - Students must take 6 units of Approved complementary studies electives (in addition to the 6 units taken in Engineering 1)
   - Students must take at least 16 units of Approved technical electives from the Engineering Physics course offerings, including at least one of the following courses involving discipline-specific lab work: ENGPHYS 3D04, 3E04, 3O04, 3PN4, 4Z04
   - Remaining units: Students may take any approved Engineering or Science technical elective (including Engineering Physics)
2. Approved technical electives are available in a list on the Engineering Physics website. Subject to Chair approval, students may replace Engineering Physics technical electives with approved Science or Engineering courses. Also subject to Chair approval, courses not appearing on the technical elective list may qualify as acceptable technical electives. Students are free to choose their technical electives according to their own interests, but may consider the following course recommendations for a program of study. Further detail on program specializations and course recommendations is available on the Engineering Physics website. Students are responsible for ensuring that they fulfill the prerequisites for each course. Note that courses in departments other than Engineering Physics may be subject to enrollment limitations.
   - **Nanotech Device Engineering:** ENGPHYS 3PN4, 4MD3, 4Z04, MATLS 4H03
   - **Photonics/Optical Engineering:** ENGPHYS 3E04, 3PD4, 3PN4, 4S04, 4Z04, ELECENG 3FK4 and 4EM4
   - **Solar Photovoltaic Engineering:** ENGPHYS 3E04, 3ES3, 3PN4, 4MD3, 4X03, 4Z04, MATLS 4Q03
   - **Nuclear Engineering:** ENGPHYS 3D04, 3ES3, 3O04, 4D04, 4NE3, 4P03, 4PP3, MECHENG 4O04, 4S03, 4U03, and 4V03
   - **Biomedical Engineering:** ENGPHYS 3E04, 3PN4, 4B03, 4I03, 4S04, 4Z04, ELECENG 4BD4, MECHENG 4N03
   - **Quantum Computing and Metrology:** ENGPHYS 4QC3, 4QM3, and optionally any of MATH 2R03, 3C03, 3D03, 3QC3, PHYSICS 3MM3, 3QI3, 4F03, DATASCI 2G03, 3ML3, COMPENG 2SH4, 2SI3
   - **Space Systems Engineering:** ENGPHYS 3O04, 3SP3, 3D04, 3E04, 4X03, MECHENG 4AA3, 4Q03, ELECENG 3TR4, and optionally MATH 3C03, PHYSICS 3A03, 3C03, 3QI3, ASTRON 2E03, 3X03, 3Y03, ELECENG 4TK4, ENGPHYS 4QC3, 4QM3, MATLS 3M03, MECHENG 4J03, MEDPHYS 4F03
   - **Interdisciplinary Engineering Physics:** ENGPHYS 3D04, 3E04, 3ES3, 3O04, 3PD4, 3PN4, 4B03, 4I03, 4PP3, 4QC3, 4X03
4. Students in a Co-op program must complete ENGINEER 1EE0 in addition to the academic requirements specified in this calendar. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 35 UNITS
26 units
- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2CM4 - Computational Multiphysics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2NE3 - Thermal Systems Design
- ENGPHYS 2P04 - Computational Mechanics: Statics
- ENGPHYS 2QM3 - Introduction to Quantum Mechanics

3 units
- ENGINEER 2PX3 - Engineering Communications

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 35-37 UNITS
20 units
- ENGPHYS 3BA3 - Circuits with Non-Linear and Active Components
- ENGPHYS 3BB3 - Embedding and Programming a Micro-Controller
- ENGPHYS 3L04 - Engineering Metrology
- ENGPHYS 3NM4 - Numerical Methods for Engineering
- ENGPHYS 3SM3 - Statistical Mechanics
- ENGPHYS 3W03 - Signals and Systems for Engineering

3 units
- ENGINEER 3PX3 - Engineering Economics

12-14 units
- Approved electives *(see Note 1)*

LEVEL IV: 35-37 UNITS
3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

6 units
- ENGPHYS 4A06 A/B - Engineering Physics Design and Synthesis Project

26-28 units
- Approved electives (See *Note 1* above.)

Bachelor of Engineering and Biomedical Engineering

ENGINEERING PHYSICS AND BIOMEDICAL ENGINEERING, ENGINEERING PHYSICS AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. Approved technical electives for a total of at least 28 units:
   - Students must take at least 12 units of Approved Technical Electives from the Engineering Physics course offerings, including at least one of the following courses involving discipline-specific lab work: ENGPHYS 3D04, 3E04, 3O04, 3PN4, 4Z04
   - Students must take at least 6 units of Approved Technical Electives from the Approved IBEHS technical elective course offerings
   - Remaining units: Students may take any approved Engineering or Science technical elective (including Engineering Physics)
2. Approved technical electives are available in a list on the Engineering Physics website. Subject to Chair approval, students may replace Engineering Physics technical electives with approved Engineering courses. Also subject to Chair approval, courses not appearing on the technical elective list may qualify as acceptable technical electives. Students are free to choose their technical electives according to their own interests, but may consider the following course recommendations for a program of study. Further detail on program specializations and course recommendations is available on the Engineering Physics website. Students are responsible for ensuring that they fulfill the prerequisites for each course. Note that courses in departments other than Engineering Physics may be subject to enrollment limitations.
   - **Nanotech Device Engineering:** ENGPHYS 3PN4, 4MD3, 4Z04, MATLS 4H03
   - **Photonics/Optical Engineering:** ENGPHYS 3E04, 3PD4, 3PN4, 4S04, 4Z04, ELECENG 3FK4 and 4EM4
   - **Solar Photovoltaic Engineering:** ENGPHYS 3E04, 3ES3, 3PN4, 4MD3, 4X03, 4Z04, MATLS 4Q03
   - **Nuclear Engineering:** ENGPHYS 3D04, 3ES3, 3O04, 4D04, 4NE3, 4P03, 4PP3, MECHENG 4O04, 4S03, 4U03, and 4V03
   - **Biomedical Engineering:** ENGPHYS 3E04, 3PN4, 4B03, 4I03, 4S04, 4Z04, MECHENG 4N03
   - **Quantum Computing and Metrology:** ENGPHYS 4QC3, 4QM3, and optionally any of MATH 2R03, 3C03, 3D03, 3QC3, PHYSICS 3MM3, 3QI3, 4F03, DATASCI 2G03, 3ML3, COMPENG 2SH4, 2SI3
   - **Space Systems Engineering:** ENGPHYS 3O04, 3SP3, 3D04, 3E04, 4X03, MECHENG 4AA3, 4Q03, ELECENG 3TR4, and optionally MATH 3C03, PHYSICS 3A03, 3C03, 3QI3, ASTRON 2E03, 3X03, 3Y03, ELECENG 4TK4, ENGPHYS 4QC3, 4QM3, MATLS 3M03, MECHENG 4J03, MEDPHYS 4F03
   - **Interdisciplinary Engineering Physics:** ENGPHYS 3D04, 3E04, 3ES3, 3O04, 3PD4, 3PN4, 4B03, 4I03, 4PP3, 4QC3, 4X03
4. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each four month work term.
5. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to 8 units of research project or independent study courses. A full listing can be found on the IBEHS website.
6. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 39 UNITS

10 units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

29 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2CM4 - Computational Multiphysics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics
- ENGPHYS 2QM3 - Introduction to Quantum Mechanics
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 39 UNITS

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

20 units

- ENGPHYS 2NE3 - Thermal Systems Design

- ENGPHYS 3BA3 - Circuits with Non-Linear and Active Components
- ENGPHYS 3BB3 - Embedding and Programming a Micro-Controller
- ENGPHYS 3L04 - Engineering Metrology
- ENGPHYS 3NM4 - Numerical Methods for Engineering
- ENGPHYS 3SM3 - Statistical Mechanics

3 units

- Health Sciences Electives

LEVEL IV: 34-36 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

12-14 units

- Approved technical electives (see *Note 1* above.*)*

LEVEL V: 34-36 UNITS

6 units

- EPHYSBME 5P06 A/B - Integrated Engineering Physics & Biomedical Engineering Capstone Design Project

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

16-18 units

- Approved technical electives (see *Note 1* above.)

6 units

- Complementary Studies

Bachelor of Engineering and Management

ENGINEERING PHYSICS AND MANAGEMENT, ENGINEERING PHYSICS AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0. Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Approved technical electives for a total of at least 32 units:
   - Students must take at least 16 units of Approved technical electives from the Engineering Physics course offerings, including at least one of the following courses involving discipline-specific lab work: ENGPHYS 3D04, 3E04, 3O04, 3PN4, 4Z04
   - Remaining units: Students may take any approved Engineering or Science technical elective (including Engineering Physics)
2. Approved technical electives are available in a list on the Engineering Physics website. Subject to Chair approval, students may replace Engineering Physics technical electives with approved Engineering courses. Also subject to Chair approval, courses not appearing on the technical elective list may qualify as acceptable technical electives. Students are free to choose their technical electives according to their own interests, but may consider the following course recommendations for a program of study. Further detail on program specializations and course recommendations is available on the Engineering Physics website. Students are responsible for ensuring that they fulfill the prerequisites for each course. Note that courses in departments other than Engineering Physics may be subject to enrollment limitations.
   - **Nanotech Device Engineering:** ENGPHYS 3PN4, 4MD3, 4Z04, MATLS 4H03
   - **Photonics/Optical Engineering:** ENGPHYS 3E04, 3PD4, 3PN4, 4S04, 4Z04, ELECENG 3FK4 and 4EM4
   - **Solar Photovoltaic Engineering:** ENGPHYS 3E04, 3ES3, 3PN4, 4MD3, 4X03, 4Z04, MATLS 4Q03
   - **Nuclear Engineering:** ENGPHYS 3D04, 3ES3, 3O04, 4D04, 4NE3, 4P03, 4PP3, MECHENG 4O04, 4S03, 4U03, and 4V03
   - **Biomedical Engineering:** ENGPHYS 3E04, 3PN4, 4B03, 4I03, 4S04, 4Z04, MECHENG 4N03
   - **Quantum Computing and Metrology:** ENGPHYS 4QC3, 4QM3, and optionally any of MATH 2R03, 3C03, 3D03, 3QC3, PHYSICS 3MM3, 3QI3, 4F03, DATASCI 2G03, 3ML3, COMPENG 2SH4, 2SI3
   - **Space Systems Engineering:** ENGPHYS 3O04, 3SP3, 3D04, 3E04, 4X03, MECHENG 4AA3, 4Q03, ELECENG 3TR4, and optionally MATH 3C03, PHYSICS 3A03, 3C03, 3QI3, ASTRON 2E03, 3X03, 3Y03, ELECENG 4TK4, ENGPHYS 4QC3, 4QM3, MATLS 3M03, MECHENG 4J03, MEDPHYS 4F03
   - **Interdisciplinary Engineering Physics:** ENGPHYS 3D04, 3E04, 3ES3, 3O04, 3PD4, 3PN4, 4B03, 4I03, 4PP3 4AC3, 4X03
3. Students in a Co-op program must complete ENGINEER 1EE0 in addition to the academic requirements specified in this calendar. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 38 UNITS

6 units

- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1MA3 - Introduction to Marketing

3 units

- ENGNMGT 2AA3 - Communication Skills

23 units

- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2CM4 - Computational Multiphysics

- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics
- ENGPHYS 2QM3 - Introduction to Quantum Mechanics

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

LEVEL III: 38 UNITS

12 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 3MC3 - Applied Marketing Management

23 units

- ENGPHYS 2NE3 - Thermal Systems Design
- ENGPHYS 3BA3 - Circuits with Non-Linear and Active Components
- ENGPHYS 3BB3 - Embedding and Programming a Micro-Controller
- ENGPHYS 3L04 - Engineering Metrology
- ENGPHYS 3NM4 - Numerical Methods for Engineering
- ENGPHYS 3SM3 - Statistical Mechanics
- ENGPHYS 3W03 - Signals and Systems for Engineering

3 units

- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

LEVEL IV: 36-38 UNITS (2025-2026 ONLY)

12 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

6 units

- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

15-17 units

- Approved technical electives (see Note 1)

LEVEL IV: 36-38 UNITS (EFFECTIVE 2026-2027)

9 units

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 4QA3 - Operations Modelling and Analysis

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

6 units

- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

15-17 units

- Approved technical electives (see Note 1)

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 32-34 UNITS

3 units

- COMMERCE 4PA3 - Business Policy: Strategic Management

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

6 units

- ENGPHYS 4A06 A/B - Engineering Physics Design and Synthesis Project

3 units

- Commerce electives selected from Level III or IV Commerce

17-19 units

- Approved technical electives (see Note 1)

Bachelor of Engineering and Society

ENGINEERING PHYSICS AND SOCIETY, ENGINEERING PHYSICS AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Approved technical electives for a total of at least 32 units:
   - Students must take at least 16 units of Approved technical electives from the Engineering Physics course offerings, including at least one of the following courses involving discipline-specific lab work: ENGPHYS 3D04, 3E04, 3O04, 3PN4, 4Z04
   - Remaining units: Students may take any approved Engineering or Science technical elective (including Engineering Physics)
1. Approved technical electives are available in a list on the Engineering Physics website. Subject to Chair approval, students may replace Engineering Physics technical electives with approved Engineering courses. Also subject to Chair approval, courses not appearing on the technical elective list may qualify as acceptable technical electives. Students are free to choose their technical electives according to their own interests, but may consider the following course recommendations for a program of study. Further detail on program specializations and course recommendations is available on the Engineering Physics website. Students are responsible for ensuring that they fulfill the prerequisites for each course. Note that courses in departments other than Engineering Physics may be subject to enrollment limitations.
   - **Nanotech Device Engineering:** ENGPHYS 3PN4, 4MD3, 4Z04, MATLS 4H03
   - **Photonics/Optical Engineering:** ENGPHYS 3E04, 3PD4, 3PN4, 4S04, 4Z04, ELECENG 3FK4 and 4EM4
   - **Solar Photovoltaic Engineering:** ENGPHYS 3E04, 3ES3, 3PN4, 4MD3, 4X03, 4Z04, MATLS 4Q03
   - **Nuclear Engineering:** ENGPHYS 3D04, 3ES3, 3O04, 4D04, 4NE3, 4P03, 4PP3, MECHENG 4O04, 4S03, 4U03, and 4V03
   - **Biomedical Engineering:** ENGPHYS 3E04, 3PN4, 4B03, 4I03, 4S04, 4Z04, MECHENG 4N03
   - **Quantum Computing and Metrology:** ENGPHYS 4QC3, 4QM3, and optionally any of MATH 2R03, 3C03, 3D03, 3QC3, PHYSICS 3MM3, 3QI3, 4F03, DATASCI 2G03, 3ML3, COMPENG 2SH4, 2SI3
   - **Space Systems Engineering:** ENGPHYS 3O04, 3SP3, 3D04, 3E04, 4X03, MECHENG 4AA3, 4Q03, ELECENG 3TR4, and optionally MATH 3C03, PHYSICS 3A03, 3C03, 3QI3, ASTRON 2E03, 3X03, 3Y03, ELECENG 4TK4, ENGPHYS 4QC3, 4QM3, MATLS 3M03, MECHENG 4J03,

MEDPHYS 4F03
- **Interdisciplinary Engineering Physics:** ENGPHYS 3D04, 3E04, 3ES3, 3O04, 3PD4, 3PN4, 4B03, 4I03, 4PP3, 4QC3, 4X03

1. Students in a Co-op program must complete ENGINEER 1EE0 in addition to the academic requirements specified in this calendar. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 35 UNITS

23 units
- ENGPHYS 2A04 - Electricity and Magnetism
- ENGPHYS 2CD4 - Computational Mechanics: Dynamics
- ENGPHYS 2CM4 - Computational Multiphysics
- ENGPHYS 2E04 - Analog and Digital Circuits
- ENGPHYS 2P04 - Computational Mechanics: Statics
- ENGPHYS 2QM3 - Introduction to Quantum Mechanics

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

LEVEL III: 32 UNITS

23 units
- ENGPHYS 2NE3 - Thermal Systems Design
- ENGPHYS 3BA3 - Circuits with Non-Linear and Active Components
- ENGPHYS 3BB3 - Embedding and Programming a Micro-Controller
- ENGPHYS 3L04 - Engineering Metrology
- ENGPHYS 3NM4 - Numerical Methods for Engineering
- ENGPHYS 3SM3 - Statistical Mechanics
- ENGPHYS 3W03 - Signals and Systems for Engineering

3 units
- ENGSOCTY 3Y03 - Technology and Society

6 units
- • Engineering and Society focus electives

LEVEL IV: 33-35 UNITS

3 units
- ENGINEER 3PX3 - Engineering Economics

15-17 units
- Approved technical electives (see Note 1)

6 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

9 units
- Engineering and Society focus electives

LEVEL V: 32-34 UNITS

6 units
- ENGPHYS 4A06 A/B - Engineering Physics Design and Synthesis Project

6 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III
- ENGSOCTY 4Y03 - Society Capstone Design

3 units
- Engineering and Society focus electives

17-19 units
- Approved technical electives (see Note 1)

Engineering and Management Program

John Hodgins Engineering Building, Room 316, ext. 27679
https://www.eng.mcmaster.ca/programs/specialized-programs-minors/engineering-management/

The Engineering and Management Programs are described in the Faculty of Engineering sections in this Calendar. These programs are administered jointly by the DeGroote School of Business and the Faculty of Engineering and lead to the B.Eng.Mgt. degree.

Engineering and Society Program

John Hodgins Engineering Building, Room 316, ext. 27679
https://www.eng.mcmaster.ca/programs/specialized-programs-minors/engineering-society/

The Engineering and Society Programs are described in the Faculty of Engineering section in this Calendar. These programs lead to the B.Eng.Society degree.

Integrated Biomedical Engineering and Health Sciences Program (IBEHS)

Michael G. DeGroote Centre for Learning, Room 3515, ext. 28347
http://ibiomed.mcmaster.ca/

Faculty as of January 15, 2025

CO-DIRECTORS

Michelle L. MacDonald/B.Sc., Ph.D. *(McMaster)*
Colin McDonald/B.Sc., Ph.D. *(Western University)*, P.Eng.

ASSOCIATE DIRECTORS

Anna Korol/B.Sc. (Honours), M.Sc., Ph.D. *(McMaster)*
Vincent Leung/B.Eng Biosci., M.A.Sc., Ph.D. *(McMaster)*

ACADEMIC DEPARTMENT MANAGER

Alexa Béhar-Bannelier/B.Com. (Honours) *(McMaster)*

The Integrated Biomedical Engineering and Health Sciences (IBEHS) Programs are offered jointly by the Faculty of Engineering and the Faculty of Health Sciences. These programs lead to the B.Eng.BME or a B.H.Sc. (Honours) degree.

At McMaster, IBEHS students take a common Level I program comprising Mathematics, Materials, Physics, Chemistry, Cellular and Molecular Biology, Graphics Design, Introduction to Professional Engineering and Design, Computation and complementary studies electives. The specialized programs are entered at Level II.

All Level I students who wish to be reviewed for admission to a Level II program in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program for the following Fall/Winter term must submit an Application of Admission to Level II through MOSAIC by the University stated deadline. Students in the IBEHS program must rank both degree options in order of preference, and are permitted to rank up to twelve program choices in total. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II program is competitive. The admission into each Level II program is determined by the Cumulative Grade Point Average (GPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (GPA) up to the time of Level II program admission review. Grades earned in summer school, after program admission review, will not change student Level II program eligibility. A student in IBEHS I with a Grade Point Average (GPA) less than 4.0

can no longer continue in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Students must follow the program requirements of the Calendar in effect when they enter Level II.
Courses offered by the IBEHS program include two types of elective courses, which are governed by regulations, as follows:

- **Complementary Studies Electives** are broadening courses with subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences. In addition to ENGINEER 4A03, or equivalent, complementary studies electives are required in the IBEHS program.
- **IBEHS Technical Electives** are approved courses offered by the Integrated Biomedical Engineering & Health Sciences program or various departments throughout the University in subjects relevant to the particular program. A list is available on the program website.
- **Health Sciences Electives** are courses administered by the Bachelor of Health Sciences (Honours) Program in subjects relevant to the health sciences, including immunology, molecular biology, infectious disease, neurosciences, behavioural sciences, clinical epidemiology, health economics and health policy. Students must meet course pre-requisites. Health sciences electives are required in the IBEHS program.

TRANSFERRING TO GRADUATE WITH A B.H.SC. DEGREE FROM THE B.H.SC. (HONOURS) HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP (HESE) STREAM OF THE INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES PROGRAM

Students who successfully complete at least 90 units including all admission requirements and program-specific course requirements up to the end of at least Level III of the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) stream of the Integrated Biomedical Engineering and Health Sciences Program, with a minimum Grade Point Average of 4.0 may request permission from the Integrated Biomedical Engineering and Health Sciences office for transfer to graduate with the B.H.Sc. (exit) degree.

TRANSFERRING TO GRADUATE WITH A B.A.SC. DEGREE FROM ONE OF THE B.ENG.BME BIOMEDICAL ENGINEERING PROGRAMS OF THE INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES PROGRAM

Students who successfully complete at least 90 units including all admission requirements and program-specific course requirements up to the end of at least Level III of one of the B.Eng.BME Biomedical Engineering programs of the Integrated Biomedical Engineering and Health Sciences Program, with a minimum Grade Point Average of 4.0 may request permission from the Office of the Associate Dean of Engineering (Academic) for transfer to graduate with the B.A.Sc. (exit) degree.

IBEHS I:

- Integrated Biomedical Engineering and Health Sciences (IBEHS) I/ Integrated Biomedical Engineering and Health Sciences (IBEHS) I Co-op

Level II program(s) leading to the B.Eng.BME degree include:

- Chemical and Biomedical Engineering, Chemical and Biomedical Engineering Co-Op (B.Eng.BME)
- Civil and Biomedical Engineering, Civil and Biomedical Engineering Co-Op (B.Eng.BME)
- Electrical and Biomedical Engineering, Electrical and Biomedical Engineering Co-Op (B.Eng.BME)
- Engineering Physics and Biomedical Engineering, Engineering Physics and Biomedical Engineering Co-Op (B.Eng.BME)
- Materials and Biomedical Engineering, Materials and Biomedical Engineering Co-Op (B.Eng.BME)
- Mechanical and Biomedical Engineering, Mechanical and Biomedical Engineering Co-Op (B.Eng.BME)
- Mechatronics and Biomedical Engineering, Mechatronics and Biomedical Engineering Co-Op (B.Eng.BME)
- Software and Biomedical Engineering, Software and Biomedical Engineering Co-Op (B.Eng.BME)

Level II program(s) leading to the B.H.Sc. (Honours) degree include:

- Health, Engineering Science and Entrepreneurship (HESE) Specialization; Health, Engineering Science and Entrepreneurship (HESE) Specialization Co-Op (B.H.Sc.(Honours))

Department of Materials Science and Engineering

Faculty of the Department of Materials Science and Engineering, as of January 15, 2025

CHAIR
Hatem Zurob
GRADUATE ASSOCIATE CHAIR
Leili Tafaghodi
UNDERGRADUATE ASSOCIATE CHAIR
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Igor Zhitomirsky/M.Sc. *(State University, Kalinin)*, Ph.D. *(Karpov Institute, Moscow)*, P.Eng. / Canada Research Chair in Micro-nanotechnology
Hatem S. Zurob/B.Eng., Ph.D. *(McMaster)*, P.Eng.
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Rakesh Sahu/B.Eng *(Jadavpur University)*, Ph.D. *(Chicago)*
ASSISTANT PROFESSORS
Bryan E.J. Lee/B.Eng., Ph.D *(McMaster)*

Nana Ofori-Opoku/B.Eng., M.A.Sc., Ph.D. *(McMaster)*
Kyla Sask/B.Sc.(Hons.)*(Queen's)*, Ph.D. *(McMaster)*
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Brian Langelier/BASc. *(Waterloo)*, Ph.D *(Waterloo)*
Esmaeil Sadeghi/ B.Sc. *(Amirkabir)*, M.Sc. *(Tarbiat Modares)*, Ph.D. *(University West)*
Tengteng (Toni) Tang/ B. Eng *(Huazhong)*, M. Eng, Ph. D *(British Columbia)*
Bosco (Hiu Ming) Yu/B.A.Sc., M.A.Sc. *(Toronto)*, Ph.D. *(Cambridge)*
Hui Yuan/ B. Eng. *(Northeastern)*, M. Sc. *(Grenoble)*, Ph. D. *(Lyon)*
ASSOCIATE MEMBERS
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Gitanjali Kolhatkar/B.Sc., M.Sc. *(Ottawa)*, Ph.D. *(Sherbrooke)*

Bachelor of Engineering

MATERIALS ENGINEERING, MATERIALS ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. The Department of Materials Science and Engineering offers a common core with five streams of study in Levels III and IV. Students may complete the required units as listed in the calendar in Levels III and IV by choosing a course selection according to the following elective streams:
    - Biomaterials
    - Data Analytics & Computational Materials
    - Materials Generalist
    - Materials for Manufacturing & Infrastructure
    - Smart Materials & Devices

A list of approved technical electives for each stream is available on the Department of Materials Science and Engineering website. Note that a course in a stream may not be taught when the enrollment is (expected to be) too low.

2. Students entering Level II should register in the Materials Science and Engineering program and follow the requirements outlined below. Students entering Levels III, IV or V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program in which they are registered and to consult with the Department of Materials Science and Engineering for further information.
3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements for Students Who Enter the Program in 2021-2022 or Later

For the *Requirements for Students Who entered the Program in 2020-2021 or earlier*, please refer to the 2020-2021 Undergraduate Calendar.

LEVEL II: 36 UNITS

11 units
- CHEMENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials
- ENGINEER 2PX3 - Engineering Communications

16 units
- MATLS 2A04 - Introduction to Materials Engineering
- MATLS 2B03 - Introduction to the Thermodynamics of Materials
- MATLS 2D03 - Thermodynamics of Alloys and Phase Diagrams
- MATLS 2Q03 - Electronic Properties of Materials
- MATLS 3M03 - Mechanical Behaviour of Materials

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

3 units
- approved complementary studies electives

LEVEL III: 36-38 UNITS

7 units
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- ENGINEER 3PX3 - Engineering Economics

23 units
- MATLS 3B03 - Manufacturing Engineering of Multifunctional and Biomedical Materials
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3J03 - Statistical Methods for Materials Engineers
- MATLS 3LP3 - Applications of Transport Phenomena in Materials Engineering
- MATLS 3T04 - Phase Transformations
- MATLS 3TP4 - Fundamentals of Transport Phenomena in Materials Engineering
- MATLS 4I03 - Sustainable Manufacturing Processes

6-8 units
- approved Level III or IV technical electives from approved List A or List B

LEVEL IV: 35-40 UNITS

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

10 units
- MATLS 4MS4 - Materials Selection in Design
- MATLS 4Z06 A/B - Materials Engineering Capstone

4 units
from
- MATLS 4LA2 - Heat-Treatable Al Alloys
- MATLS 4LB2 - Synthesis and Characterization of Biomedical Coatings
- MATLS 4LF2 - Synthesis, Properties and Application of Thin Films
- MATLS 4LS2 - Physical Metallurgy of Steels

3 units
- approved complementary studies electives

12-16 units
- approved Level III or IV technical electives

3-4 units
- approved Level III or IV technical electives from approved List B (Interdisciplinary engineering courses)

Bachelor of Engineering and Biomedical Engineering

MATERIALS AND BIOMEDICAL ENGINEERING, MATERIALS AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each four month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 37 UNITS

7 units

- CHEM 1AA3 - Introductory Chemistry II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

24 units

- CHEMENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV
- MATLS 2A04 - Introduction to Materials Engineering
- MATLS 2B03 - Introduction to the Thermodynamics of Materials
- MATLS 2D03 - Thermodynamics of Alloys and Phase Diagrams

3 units

- Complementary Studies

3 units

- Health Sciences Electives

LEVEL III: 39 UNITS

19 units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

17 units

- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers
- MATLS 2Q03 - Electronic Properties of Materials
- MATLS 3B03 - Manufacturing Engineering of Multifunctional and Biomedical Materials
- MATLS 3M03 - Mechanical Behaviour of Materials
- MATLS 3TP4 - Fundamentals of Transport Phenomena in Materials Engineering

3 units

- Complementary Studies

LEVEL IV: 36-37 UNITS (2025-2026 ONLY)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

11 units

- CHEMENG 3A04 - Heat Transfer
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3T04 - Phase Transformations

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved Level III or IV tech elective

LEVEL IV: 35-36 UNITS (EFFECTIVE 2026-27)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units
- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

10 units
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3LP3 - Applications of Transport Phenomena in Materials Engineering
- MATLS 3T04 - Phase Transformations

3 units

from
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units
- approved Level III or IV tech elective

LEVEL V: 35-40 UNITS

6 units
- MATLSBME 5P06 A/B - Integrated Materials & Biomedical Engineering Capstone Design Project

7 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering
- MATLS 4MS4 - Materials Selection in Design

3 units

from
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

4 units

from
- MATLS 4LA2 - Heat-Treatable Al Alloys
- MATLS 4LB2 - Synthesis and Characterization of Biomedical Coatings
- MATLS 4LF2 - Synthesis, Properties and Application of Thin Films
- MATLS 4LS2 - Physical Metallurgy of Steels

6-8 units
- approved IBEHS Technical Elective

9-12 units
- approved Level III or IV tech elective from approved List A or List B

Bachelor of Engineering and Management

MATERIALS ENGINEERING AND MANAGEMENT, MATERIALS ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0. Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. The Department of Materials Science and Engineering offers a common core with five streams of study in Levels III and IV. Students may complete the required units as listed in the calendar in Levels III and IV by choosing a course selection according to the following elective streams:
    - Biomaterials
    - Data Analytics & Computational Materials
    - Materials Generalist
    - Materials for Manufacturing & Infrastructure
    - Smart Materials & Devices

   A list of approved technical electives for each stream is available on the Department of Materials Science and Engineering website. Note that a course in a stream may not be taught when the enrollment is (expected to be) too low.
2. Students entering Level II should register in the Materials Science and Engineering program and follow the requirements outlined below. Students entering Levels III, IV or V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program in which they are registered and to consult with the Department of Materials Science and Engineering for further information.
3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each four month work term.

Requirements for Students Who Enter the Program in 2021-2022 or Later

For the *Requirements for Students Who entered the Program in 2020-2021 or earlier*, please refer to the 2020-2021 Undergraduate Calendar.

LEVEL II: 36 UNITS

8 units
- CHEMENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials

9 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2FA3 - Introduction to Finance

3 units
- ENGNMGT 2AA3 - Communication Skills

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

10 units
- MATLS 2A04 - Introduction to Materials Engineering
- MATLS 2B03 - Introduction to the Thermodynamics of Materials
- MATLS 2D03 - Thermodynamics of Alloys and Phase Diagrams

LEVEL III: 35 UNITS (2025-26 ONLY)

12 units
- COMMERCE 1AA3 - Introductory Financial Accounting (or 2AA3)
- COMMERCE 1BA3 - Organizational Behaviour (or 2BA3)
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FA3 - Introduction to Finance

4 units
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical

Engineers

19 units

- MATLS 2Q03 - Electronic Properties of Materials
- MATLS 3B03 - Manufacturing Engineering of Multifunctional and Biomedical Materials
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3LP3 - Applications of Transport Phenomena in Materials Engineering
- MATLS 3M03 - Mechanical Behaviour of Materials
- MATLS 3TP4 - Fundamentals of Transport Phenomena in Materials Engineering

LEVEL III: 35 UNITS (EFFECTIVE 2026-27)

9 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance

4 units

- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers

19 units

- MATLS 2Q03 - Electronic Properties of Materials
- MATLS 3B03 - Manufacturing Engineering of Multifunctional and Biomedical Materials
- MATLS 3TP4 - Fundamentals of Transport Phenomena in Materials Engineering
- MATLS 3LP3 - Applications of Transport Phenomena in Materials Engineering
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3M03 - Mechanical Behaviour of Materials

3 units

- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

LEVEL IV: 34-35 UNITS (2025-26 AND 2026-27 ONLY)

9 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

6 units

- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

10 units

- MATLS 3J03 - Statistical Methods for Materials Engineers
- MATLS 3T04 - Phase Transformations
- MATLS 4I03 - Sustainable Manufacturing Processes

3-4 units

- approved Level III or IV technical electives from approved List A or List B

3 units

- Commerce electives selected from Level III or IV Commerce

LEVEL IV: 34-35 UNITS (EFFECTIVE 2027-28)

6 units

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 3MC3 - Applied Marketing Management

6 units

- ENGINEER 3PX3 - Engineering Economics
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- ENGNMGT 4A03 - Innovation Driven Project Development and Management

10 units

- MATLS 3J03 - Statistical Methods for Materials Engineers
- MATLS 3T04 - Phase Transformations
- MATLS 4I03 - Sustainable Manufacturing Processes

3-4 units

- approved Level III or IV technical electives from approved List A or List B

6 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 32-35 UNITS

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

10 units

- MATLS 4MS4 - Materials Selection in Design
- MATLS 4Z06 A/B - Materials Engineering Capstone

4 units

from

- MATLS 4LA2 - Heat-Treatable Al Alloys
- MATLS 4LB2 - Synthesis and Characterization of Biomedical Coatings
- MATLS 4LF2 - Synthesis, Properties and Application of Thin Films
- MATLS 4LS2 - Physical Metallurgy of Steels

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

6-8 units

- Approved Level III or IV technical electives from approved List A or List B

3-4 units

- approved Level III or IV technical electives from approved List B (Interdisciplinary engineering courses)

Bachelor of Engineering and Society

MATERIALS ENGINEERING AND SOCIETY, MATERIALS ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. The Department of Materials Science and Engineering offers a common core with five streams of study in Levels III and IV. Students may complete the required units as listed in the calendar in Levels III and IV by choosing a course selection according to the following elective streams:
    - Biomaterials
    - Data Analytics & Computational Materials
    - Materials Generalist
    - Materials for Manufacturing & Insfrastructure
    - Smart Materials & Devices

A list of approved technical electives for each stream is available on the

Department of Materials Science and Engineering website. Note that a course in a stream may not be taught when the enrollment is (expected to be) too low.

2. Students entering Level II should register in the Materials Science and Engineering program and follow the requirements outlined below. Students entering Levels III, IV or V should follow the program requirements as specified in the Undergraduate Calendar of the year of their entry into Level II. Such students are advised to refer to their degree audit for the program in which they are registered and to consult with the Department of Materials Science and Engineering for further information.
3. A minimum of 18 units of focus elective courses is required for the Engineering and Society program. (This does not include the six units of complementary studies elective in Level I.)
4. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements for Students Who Enter the Program in 2021-2022 or Later

For the *Requirements for Students Who entered the Program in 2020-2021 or earlier*, please refer to the 2020-2021 Undergraduate Calendar.

LEVEL II: 33 UNITS

8 units
- CHEMENG 2O04 - Fluid Mechanics
- CIVENG 2P04 - Statics and Mechanics of Materials

10 units
- MATLS 2A04 - Introduction to Materials Engineering
- MATLS 2B03 - Introduction to the Thermodynamics of Materials
- MATLS 2D03 - Thermodynamics of Alloys and Phase Diagrams

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

6 units
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units
- Engineering and Society focus electives

LEVEL III: 32-35

4 units
- CHEMENG 2E04 - Numerical Methods and Computing for Chemical Engineers

19 units
- MATLS 2Q03 - Electronic Properties of Materials
- MATLS 3B03 - Manufacturing Engineering of Multifunctional and Biomedical Materials
- MATLS 3F03 - High-Temperature Materials Production
- MATLS 3LP3 - Applications of Transport Phenomena in Materials Engineering
- MATLS 3M03 - Mechanical Behaviour of Materials
- MATLS 3TP4 - Fundamentals of Transport Phenomena in Materials Engineering

3 units
- ENGSOCTY 3Y03 - Technology and Society

6-9 units
- Engineering and Society focus electives

LEVEL IV: 31-36 UNITS

13 units
- ENGINEER 3PX3 - Engineering Economics
- MATLS 3J03 - Statistical Methods for Materials Engineers
- MATLS 3T04 - Phase Transformations
- MATLS 4I03 - Sustainable Manufacturing Processes

6-8 units
- approved Level III or IV technical electives from approved List A or List B

6 units
- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6-9 units
- Engineering and Society focus electives

LEVEL V: 32-38 UNITS

10 units
- MATLS 4MS4 - Materials Selection in Design
- MATLS 4Z06 A/B - Materials Engineering Capstone

4 units

from
- MATLS 4LA2 - Heat-Treatable Al Alloys
- MATLS 4LB2 - Synthesis and Characterization of Biomedical Coatings
- MATLS 4LF2 - Synthesis, Properties and Application of Thin Films
- MATLS 4LS2 - Physical Metallurgy of Steels

6-8 units
- approved Level III or IV technical electives from approved List A or List B

3-4 units
- approved Level III or IV technical electives from approved List B (Interdisciplinary engineering courses)

6 units
- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III
- ENGSOCTY 4Y03 - Society Capstone Design

3-6 units
- Engineering and Society focus electives

Department of Mechanical Engineering

Faculty of the Department of Mechanical Engineering, as of January 15, 2025

CHAIR

Gregory Wohl

ASSOCIATE CHAIR (UNDERGRADUATE PROGRAMS)

Cheryl Quenneville

ASSOCIATE CHAIR (GRADUATE STUDIES)

S. Andrew Gadsden

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Bachelor of Engineering

MECHANICAL ENGINEERING, MECHANICAL ENGINEERING CO-OP (B.ENG.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Level IV Mechanical Engineering students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.

2. PROGRAM OPTION COMPULSORY COURSES:
   - **General:** five of any approved technical electives
   - **Mechanics and Design:** two approved technical electives; plus three of CHEMENG 4T03, MATLS 4MS4, 4T03, MECHENG 4B03, 4BB3, 4BF3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03, ENGINEER 4EX3
   - **Manufacturing:** two approved technical electives; plus three of CHEMENG 4X03, MATLS 3MF3, 4MS4, 4T03, MECHENG 4B03, 4C03, 4D03, 4DD3, 4E03, 4H03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03
   - **Smart Systems:** two approved technical electives; plus three of: MECHENG 4AI3, 4FM3, 4H03, 4I03, 4K03, 4SS3, 4X04, SMRTTECH 4ID3, 4AI3, PROCTECH 4MH3, SFWRTECH 4DA3, 4ES3, ENGTECH 4AI3
   - **Thermofluids and Energy Systems:** two approved technical electives; plus MECHENG 4S03; plus two of CHEMENG 4X03, ENGPHYS 3D03, 3SP3, 4D03, 4NE3, 4P03, MECHENG 4AA3, 4BF3, 4ES3, 4FM3, 4I03, 4J03, 4N03, 4O04, 4T03, 4U03, 4W03, 4X04, 4Y03
   - **Approved Technical Electives:** any of the required program option courses listed above, plus CIVENG 3K03, COMMERCE 4QA3, ELECENG 3N03

3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.

Requirements

LEVEL II: 40 UNITS

3 units
- ENGINEER 2PX3 - Engineering Communications

9 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV
- STATS 3Y03 - Probability and Statistics for Engineering

28 units
- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 2C04 - Mechanical Engineering Design Project I
- MECHENG 2D03 - Mechanical Engineering Design Elements
- MECHENG 2P04 - Statics and Mechanics of Materials
- MECHENG 2Q04 - Engineering Mechanics: Kinetics and Dynamics
- MECHENG 2W04 - Thermodynamics
- MECHENG 3A03 - Engineering Mechanics
- MECHENG 3C03 - Manufacturing Engineering

LEVEL III: 35 UNITS

6 units
- ELECENG 2MM3 - Electrical Circuits and Power
- ENGINEER 3PX3 - Engineering Economics

3 units
- MATLS 3M03 - Mechanical Behaviour of Materials

3 units
- MATH 3I03 - Partial Differential Equations for Engineering

23 units
- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3F04 - Modelling and Numerical Solutions
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4R03 - Control Systems

LEVEL IV: 36-37 UNITS

3 units
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

6 units
- approved complementary studies electives

12 units
- MECHENG 4M06 A/B - Mechanical Engineering Capstone Design Project
- MECHENG 4P03 A/B - Composite Laboratory II
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

15-16 units
- Program option courses or approved technical electives.

(See *Note 1* above.)

Bachelor of Engineering and Biomedical Engineering

MECHANICAL AND BIOMEDICAL ENGINEERING, MECHANICAL AND BIOMEDICAL ENGINEERING CO-OP (B.ENG.BME)

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each four month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

LEVEL II: 37 UNITS

10 units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering

27 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV
- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 2D03 - Mechanical Engineering Design Elements
- MECHENG 2P04 - Statics and Mechanics of Materials
- MECHENG 2Q04 - Engineering Mechanics: Kinetics and Dynamics
- MECHENG 2W04 - Thermodynamics
- MECHENG 3A03 - Engineering Mechanics

LEVEL III: 35 UNITS (2025-26 ONLY)

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

19 units

- MATH 3I03 - Partial Differential Equations for Engineering
- MATLS 3M03 - Mechanical Behaviour of Materials
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

LEVEL III: 38 UNITS (EFFECTIVE 2026-27)

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2G03 - Statistics & Epidemiology 1
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management
- IBEHS 3S03 - Statistical Methods in Biomedical Engineering

19 units

- MATH 3I03 - Partial Differential Equations for Engineering
- MATLS 3M03 - Mechanical Behaviour of Materials
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

3 units

- Health Sciences Electives

LEVEL IV: 35-36 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

16 units

- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

10 units

- ELECENG 2MM3 - Electrical Circuits and Power
- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3F04 - Modelling and Numerical Solutions

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

3-4 units

- approved IBEHS Technical Elective

LEVEL V: 36-38 UNITS

6 units

- MECHBME 5P06 A/B - Integrated Mechanical & Biomedical Engineering Capstone Design Project

12 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering
- MECHENG 4P03 A/B - Composite Laboratory II
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

3-4 units

- approved IBEHS Technical Elective

3 units

from

- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4M03 - Biomaterials and Tissue Engineering
- IBEHS 4QZ3 - Modelling of Biological Systems
- IBEHS 4XC3 - Experimental and Computational Biomechanics
- IBEHS 4Y03 - Applications of Chemical Engineering in Medicine

6-7 units

- program option courses or approved technical electives

6 units

- Complementary Studies

Bachelor of Engineering and Management

MECHANICAL ENGINEERING AND MANAGEMENT, MECHANICAL ENGINEERING AND MANAGEMENT CO-OP (B.ENG.MGT.)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Level IV and Level V Mechanical Engineering and Management students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.
2. PROGRAM OPTION COMPULSORY COURSES:
   - **General:** four of any approved technical electives
   - **Mechanics and Design:** one approved technical elective plus three of CHEMENG 4T03, MATLS 4MS4, 4T03, MECHENG 4B03, 4BB3, 4BF3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03, ENGINEER 4EX3
   - **Manufacturing:** one approved technical elective plus three of CHEMENG 4X03, MATLS 3MF3, 4MS4, 4T03, MECHENG 4B03, 4C03, 4D03, 4DD3, 4E03, 4H03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03
   - **Smart Systems:** one approved technical elective, plus three of: MECHENG 4AI3, 4FM3, 4H03, 4I03, 4K03, 4SS3, 4X04, SMRTTECH 4ID3, 4AI3, PROCTECH 4MH3, SFWRTECH 4DA3, 4ES3, ENGTECH 4AI3
   - **Thermofluids and Energy Systems:** one approved technical elective; plus MECHENG 4S03; plus two of CHEMENG 4X03, ENGPHYS 3D03, 3SP3, 4D03, 4NE3, 4P03, MECHENG 4AA3, 4BF3, 4ES3, 4FM3, 4I03, 4J03, 4N03, 4O04, 4T03, 4U03, 4W03, 4X04, 4Y03
   - **Approved Technical Electives:** any of the required program option courses listed above, plus CIVENG 3K03, ELECENG 3N03
3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each four month work term.

Requirements

LEVEL II: 39 UNITS

12 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2FA3 - Introduction to Finance

6 units
- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

18 units
- MECHENG 2C04 - Mechanical Engineering Design Project I
- MECHENG 2D03 - Mechanical Engineering Design Elements
- MECHENG 2P04 - Statics and Mechanics of Materials
- MECHENG 2W04 - Thermodynamics
- MECHENG 3A03 - Engineering Mechanics

3 units
- ENGNMGT 2AA3 - Communication Skills

LEVEL III: 39 UNITS (2025-2026 ONLY)

3 units
- COMMERCE 2FA3 - Introduction to Finance

3 units
- ELECENG 2MM3 - Electrical Circuits and Power

3 units
- MATH 3I03 - Partial Differential Equations for Engineering

3 units
- MATLS 3M03 - Mechanical Behaviour of Materials

24 units
- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 2Q04 - Engineering Mechanics: Kinetics and Dynamics
- MECHENG 3A03 - Engineering Mechanics
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3F04 - Modelling and Numerical Solutions
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL III: 39 UNITS (EFFECTIVE 2026-2027)

3 units
- COMMERCE 2AB3 - Managerial Accounting I

3 units
- ELECENG 2MM3 - Electrical Circuits and Power

3 units
- ENGNMGT 3A03 - Leading High-Performance Engineering Teams

3 units
- MATH 3I03 - Partial Differential Equations for Engineering

3 units
- MATLS 3M03 - Mechanical Behaviour of Materials

21 units
- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 2Q04 - Engineering Mechanics: Kinetics and Dynamics
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3F04 - Modelling and Numerical Solutions
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

3 units
- STATS 3Y03 - Probability and Statistics for Engineering

LEVEL IV: 36 UNITS (2025-2026 AND 2026-2027 ONLY)

12 units
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- ENGNMGT 4A03 - Innovation Driven Project Development and Management

15 units
- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4R03 - Control Systems
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

3 units
- Program Option Courses or approved technical electives

(See *Note 1* above.)

LEVEL IV: 36 UNITS (EFFECTIVE 2027-2028)

9 units
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3MC3 - Applied Marketing Management

3 units
- ENGINEER 3PX3 - Engineering Economics

3 units
- ENGNMGT 4A03 - Innovation Driven Project Development and Management

15 units
- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4R03 - Control Systems
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

3 units

- Program Option Courses or approved technical electives

(See Note 1 above.)

3 units

from

- ECON 1BB3 - Introductory Macroeconomics
- Commerce electives selected from Level III or IV Commerce

LEVEL V: 36-40 UNITS

6 units

- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4QA3 - Operations Modelling and Analysis

3-6 units

- Commerce electives selected from Level III or IV Commerce

3 units

- ENGNMGT 5B03 - Engineering and Management Capstone

3 units

- ENGINEER 4A03 - Ethics, Equity and Law in Engineering

3 units

- approved complementary studies electives

9 units

- MECHENG 4M06 A/B - Mechanical Engineering Capstone Design Project
- MECHENG 4P03 A/B - Composite Laboratory II

9-10 units

- Program Option Courses or approved technical electives.

(See *Note 1* above.)

Bachelor of Engineering and Society

MECHANICAL ENGINEERING AND SOCIETY, MECHANICAL ENGINEERING AND SOCIETY CO-OP (B.ENG.SOCIETY)

Admission to Level II Engineering Programs

Admission to Level II Engineering programs requires completion of all 31 units of required Engineering I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the student's Cumulative Grade Point Average. Admission to a B.Eng. Management program is competitive and will be based on cumulative Grade Point Average. Students are required to complete ECON 1B03 - Introductory Microeconomics with a minimum grade of 5.0.
Students seeking admission to the Engineering and Management program, or the Engineering and Society program must first be admitted to the relevant department. Thereafter, they will be considered for admission to one of these two programs.

Notes

1. Level IV and Level V Mechanical Engineering and Society students must choose one of the following option areas and complete sufficient units of the listed required courses and technical electives.
2. PROGRAM OPTION COMPULSORY COURSES:
   - **General:** five of any approved technical electives
   - **Mechanics and Design:** two approved technical electives; plus three of CHEMENG 4T03, MATLS 4MS4, 4T03, MECHENG 4B03, 4BB3, 4BF3, 4CC3, 4E03, 4H03, 4I03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03, ENGINEER 4EX3
   - **Manufacturing:** two approved technical electives; plus three of CHEMENG 4X03, MATLS 3MF3, 4MS4, 4T03, MECHENG 4B03, 4C03, 4D03, 4DD3, 4E03, 4H03, 4K03, 4N03, 4T03, 4X04, 4Y03, 4Z03
   - **Smart Systems:** two approved technical electives; plus three of: MECHENG 4AI3, 4FM3, 4H03, 4I03, 4K03, 4SS3, 4X04, SMRTTECH 4ID3, 4AI3, PROCTECH 4MH3, SFWRTECH 4DA3, 4ES3, ENGTECH 4AI3
   - **Thermofluids and Energy Systems:** two approved technical electives; plus MECHENG 4S03; plus two of CHEMENG 4X03, ENGPHYS 3D03, 3SP3, 4D03, 4NE3, 4P03, MECHENG 4AA3, 4BF3, 4ES3, 4FM3, 4I03, 4J03, 4N03, 4O04, 4T03, 4U03, 4W03, 4X04, 4Y03
   - **Approved Technical Electives:** any of the required program option courses listed above, plus CIVENG 3K03, COMMERCE 4QA3, ELECENG 3N03
3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete ENGINEER 1EE0. ENGINEER 2EC0 will be added to the academic record for each 4 month work term.
4. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)

Requirements

LEVEL II: 37 UNITS

6 units

- MATH 2Z03 - Engineering Mathematics III
- MATH 2ZZ3 - Engineering Mathematics IV

22 units

- MECHENG 2C04 - Mechanical Engineering Design Project I
- MECHENG 2D03 - Mechanical Engineering Design Elements
- MECHENG 2P04 - Statics and Mechanics of Materials
- MECHENG 2Q04 - Engineering Mechanics: Kinetics and Dynamics
- MECHENG 2W04 - Thermodynamics
- MECHENG 3A03 - Engineering Mechanics

6 units

- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 2Y03 - Case Studies in History and Technology

3 units

- Engineering and Society focus electives

LEVEL III: 37 UNITS (2025-2026)

3 units

- MATLS 3M03 - Mechanical Behaviour of Materials

3 units

- ELECENG 2MM3 - Electrical Circuits and Power

3 units

- MATH 3I03 - Partial Differential Equations for Engineering

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

16 units

- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 3A03 - Engineering Mechanics
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

3 units

- ENGSOCTY 3Y03 - Technology and Society

6 units

- Engineering and Society focus electives

LEVEL III: 34 UNITS (EFFECTIVE 2026-2027)

3 units

- MATLS 3M03 - Mechanical Behaviour of Materials

3 units

- ELECENG 2MM3 - Electrical Circuits and Power

3 units

- MATH 3I03 - Partial Differential Equations for Engineering

3 units

- STATS 3Y03 - Probability and Statistics for Engineering

13 units

- MECHENG 2B03 - Mechanical Engineering Measurements
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer

3 units

- ENGSOCTY 3Y03 - Technology and Society

6 units

- Engineering and Society focus electives

LEVEL IV: 37 UNITS (2025-2026 ONLY)

19 units

- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3F04 - Modelling and Numerical Solutions
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4R03 - Control Systems
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

3 units

- Program option courses or approved technical electives

(See Note 1 above.)

6 units

- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

9 units

- Engineering and Society focus electives

LEVEL IV: 37 UNITS (EFFECTIVE 2026-2027)

19 units

- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3F04 - Modelling and Numerical Solutions
- MECHENG 3M03 A/B - Composite Laboratory I
- MECHENG 4Q03 - Mechanical Vibrations
- MECHENG 4R03 - Control Systems
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis

3 units

- ENGINEER 3PX3 - Engineering Economics

3 units

- Program option courses or approved technical electives

(See Note 1 above.)

6 units

- ENGSOCTY 3X03 - Inquiry in an Engineering Context II
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives

6 units

- Engineering and Society focus electives

LEVEL V: 30-37 UNITS

9 units

- MECHENG 4M06 A/B - Mechanical Engineering Capstone Design Project
- MECHENG 4P03 A/B - Composite Laboratory II

12-13 units

- Program option courses or approved technical electives

(See *Note 1* above.)

3 units

- ENGSOCTY 4X03 A/B - Inquiry in an Engineering Context III

3 units

- ENGSOCTY 4Y03 - Society Capstone Design

3-9 units

- Engineering and Society focus electives

W. Booth School of Engineering Practice and Technology

Faculty of the W. Booth School of Engineering Practice and Technology, as of January 15, 2025
Engineering Technology Building (ETB), Room 509, ext. 26401
https://www.eng.mcmaster.ca/sept

DIRECTOR, W. BOOTH SCHOOL OF ENGINEERING PRACTICE AND TECHNOLOGY

B. Baetz/B.A.Sc., M.A.Sc. *(Toronto)*, Ph.D., *(Duke)*, P.Eng.

ASSOCIATE DIRECTOR, UNDERGRADUATE BACHELOR OF TECHNOLOGY DEGREE PROGRAM

K. Apostolou/Dipl.Eng. *(Thessaloniki)*, Ph.D. *(Minnesota)*

Four-Year Degree Programs

PROGRAM CHAIR, AUTOMATION SYSTEMS ENGINEERING TECHNOLOGY CO-OP

T. Wanyama/B.Eng. *(Makerere)*, M.Eng *(New South Wales)*, PhD *(Calgary)*, P.Eng.

PROGRAM CHAIR, AUTOMOTIVE AND VEHICLE ENGINEERING TECHNOLOGY CO-OP

M. Mehrtash/B.Sc. *(Sharif)*, M.Sc. *(Sharif)*, Ph.D. *(Waterloo)*

PROGRAM CHAIR, BIOTECHNOLOGY CO-OP

F. Geng/M.Sc.*(Fudan)*, M.D. *(Jining)*, Ph.D. *(McMaster)*

CHAIR, MANAGEMENT

H. Kamel/B.Sc. *(Kuwait)*, M.A.Sc. *(Toronto)*, MBA (Wilfrid Laurier), P.Eng.

Degree Completion Programs

PROGRAM CHAIR, CIVIL ENGINEERING INFRASTRUCTURE TECHNOLOGY CO-OP

M. Justason/B.Eng.Mgmt., M.Eng. *(McMaster)*, MBA *(Western)*, P.Eng.

PROGRAM CHAIR, MANUFACTURING ENGINEERING TECHNOLOGY CO-OP

E. Ng/B.Eng. (Hons.), Ph.D. *(Birmingham)*

PROGRAM CHAIR, POWER AND ENERGY ENGINEERING TECHNOLOGY CO-OP

C. Tang/B.A.Sc. *(Waterloo)*, M.Eng. *(Toronto)*, Ph.D. *(McMaster)*, P.Eng., SMIEEE

PROGRAM CHAIR, SOFTWARE ENGINEERING TECHNOLOGY CO-OP

S. Srinivasan/B.Eng. *(Bombay)*, M.Sc., Ph.D. *(Michigan)*, P.Eng.

CHAIR, MANAGEMENT

H. Kamel/B.Sc. *(Kuwait)*, M.A.Sc. *(Toronto)*, MBA *(Wilfrid Laurier)*

BUSINESS MANAGER

M. Vaz/B.A.

TEAM LEAD, ACADEMIC PROGRAMS

J. Morrison/B.Sc., M.Sc.

ADMINISTRATIVE ASSISTANTS

D. Shetty

N. Furlano

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Gail Krantzberg, B.Sc. *(McGill)*, M.Sc./M.E.S., Ph.D. *(Toronto)*

Vladimir Mahalec, Dipl. Ing. *(Zagreb)*, Ph.D. *(Houston)*

ASSOCIATE PROFESSORS

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Faiez Alani, B.Sc. *(Mosul)*, M.Sc. *(Strathclyde)*, Ph.D. *(Strathclyde)*

Kostas Apostolou, Dipl. Eng. *(Thessaloniki)*, Ph.D. *(Minnesota)*/ Associate Director, Undergraduate Programs

Zhen Gao, B.Eng. *(CUMT)*, Ph.D. (USTC), PDF (UOIT), P.Eng. (Limited License)/ Associate Director (Graduate Studies)

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Timber (Ka-Ming) Yuen, B.Eng., M.Eng. Ph.D. *(McMaster)* P.Eng.

ASSISTANT PROFESSORS

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Lucian Balan, B.Eng. *(Cluj-Napoca)*, M.Sc., Ph.D. *(McMaster)*
Jeff Fortuna, B.A.Sc., M.A.Sc., Ph.D. *(McMaster)*
Michael Justason, B.Eng.Mgmt., M.Eng. *(McMaster)*, MBA *(Western)*, P.Eng. / Four-Year Program Chair, Management/ Program Chair, Civil Engineering Infrastructure Technology
Allan MacKenzie, B.Sc. *(Toronto)*, MBA *(Phoenix)* Hamidreza Mahyar, B.Sc. *(South Tehran)*, M.Sc. *(SRU, Tehran)*, Ph.D. *(Sharif)*
Hamidreza Mahyar, B.Sc. *(South Tehran)*, M.Sc. *(SRU, Tehran)*, Ph.D. *(Sharif)*
Silvie Tanu Halim, B.Eng., M.A.Sc ., Ph.D. *(McMaster)*
Ahmed Fakhr, B.Sc *(Cairo)*, MA.Sc., Ph.D. *(McMaster)*

LECTURER

Hoda Kamel, B.Sc. *(Kuwait)*, M.A.Sc. *(Toronto)*, MBA *(Wilfrid Laurier)*, P. Eng/ Degree Completion, Management Program Chair

ADJUNCT PROFESSORS

Brandon Corbett, B.Eng, Ph.D. *(McMaster)*
Renaud Jacquemart, B.Sc. *(Belgium)*, M.Sc. *(France)*, Ph.D. *(France)*
Mohamed Mostafa, B.Sc. *(Cairo)*, M.A.Sc., Ph.D. *(Carleton)*
Ishwar Singh, Hons. B.Sc., Hons. M.Sc. *(Punjab)*, Ph.D. *(Hawaii)*
Mikhail Sorin, B.Eng. Ph.D. *(Moscow)*
David Wheeler, B.Sc., Ph.D. *(British Columbia)*

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Anthony Cupido, B.Eng. *(Western)*, M.Eng., Ph.D. *(McMaster)*
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Thomas Lee, B.A.Sc., M.A.Sc., Ph.D. *(Waterloo)*

ADJUNCT ASSISTANT PROFESSORS

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ASSOCIATE MEMBERS

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Mo Elbestawi (Mechanical Engineering)
Wael El-Dakhakhni (Civil Engineering)
Qiyin Fang (Engineering Physics)
Aadil Juma (Business)
Philip Koshy (Mechanical Engineering)
Zhong Li (Civil Engineering)
Sean Park (Integrated Biomedical Engineering and Health Sciences)
Heather Sheardown (Chemical Engineering)
William Spencer Smith (Computing and Software)

The Bachelor of Technology (B.Tech.) programs, within the Faculty of Engineering's W. Booth School of Engineering Practice and Technology, provide a degree-level technological education that is distinct from that offered in Bachelor of Engineering programs. These programs are more oriented to applications in specific technologies, with less emphasis on broader mathematical and scientific foundations than a corresponding engineering program. Graduates will have considerably more breadth and depth in their area of technology than graduates of college technology diploma programs. For degree completion programs, a second objective is to provide a path for college diploma graduates to gain an education leading to a university degree. The programs are being offered in two specific configurations:

- **Four-year programs** with direct entry from secondary school leading to a Bachelor of Technology Degree from McMaster and both an Advanced Diploma in Technology and a Business Management Certificate from Mohawk College. The Four-Year Degree Programs are:
- Automation Systems Engineering Technology Co-op
- Automotive and Vehicle Engineering Technology Co-op
- Biotechnology Co-op
- **Degree Completion programs** for graduates of an Advanced Diploma in a Technology program leading to a Bachelor of Technology degree from McMaster and a Business Management Certificate from Mohawk College. The Degree Completion Programs are:
- Civil Engineering Infrastructure Technology Co-op
- Manufacturing Engineering Technology Co-op
- Power and Energy Engineering Technology Co-op
- Software Engineering Technology Co-op

Breadth of Learning

B.Tech. graduates will be functioning in an evolving world in which they will play an important role as "evolvers" or change agents. This means that their education cannot just be narrowly focused on technical and management topics but must also enable them to develop important complementary skills, including written and oral communication skills, as well as understanding the relationship between technology and society.

Management Studies

The Degree Completion Program includes a seven-course management studies component, and the Four-Year program has a thirteen-course management studies component with courses such as: financial systems, entrepreneurial thinking & innovation, project management and strategic management. This convergence of engineering technology and management education enables graduates to 'hit the ground running' and make significant contributions within the ever-changing business and technical environments.

Co-operative Education

The successful completion of Co-op work terms is a mandatory component of all B.Tech. degree programs; co-op work terms provide explicit experiential learning which is related to the technologically-oriented careers for which students are being prepared. Testing and enhancing their skills through a co-operative education experience is important in enabling graduates to function effectively in an industrial environment. All Co-op work terms must be completed prior to the start of the final academic term. The co-op component is managed by Engineering Co-op and Career Services.

Four-Year B.Tech. Programs

Academic Regulations for Four-Year B.Tech. Programs

STUDENT ACADEMIC RESPONSIBILITY

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

STUDENT COMMUNICATION RESPONSIBILITY

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in a Four-Year program for the B.Tech. degree, in addition to meeting the General Academic Regulations of the University, shall be subject to the following regulations.

Minimum Requirements to Continue in a Program Beyond Level I

In Level II and above, the student must maintain a Grade Point Average (GPA) of at least 3.5 to continue in the B.Tech. program.

Sequence of Courses

Courses must be taken in the sequence specified in the requirements for the program as outlined in this Calendar. Students must register for all outstanding work of one level before attempting work for a higher level.

Repeated Courses

All failed courses must be repeated if they are required courses for the B.Tech. program or may be replaced if the courses are not explicitly required.

Level of Registration

A student is required to register in the lowest level for which more than six units of work are incomplete. Work of a higher level may be undertaken only with the permission of the B.Tech. Academic Advisor, Office of the Associate Dean (Undergraduate Studies).

Minimum Workload

The minimum workload for students registered in Level I of the Bachelor of Technology program is 30 units. The workload for students registered above Level I will range from 30 to 36 units per year and is specified within each academic program.

Reinstatement

A student who is ineligible to continue in a Bachelor of Technology program *(May not continue at university)* may normally not apply for reinstatement for one full academic year. Exceptions may be made where there are extenuating circumstances that are supported by documentation.

Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar. The completed form and the fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous academic problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. Letters of reference may be submitted but are not required.

Reinstatement is not guaranteed.

A student who is reinstated after being ineligible to continue at a given level must repeat all courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on program probation, and calculation of their Grade Point Average will begin anew. If at any review after reinstatement the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Transfers

Students in good standing in Engineering I or students in other Faculties can apply to transfer directly to Level I B.Tech. Programs (Automation Engineering Technology I Co-op, Automotive and Vehicle Engineering Technology I Co-op, Biotechnology I Co-op) provided they have completed the necessary admission requirements. For more details on the transfer process, lease visit the Faculty of Engineering website.

Requirements for Advanced Mohawk Diploma

Students registered in the Four-Year Bachelor of Technology Program may elect to leave the Program upon the successful completion of Level III and 8 months of co-op. Students will be awarded a Mohawk College Advanced Diploma.

Structure of the Four-Year B.Tech. Program

	Fall (September - December)	**Winter (January - April)**	**Summer (May-August)**
Year 1	IA (15 units from Academic Level I)	IB (15 units from Academic Level I)	
Year 2	IIA (18 units from Academic Level II)	IIB (18 units from Academic Level II)	Co-op Work Term 1 ENGTECH 2EE0
Year 3	IIIA (18 units from Academic Level III)	Co-op Work Term 2 ENGTECH 3EE0	Co-op Work Term 3 ENGTECH 4EE0
Year 4	IIIB (18 units from Academic Level III)	IVA (16 units from Academic Level IV)	
Year 5	IVB (18 units from Academic Level IV)		

**Co-op work-term possibilities for the summers in Years 1 and 4 should be discussed with Engineering Co-Op and Career Services.*

Degree Completion B.Tech. Programs

Academic Regulations for Degree Completion B.Tech. Programs

STUDENT ACADEMIC RESPONSIBILITY

You are responsible for adhering to the statement on student academic responsibility found in the General Academic Regulations of this calendar.

STUDENT COMMUNICATION RESPONSIBILITY

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in a Degree Completion program for the B.Tech. degree, in addition to meeting the General Academic Regulations of the University, shall be subject to the following regulations.

Minimum Requirements to Continue in a Program Beyond Level II

Students in Level III and above in the Civil Engineering Infrastructure Technology Co-op Program, in the Power and Energy Engineering Technology Co-op Program, and in the Manufacturing Engineering Technology Co-op Program must maintain a Grade Point Average (GPA) of at least 3.5 to continue in the program. GPA requirement does not apply to the Software Engineering Technology Co-op Program.

Advanced Standing

The Bachelor of Technology degree is a 4-year degree program. A minimum of 72 units of work must be completed at McMaster University in order to obtain a Bachelor of Technology degree.

Sequence of Courses

Students in the degree completion program may register in any courses in the program for which they have achieved the specified prerequisite requirements.

Repeated Courses

All failed courses must be repeated if they are required courses for the B.Tech. program or may be replaced if the courses are not explicitly required.

Level of Registration

A student is required to register in the lowest level for which more than six units of work is incomplete.

Workload

Courses in the degree completion program are only offered on evenings (Monday through Friday), on Saturdays and Sundays and as exception to the academic general regulations. Students may elect to register in the program full-time or part-time. Students in these programs are considered to be full-time if registered for 9 units or more in an academic term. Students in the Bachelor of Technology Degree Completion programs are permitted to enroll in up to 18 units during the Spring-Summer Term; additional fees will be assessed accordingly. Students working full-time should not attempt more than two or three courses per academic term.

Reinstatement

A student who is ineligible to continue in a Bachelor of Technology program *(May not continue at university)* may normally not apply for reinstatement for one full academic year. Exceptions may be made where there are extenuating circumstances that are supported by documentation.

Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar. The completed form and the fee must be submitted to the Office of the Registrar by June 30. The form must be accompanied by a written explanation of the reason for the student's previous unsatisfactory academic performance, reasons for reinstatement at this time (including documentation of what has been done to correct previous academic problems), reasons why the student would expect to succeed in the desired program if reinstated (i.e. what was the previous problem and what has been done to correct it), activities since last registered at McMaster including all academic work. Letters of reference may be submitted but are not required. **Reinstatement is not guaranteed**.

A student who is reinstated after being ineligible to continue at a given level must repeat all courses of that level, unless specific course exemptions are granted explicitly in the letter of reinstatement. Students who are reinstated will be placed on program probation, and calculation of their Grade Point Average will begin anew. If at any review after reinstatement the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Admission to Degree Completion Programs

The minimum academic requirement for admission to the Bachelor of Technology degree completion programs in Power and Energy Engineering Technology Co-op, Manufacturing Engineering Technology Co-op, and Software Engineering Technology Co-op is successful completion of an advanced technology diploma from an Ontario college with a Grade Point Average of 75%.

The minimum academic requirement for admission to the Bachelor of Technology degree completion programs in Civil Engineering Infrastructure Technology Co-op is successful completion of an advanced technology diploma from an Ontario college with a Grade Point Average of 80%.

The degree completion programs will only accept students with diplomas in a related technology program. Applicants with educational background equivalent to those completing Ontario college diplomas (i.e. overseas technology diploma or degree graduates) are encouraged to apply; such applications will be considered on an individual basis.

Note

Co-op Education: Students in the degree completion Bachelor of Technology programs are required to complete eight months of co-op experience prior to the start of their final academic term. The eight months of co-op experience may be acquired through a combination of two four-month experience terms. These co-op work terms will be waived for diploma graduates whose programs are operated on a co-op basis and for diploma graduates who have achieved significant work experience in a related field through the completion of a Prior Learning Assessment conducted by the Engineering Co-op & Career Services Office.

As well as completing the academic requirements as specified in this Calendar, students in co-op must also complete the following courses prior to graduation:

- ENGTECH 1ET0 - Introduction to the Technology Co-op Program
- ENGTECH 2ET0 - Four Month Co-op Experience I
- ENGTECH 3ET0 - Four Month Co-op Experience II

ENGTECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op work term is taken.

Bachelor of Technology

AUTOMATION SYSTEMS ENGINEERING TECHNOLOGY CO-OP (B.TECH.)

Admission to Level II

Admission to Level II of the Automation Systems Engineering Technology Co-op Program requires completion of 24 units of Bachelor of Technology I including ENGTECH 1AC3 and ENGTECH 1PR3 with a minimum Grade Point Average (GPA) of 3.5.

Note 1

Co-op Education: Students in the Four-Year Bachelor of Technology programs will be required to complete 12 months of co-op experience prior to the start of their final academic term. The 12 months of co-op experience may be acquired through a combination of three four-month experience terms.

Requirements

LEVEL II: 36 UNITS

21 units
- PROCTECH 2CA3 - CAD for Design
- PROCTECH 2CE3 - Chemical Engineering I: Mass Balance
- PROCTECH 2EC3 - Chemical Engineering II: Energy Balance
- PROCTECH 2EE3 - Electricity and Electronics II
- PROCTECH 2IC3 - Instrumentation and Control
- PROCTECH 2PL3 - PLC Programming
- PROCTECH 2SE3 - Systems Engineering Fundamentals

6 units
- ENGTECH 2MA3 - Mathematics III
- ENGTECH 2MT3 - Mathematics IV

9 units
- GENTECH 2EE3 - Engineering Economics
- GENTECH 2HR3 - Human Resource Fundamentals
- GENTECH 2MP3 - Management Principles

2 courses
- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- ENGTECH 2EE0 - Four Month Co-op Experience I

LEVEL III: 36 UNITS

15 units
- PROCTECH 3CE3 - Chemical Engineering III: Unit and Process Design
- PROCTECH 3CT3 - Control Theory I
- PROCTECH 3MC3 - Motion Control and Robotics
- PROCTECH 3PL3 - Advanced PLC Programming and Control
- PROCTECH 4SS3 - System Specification and Design

3 units
- ENGTECH 3ES3 - Engineering Statistics

12 units
- GENTECH 3FF3 - Financial Systems
- GENTECH 3LS3 - Quality Control and Assurance Methods
- GENTECH 3MB3 - Fundamentals of Marketing
- GENTECH 3MT3 - Project Management

2 courses
- ENGTECH 3EE0 - Four Month Co-op Experience II
- ENGTECH 4EE0 - Four Month Co-op Experience III

Industrial Systems Stream and Smart Systems Stream

6 units
- SMRTTECH 3CC3 - Cloud Computing and Internet of Things
- SMRTTECH 3DE3 - Digital Electronics

Software Systems Stream

6 units
- SFWRTECH 3CS3 - Introduction to Cyber Security
- SFWRTECH 4DS3 - Data Structures and Algorithms

LEVEL IV: 34 UNITS

4 units
- PROCTECH 4TR1 - Capstone Design Project I
- PROCTECH 4TR3 - Capstone Design Project II

12 units
- GENTECH 4EP3 - Entrepreneurial Thinking and Innovation
- GENTECH 4FT3 - Strategic Management
- GENTECH 4OM3 - Operations Management
- GENTECH 4TE3 - Technology Ethics and Sustainability

Industrial Systems Stream and Smart Systems Stream

3 units
- PROCTECH 4IT3 - Internet Technologies and Databases

3 units

from
- PROCTECH 4MH3 - Machine Health and Remote Monitoring
- SMRTTECH 4HM3 - Human Monitoring and Smart Health Systems

Industrial Systems Stream

(See *Note 1* above.)

9 Units
- PROCTECH 4AS3 - Industrial System Components and Integration
- PROCTECH 4CT3 - Advanced Control Theory II
- PROCTECH 4IC3 - Industrial Networks and Controllers

3 units

from
- ENGTECH 4DT3 - Engineering Design & Technology
- PROCTECH 4MS3 - Manufacturing Technologies

Smart Systems Stream

(See *Note 1* above.)

9 Units
- SMRTTECH 4AI3 - Artificial Intelligence and Machine Learning
- SMRTTECH 4ES3 - Embedded Systems
- SMRTTECH 4ID3 - IoT Devices and Networks

3 units

from
- ENGTECH 4DT3 - Engineering Design & Technology
- SMRTTECH 4SC3 - Smart Cities and Communities

Software Systems Stream

(See *Note 1* above.)

15 units
- SFWRTECH 3IT3 - Fundamentals of Networking
- SFWRTECH 4ES3 - Real-Time Systems
- SFWRTECH 4NS3 - Advanced Cyber Security
- SFWRTECH 4SA3 - Software Architecture
- SFWRTECH 4WP3 - Advanced Web Programming

3 units

from
- ENGTECH 4AI3 - Artificial Intelligence
- ENGTECH 4DT3 - Engineering Design & Technology
- SFWRTECH 4DM3 - Data Mining

AUTOMOTIVE AND VEHICLE ENGINEERING TECHNOLOGY CO-OP (B.TECH.)

Admission to Level II

Admission to Level II of the Automotive and Vehicle Engineering Technology Co-op Program requires completion of 24 units of Bachelor of Technology I including ENGTECH 1ME3 and ENGTECH 1PR3 with a minimum

Grade Point Average (GPA) of 3.5.

Note

Co-op Education: Students in the Four-Year Bachelor of Technology programs will be required to complete 12 months of co-op experience prior to the start of their final academic term. The 12 months of co-op experience may be acquired through a combination of three four-month experience terms.

Requirements

LEVEL II: 36 UNITS

15 units

- AUTOTECH 2AC3 - Advanced CAD
- AUTOTECH 2AE3 - Design of Machine Elements
- AUTOTECH 2CD3 - Computer Aided Design
- AUTOTECH 2MT3 - Structure and Properties of Materials
- AUTOTECH 2TS3 - Thermodynamics and Heat Transfer

12 units

- ENGTECH 2ES3 - Engineering Statistics
- ENGTECH 2MA3 - Mathematics III
- ENGTECH 2MS3 - Modelling and Numerical Solutions
- ENGTECH 2MT3 - Mathematics IV

9 units

- GENTECH 2EE3 - Engineering Economics
- GENTECH 2HR3 - Human Resource Fundamentals
- GENTECH 2MP3 - Management Principles

2 courses

- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- ENGTECH 2EE0 - Four Month Co-op Experience I

LEVEL III: 36 UNITS

21 units

- AUTOTECH 3AE3 - Automotive Systems and Integrations
- AUTOTECH 3AV3 - Electric and Hybrid Vehicles
- AUTOTECH 3CT3 - Control Theory
- AUTOTECH 3MP3 - Manufacturing Processes and Systems
- AUTOTECH 3MV3 - Mechatronics
- AUTOTECH 3TS3 - Fluid Mechanics
- AUTOTECH 3VD3 - Mechanical Vibrations

3 units

- ENGTECH 3FE3 - Finite Element Analysis

12 units

- GENTECH 3FF3 - Financial Systems
- GENTECH 3LS3 - Quality Control and Assurance Methods
- GENTECH 3MB3 - Fundamentals of Marketing
- GENTECH 3MT3 - Project Management

2 courses

- ENGTECH 3EE0 - Four Month Co-op Experience II
- ENGTECH 4EE0 - Four Month Co-op Experience III

LEVEL IV: 34 UNITS

16 units

- AUTOTECH 4CI3 - Robotics and Computer Integrated Manufacturing
- AUTOTECH 4DV3 - Vehicle Dynamics
- AUTOTECH 4EC3 - Electrical and Electronics Control Systems
- AUTOTECH 4MS3 - Kinematic and Dynamic Modelling and Simulation
- AUTOTECH 4TR1 - Capstone Design I
- AUTOTECH 4TR3 - Capstone Design II

12 units

- GENTECH 4EP3 - Entrepreneurial Thinking and Innovation
- GENTECH 4FT3 - Strategic Management
- GENTECH 4OM3 - Operations Management
- GENTECH 4TE3 - Technology Ethics and Sustainability

6 units from

- AUTOTECH 4AE3 - Internal Combustion Engines
- AUTOTECH 4AT3 - Conceptual Design of Electric and Hybrid Vehicles
- AUTOTECH 4BE3 - Battery Energy Storage Systems
- ENGTECH 4AI3 - Artificial Intelligence
- ENGTECH 4DT3 - Engineering Design & Technology
- PROCTECH 4MH3 - Machine Health and Remote Monitoring

BIOTECHNOLOGY CO-OP (B.TECH.)

Admission to Level II

Admission to Level II of the Biotechnology Co-op Program requires completion of 24 units of Bachelor of Technology I including ENGTECH 1AC3 and ENGTECH 1BI3 with a minimum Grade Point Average (GPA) of 3.5.

Note

Co-op Education: Students in the Four-Year Bachelor of Technology programs will be required to complete 12 months of co-op experience prior to the start of their final academic term. The 12 months of co-op experience may be acquired through a combination of three four-month experience terms.

Requirements

LEVEL II: 36 UNITS

24 units

- BIOTECH 2B03 - Biotechnology Concepts
- BIOTECH 2BC3 - Biochemistry
- BIOTECH 2CB3 - Cell Biology
- BIOTECH 2EC3 - Chemical Engineering Concepts
- BIOTECH 2GT3 - Genetics
- BIOTECH 2MB3 - Microbiology
- BIOTECH 2M03 - Molecular Biology
- BIOTECH 2OC3 - Organic Chemistry

3 units

- ENGTECH 2MA3 - Mathematics III

9 units

- GENTECH 2EE3 - Engineering Economics
- GENTECH 2HR3 - Human Resource Fundamentals
- GENTECH 2MP3 - Management Principles

2 courses

- ENGINEER 1EE0 - Introduction to Career Planning & Employment
- ENGTECH 2EE0 - Four Month Co-op Experience I

LEVEL III: 36 UNITS

18 units

- BIOTECH 3BC3 - Bioprocess Control and Dynamics
- BIOTECH 3B03 - Industrial Biotechnology
- BIOTECH 3BP3 - Bioreactor Processes and Design
- BIOTECH 3FM3 - Food Microbiology
- BIOTECH 3IV3 - Immunology and Virology
- BIOTECH 3PM3 - Pharmacology

3 units

- ENGTECH 3ES3 - Engineering Statistics

3 units from

- BIOTECH 3CM3 - Computational Modeling of Biological Systems
- ENGTECH 4AI3 - Artificial Intelligence
- ENGTECH 4DT3 - Engineering Design & Technology
- SFWRTECH 4DA3 - Data Analytics and Big Data

12 units

- GENTECH 3FF3 - Financial Systems
- GENTECH 3LS3 - Quality Control and Assurance Methods
- GENTECH 3MB3 - Fundamentals of Marketing
- GENTECH 3MT3 - Project Management

2 courses
- ENGTECH 3EE0 - Four Month Co-op Experience II
- ENGTECH 4EE0 - Four Month Co-op Experience III

LEVEL IV: 34 UNITS

22 units
- BIOTECH 4BI3 - Bioinformatics
- BIOTECH 4BL3 - Biomaterials and Biocompatibility
- BIOTECH 4BM3 - Biopharmaceuticals
- BIOTECH 4BS3 - Biotechnology Regulations
- BIOTECH 4GP3 - Genomics and Proteomics
- BIOTECH 4TB3 - Advanced Biotechnology
- BIOTECH 4TR1 - Capstone Project I
- BIOTECH 4TR3 - Capstone Project II

12 units
- GENTECH 4EP3 - Entrepreneurial Thinking and Innovation
- GENTECH 4FT3 - Strategic Management
- GENTECH 4OM3 - Operations Management
- GENTECH 4TE3 - Technology Ethics and Sustainability

CIVIL ENGINEERING INFRASTRUCTURE TECHNOLOGY CO-OP (B.TECH.)

Admission

Admission requires satisfactory completion of an advanced technology diploma in one of Architectural Engineering Technology, Civil Engineering Technology or Construction Engineering Technology. Applicants with educational backgrounds equivalent to those completing Ontario college diplomas (i.e. overseas technology diploma or degree graduates) are encouraged to apply; such applications will be considered on an individual basis.

Notes

1. WHMIS 1A00 must be completed in the first term of the program.
2. Students may complete Level III or Level IV courses in any order, provided they meet the specific course prerequisites.
3. ENGTECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op work term is taken.
4. Students must complete their two co-op terms before they have 9 units or fewer remaining in their DCP program requirements.

Infrastructure Electives Course List A

- CIVTECH 3PM3 - Highway Design, Construction, and Maintenance
- CIVTECH 3TP3 - Transportation Planning and Modelling
- CIVTECH 4LU3 - Advanced Land Use Planning
- CIVTECH 4WT3 - Municipal and Environmental Engineering
- ENGTECH 4FA3 - Finite Element Analysis

Infrastructure Electives Course List B

- CIVTECH 4BC3 - Building Science
- CIVTECH 4BD3 - Bridge Design, Maintenance and Repair
- CIVTECH 4UM3 - Asset Management

Requirements

LEVEL III: 36 UNITS

27 units
- CIVTECH 3GE3 - Geotechnical Materials and Analysis
- CIVTECH 3SA3 - Structural Analysis
- ENGTECH 3MA3 - Mathematics V
- ENGTECH 3ML3 - Strength of Materials
- ENGTECH 3SD3 - Statics and Dynamics
- ENGTECH 3SP3 - Structure and Properties of Materials
- ENGTECH 3ST3 - Probability and Statistics
- ENGTECH 4MA3 - Advanced Mathematics
- ENGTECH 4TF3 - Mechanics of Fluids

9 units
- GENTECH 3EE3 - Engineering Economics
- GENTECH 3FS3 - Financial Systems
- GENTECH 3MP3 - Management Principles

1 course
- WHMIS 1A00 - Introduction to Health and Safety (See *Note 2* above.)

2 courses
- ENGTECH 2ET0 - Four Month Co-op Experience I
- ENGTECH 3ET0 - Four Month Co-op Experience II

LEVEL IV: 36 UNITS

15 units
- CIVTECH 3GT3 - Geotechnical Design
- CIVTECH 4MH3 - Hydraulic Engineering
- CIVTECH 4RC3 - Reinforced Concrete and Masonry Design
- CIVTECH 4SD3 - Structural Steel Design
- ENGTECH 4ED3 - Senior Engineering Design Project

6 units
- GENTECH 4PM3 - Project Management
- GENTECH 4SE3 - Technology Ethics and Sustainability

6 units

from
- GENTECH 3DM3 - Creativity, Innovation and Technology
- GENTECH 4EM3 - Legal and Regulatory Issues
- GENTECH 4EN3 - Entrepreneurial Thinking and Innovation
- GENTECH 4LM3 - Lean Thinking and Practices
- GENTECH 4MK3 - Fundamentals of Marketing
- GENTECH 4SF3 - Strategic Management
- GENTECH 4ST3 - Contemporary Issues in Management
- GENTECH 4TC3 - Technical Communications
- COMMERCE 4MI3 - Marketing Analytics
- COMMERCE 4ME3 - Sales Management

6 units
- from *Infrastructure Electives Course List A*

3 units
- from *Infrastructure Electives Course List B* or an approved ENRTECH, MANTECH, or SFWRTECH course

MANUFACTURING ENGINEERING TECHNOLOGY CO-OP (B.TECH.)

Admission

Manufacturing Engineering Technology Co-op is open to graduates of an advanced technology diploma in one of Mechanical Engineering, Chemical Engineering Technology, Electro-Mechanical Engineering Technology and Manufacturing Engineering Technology. Applicants with educational backgrounds equivalent to those applicants completing Ontario college diplomas (i.e. overseas technology diploma or degree graduates) are encouraged to apply; such applications will be considered on an individual basis.

Notes

1. WHMIS 1A00 must be taken in the first term of the program.
2. ENGTECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op work term is taken.
3. Students must complete their two co-op terms before they have 9 units or fewer remaining in their DCP program requirements.

Requirements

LEVEL III: 36 UNITS

15 units
- ENGTECH 3MA3 - Mathematics V
- ENGTECH 3ML3 - Strength of Materials
- ENGTECH 3SP3 - Structure and Properties of Materials
- MANTECH 3LS3 - Quality Control and Assurance Methods
- ENGTECH 4CT3 - Systems and Control

3 units
- ENGTECH 4MA3 - Advanced Mathematics

9 units
- ENGTECH 3SD3 - Statics and Dynamics
- ENGTECH 3TD3 - Thermodynamics
- MANTECH 3MF3 - Micro Manufacturing and Fabrication

9 units
- GENTECH 3EE3 - Engineering Economics
- GENTECH 3FS3 - Financial Systems
- GENTECH 3MP3 - Management Principles

1 course
- WHMIS 1A00 - Introduction to Health and Safety

(See *Note* above.)

2 courses
- ENGTECH 2ET0 - Four Month Co-op Experience I
- ENGTECH 3ET0 - Four Month Co-op Experience II

LEVEL IV: 36 UNITS

24 units
- ENGTECH 4AI3 - Artificial Intelligence
- ENGTECH 4FA3 - Finite Element Analysis
- ENGTECH 4TF3 - Mechanics of Fluids
- MANTECH 4FM3 - CIM and Flexible Manufacturing
- MANTECH 4MM3 - Design and Manufacturing of Machine Elements
- MANTECH 4PD3 - Senior Engineering Design Project
- MANTECH 4PM3 - Production Management
- MANTECH 4RM3 - Robot Mechanics and Mechatronics

6 units
- GENTECH 4PM3 - Project Management
- GENTECH 4SE3 - Technology Ethics and Sustainability

6 units

from
- GENTECH 3DM3 - Creativity, Innovation and Technology
- GENTECH 4EM3 - Legal and Regulatory Issues
- GENTECH 4EN3 - Entrepreneurial Thinking and Innovation
- GENTECH 4LM3 - Lean Thinking and Practices
- GENTECH 4MK3 - Fundamentals of Marketing
- GENTECH 4SF3 - Strategic Management
- GENTECH 4ST3 - Contemporary Issues in Management
- GENTECH 4TC3 - Technical Communications
- COMMERCE 4MI3 - Marketing Analytics
- COMMERCE 4ME3 - Sales Management

POWER AND ENERGY ENGINEERING TECHNOLOGY CO-OP (B.TECH.)

Admission

The degree completion programs in Power and Energy Engineering Technology Co-op will accept graduates in one of Mechanical Engineering Technology, Electrical Engineering Technology, Electronics Engineering Technology, or Electro-Mechanical Engineering Technology. Graduates from Ontario university engineering programs who seek to develop careers in the power and energy technology sectors will also be accepted. Applicants with educational backgrounds at least equivalent to those applicants completing Ontario college diplomas (i.e. overseas technology diploma or degree graduates) are encouraged to apply; such applications will be considered on an individual basis.

Notes

1. WHMIS 1A00 must be completed in the first term of the program.
2. ENGTECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op work term is taken.
3. Students must complete their two co-op terms before they have 9 units or fewer remaining in their DCP program requirements.

Requirements

LEVEL III: 33 UNITS

24 units
- ENRTECH 3CS3 - Communication Systems
- ENRTECH 3EM3 - Transmission Lines and Electromagnetics
- ENRTECH 3EP3 - Power Systems and Electrical Machines
- ENRTECH 3IN3 - Industrial Networks and Communication Systems
- ENRTECH 3MI3 - Measurements and Instrumentation
- ENRTECH 3PD3 - Power Distribution I
- ENGTECH 3MA3 - Mathematics V
- ENGTECH 3TD3 - Thermodynamics

9 units
- GENTECH 3EE3 - Engineering Economics
- GENTECH 3FS3 - Financial Systems
- GENTECH 3MP3 - Management Principles

1 course
- WHMIS 1A00 - Introduction to Health and Safety

(See *Note 3* above.)

2 courses
- ENGTECH 2ET0 - Four Month Co-op Experience I
- ENGTECH 3ET0 - Four Month Co-op Experience II

LEVEL IV: 39 UNITS

24 units
- ENGTECH 4CT3 - Systems and Control
- ENGTECH 4EP3 - Senior Engineering Project
- ENGTECH 4MA3 - Advanced Mathematics
- ENGTECH 4TF3 - Mechanics of Fluids
- ENRTECH 4PD3 - Power System Analysis and Control
- ENRTECH 4PE3 - Power Electronics
- ENRTECH 4PM3 - Power Protection and Maintenance I
- ENRTECH 4PP3 - Power Protection and Maintenance II

3 units

from
- ENRTECH 4CA3 - Computer Applications in Power System Engineering
- ENRTECH 4RG3 - Renewable Generation
- ENGTECH 4AI3 - Artificial Intelligence

6 units
- GENTECH 4PM3 - Project Management
- GENTECH 4SE3 - Technology Ethics and Sustainability

6 units

from
- GENTECH 3DM3 - Creativity, Innovation and Technology
- GENTECH 4EM3 - Legal and Regulatory Issues
- GENTECH 4EN3 - Entrepreneurial Thinking and Innovation
- GENTECH 4LM3 - Lean Thinking and Practices
- GENTECH 4MK3 - Fundamentals of Marketing
- GENTECH 4SF3 - Strategic Management
- GENTECH 4ST3 - Contemporary Issues in Management

- GENTECH 4TC3 - Technical Communications
- COMMERCE 4MI3 - Marketing Analytics
- COMMERCE 4ME3 - Sales Management

SOFTWARE ENGINEERING TECHNOLOGY CO-OP (B.TECH.)

Admission

Admission requires satisfactory completion of an advanced technology diploma in one of Computer Engineering Technology, Computer Systems Technology, Software or Networking, or Computer Programmer/Analyst. Applicants with educational backgrounds equivalent to those applicants completing Ontario college diplomas (i.e. overseas technology diploma or degree graduates) are encouraged to apply; such applications will be considered on an individual basis.

Notes

1. Software Engineering diploma graduates are recommended to complete SFWRTECH 3IT3.
2. Network Engineering Security Analyst diploma graduates are recommended to complete SFWRTECH 3PR3.
3. WHMIS 1A00 must be completed in the first term of the program.
4. ENGTECH 1ET0 must be completed at least one academic term prior to the term in which the first co-op work term is taken.
5. Students must complete their two co-op terms before they have 9 units or fewer remaining in their DCP program requirements.

Requirements

LEVEL III: 36 UNITS

3 units

from

- SFWRTECH 3IT3 - Fundamentals of Networking
- SFWRTECH 3PR3 - Procedural and Object Oriented Programming Concepts

(See *Notes 1* and *2* above.)

24 units

from

- ENGTECH 3DM3 - Discrete Mathematics
- SFWRTECH 3CS3 - Introduction to Cyber Security
- SFWRTECH 3MA3 - Contemporary Math for Software Development
- SFWRTECH 3OS3 - Operating Systems
- SFWRTECH 3RQ3 - Software Requirements and Specification
- SFWRTECH 3ST3 - Probability and Statistics
- SFWRTECH 4DS3 - Data Structures and Algorithms
- SFWRTECH 4MA3 - Numerical Linear Algebra and Numerical Optimization

9 units

from

- SFGNTECH 3EE3 - Engineering Economics
- SFGNTECH 3FS3 - Financial Systems
- SFGNTECH 3MP3 - Management Principles

1 course

- WHMIS 1A00 - Introduction to Health and Safety

(See *Note 3* above.)

2 courses

- ENGTECH 2ET0 - Four Month Co-op Experience I
- ENGTECH 3ET0 - Four Month Co-op Experience II

LEVEL IV: 36 UNITS

18 units

from

- SFWRTECH 4AI3 - Artificial Intelligence
- SFWRTECH 4AV3 - Augmented and Virtual Reality
- SFWRTECH 4CL3 - Cloud Computing
- SFWRTECH 4CG3 - Computer Graphics
- SFWRTECH 4DA3 - Data Analytics and Big Data
- SFWRTECH 4DM3 - Data Mining
- SFWRTECH 4ES3 - Real-Time Systems
- SFWRTECH 4NN3 - Neural Networks and Deep Learning
- SFWRTECH 4NS3 - Advanced Cyber Security
- SFWRTECH 4SA3 - Software Architecture
- SFWRTECH 4SS3 - Software Security
- SFWRTECH 4VD3 - Videogame Development Technology
- SFWRTECH 4VE3 - Visual Effects and Technology for Animated Production
- SFWRTECH 4WP3 - Advanced Web Programming

6 units

- ENGTECH 4FD3 - Senior Engineering Project
- SFWRTECH 4CC3 - Parallel Programming

6 units

- SFGNTECH 4PM3 - Project Management
- SFGNTECH 4SE3 - Technology Ethics and Sustainability

6 units

from

- SFGNTECH 3DM3 - Creativity, Innovation and Technology
- SFGNTECH 4EM3 - Legal and Regulatory Issues
- SFGNTECH 4EN3 - Entrepreneurial Thinking and Innovation
- SFGNTECH 4LM3 - Lean Thinking and Practices
- SFGNTECH 4MK3 - Fundamentals of Marketing
- SFGNTECH 4SF3 - Strategic Management
- SFGNTECH 4ST3 - Contemporary Issues in Management
- SFGNTECH 4TC3 - Technical Communications

Faculty of Health Sciences

https://healthsci.mcmaster.ca/

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S.E. Hanna/B.Sc, M.Sc, Ph.D. *(Western)*

VICE DEAN (REHABILITATION SCIENCE)

S. Wojkowski, HBKin, MSc(PT), PhD *(McMaster)*, PT

For information concerning Health Sciences education programs and admission requirements, contact:

Office of the Registrar
McMaster University
Gilmour Hall, Room 108
Hamilton, Ontario, L8S 4L8
Telephone (905) 525-4600
http://future.mcmaster.ca

Overview

The concept of Health Sciences Education is based on the view that health is a broad subject encompassing both the problems of ill health and the impact of biology, environment and lifestyle on health. Each health sciences program has specific educational requirements, but by learning together in shared facilities there exists an opportunity to establish effective interprofessional working relationships.

The programs in the Faculty attempt to meet these goals through a variety of learning approaches. Emphasis is placed on problem-based, small group learning experiences and inquiry. Other approaches to learning, including interdisciplinary educational experiences, are used where appropriate.

In July 1974, the School of Nursing and the School of Medicine were brought together to form the Faculty of Health Sciences. In 1989, the School of Occupational Therapy and Physiotherapy (School of Rehabilitation Science) was added and in 1993 the Midwifery Education Program was established. A further innovation was the implementation of the Bachelor of Health Sciences Program in 2000, followed by the establishment of the Bachelor of Health Sciences (Physician Assistant) in 2008. The Faculty introduced in 2014, the Biomedical Discovery and Commercialization Program, which has an optional fifth-year Masters degree component beyond the Bachelor's degree. The Faculty of Health Sciences joined with the Faculty of Engineering in 2017 to jointly offer the Integrated Biomedical Engineering and Health Sciences Program (IBEHS) which lead to a B.Eng.BME, or a B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) degree. In 2019, the Honours Biology and Pharmacology Co-Op transferred to the Faculty of Health Sciences from the Faculty of Science; and in 2021, the Honours Biochemisty, Honours Biochemisty - Biomedical Research Specialization, and Honours Biochemistry Co-op Programs similarly moved to the Faculty of Health Sciences from the Faculty of Science. Finally, in 2024, the School of Rehabilitation Sciences in the Faculty of Health Sciences is partnering with the Faculty of Humanities to launch their B.H.Sc. (Honours) degree in the interdisciplinary Integrated Rehabilitation and Humanities Program. The Faculty offers the following undergraduate degree programs: Doctor of Medicine (MD), Bachelor of Science in Nursing (B.Sc.N.), Bachelor of Health Sciences (Honours) in Honours Health Sciences with a specialization available in Child Health, Bachelor of Health Sciences in Midwifery (B.H.Sc.), Bachelor of Health Sciences in Physician Assistant (B.H.Sc.), Bachelor of Health Sciences (Honours) in Biomedical Discovery and Commercialization (B.H.Sc. Honours), Bachelor of Health Sciences (Honours) in Honours Biology and Pharmacology Co-Op Program (B.H.Sc. Honours), and most recently Bachelor of Health Sciences (Honours) in Biochemistry with specializations available in Biomedical Research and Co-Op.

In addition to its undergraduate programs, the Faculty of Health Sciences also has responsibility for Residency Programs in Postgraduate Medical Education. The Clinician Investigator Program (CIP) allows Residents in the Royal College of Physician and Surgeons of Canada (RCPSC) specialty or subspecialty program to do research as a key component of their medical career. The CIP at McMaster University is one of the largest Clinical Investigator Training Programs in Canada.

The University offers eight distinct research-oriented graduate programs in Health Sciences. Both Masters and Ph.D. programs are offered in: Biochemistry and Biomedical Sciences, Biomedical Engineering, Chemical Biology, Health Research Methodology, Medical Sciences, Neurosciences, Nursing and Rehabilitation Sciences. Masters degrees are offered in: Biomedical Discovery and Commercialization, Child Life and Pediatric Psychosocial Care, eHealth, Global Health, Health Science Education, Occupational Therapy, Physiotherapy, Public Health and Speech-Language Pathology. A Ph.D. is also available in Health Policy.

The Faculty of Health Sciences developed the MD/PhD Program to bridge the gap between medical sciences and clinical application and train the future leaders of healthcare. The program is uniquely structured to allow optimal integration of medical education and research training that starts on the first day and extends throughout this 7 year program.

The Faculty of Health Sciences collaborates with the Division of Health Sciences at Mohawk College in educational programs for other health professions based at the College. Research programs encompassing the broad spectrum of health have been established, including basic and applied research and various aspects of health-care delivery. The graduate programs in medical sciences are related to the various areas of health research.

The Health Sciences Centre at McMaster provides educational and research facilities for medicine, nursing and other health professions. It includes a teaching hospital (the McMaster Site of Hamilton Health Sciences) with extensive ambulatory clinics for primary and specialized aspects of patient care. The building has been designed to bring into close proximity the programs for the various health professions and to integrate the facilities for education, research and patient care in the Faculty of Health Sciences.

In addition to the Health Sciences Centre, education, research and clinical programs are based at other Hamilton Health Sciences sites (Chedoke, General, Juravinski), St. Joseph's Centre for Mountain Health Services, St. Joseph's Hospital, St. Peter's Hospital, Juravinski Cancer Centre and the Health Sciences Education Centre, Mohawk College. Extensive use is made of a variety of community agencies. In accordance with the plan to coordinate the development of specialized health services among the Hamilton and District hospitals, the Postgraduate Education programs in medicine have been developed on a regional basis.

Undergraduate Health Sciences Education Programs

Admission and Registration

Application to any program in the Faculty of Health Sciences implies acceptance on the part of the applicant of the admission policies and procedures, and the methods by which applicants are chosen for the Health Sciences programs.

Registration in any program in the Faculty of Health Sciences implies acceptance on the part of the student of the objectives of that program and the methods by which progress toward the achievement of those objectives is evaluated.

The following describes the regulations governing admission and registration in the Health Sciences programs, and should be considered in conjunction with specific admission requirements described on the following pages for: the Honours Health Sciences program (B.H.Sc. Honours), Bachelor of Health Sciences in Biochemistry (Honours) programs (B.H.Sc.Honours), Bachelor of Health Sciences in Biomedical Discovery and Commercialization (Honours) program (B.H.Sc. Honours), Bachelor of Health Sciences in Health, Engineering Sciences and Entrepreneurship Specialization (Honours) in the Integrated Biomedical Engineering and Health Sciences program (B.H.Sc. Honours), Honours Biology and Pharmacology Co-Op Program (B.H.Sc. Honours), Bachelor of Health Sciences in Integrated Rehabilitation and Humanities (B.H.Sc. Honours), Doctor of Medicine (M.D.), Bachelor of Health Sciences, Midwifery Education program (B.H.Sc.), Bachelor of Science, Nursing (B.Sc.N.) and the Physician Assistant Education program (B.H.Sc.). The following application deadlines are strictly enforced. Deadline dates are for consideration of admission to a program in the following September.

PROGRAM	DEADLINE
Honours Health Sciences Program (B.H.Sc. (Honours))	

	Honours Health Sciences - Level I	Mid-February (Supplementary Application deadline)- Details at https://hhsp. healthsci. mcmaster.ca/future-students/
	Honours Health Sciences - Level II transfer	Early May (Supplementary Application deadline)- Details at https://hhsp. healthsci. mcmaster.ca/future-students/
Bachelor of Health Sciences in Biochemistry Programs (B.H.Sc. (Honours))		
Honours Biochemistry Level II		Late April - Details at https:// registrar.mcmaster.ca/build-degree/level-ii/
Honours Biochemistry - Biomedical Research Specialization Level III		Mid April (Supplementary Application Deadline)- Details at biochem.healthsci. mcmaster.ca/education/ undergraduate/programs/
Honours Biochemistry - Co-op Level III		Co-op admissions is administered by the Science Career and Co-operative Education Office - Details at https://scce.science. mcmaster.ca/co-op/ prospective-students/
Bachelor of Health Sciences in Biomedical Discovery and Commercialization (B.H.Sc. (Honours))		
	Current McMaster students	February 1st by 11:59pm
	External students	February 1st by 11:59pm
Integrated Rehabilitation and Humanities (B.H.Sc. (Honours))		
Current McMaster students		Program selection for Level II opens annually in April. Details at Level II program selection | Office of the Registrar | McMaster University
External students Supplementary Application		Application deadline is April 1. Details online for current McMaster and external students at Future Students - Integrated Rehabilitation & Humanities (mcmaster.ca)
Integrated Biomedical Engineering and Health Sciences (IBEHS) (B.Eng.BME or B.H.Sc.(Honours))		
	IBEHS Level I	Details online at https://www. eng.mcmaster.ca/ibiomed/ ibehs-1/
	Supplemental Application	Details online at ibiomed. mcmaster.ca
	IBEHS Level II specialization transfer	Details online at ibiomed. mcmaster.ca
Honours Biology and Pharmacology Co-Op Program (B.H.Sc. Honours)		
	Current McMaster Students	January 6
	External Students	January 31
Medicine (MD)		
	Final application deadline	October 1
Midwifery (B.H.Sc.)		Application deadline January 15. Supporting documentation deadline February 1 Details at https:// midwiferyundergrad.mcmaster. ca/prospective-students
Nursing (B.Sc.N.)		
	Applicants directly from Ontario Secondary Schools	January 15
	Applicants to Accelerated	February 1
	Applicants with Other Qualifications	February 1
Physician Assistant (B.H.Sc.)		
OUAC Application deadline		January 15
Supporting documentation deadline		February 1

The University reserves the right to change the admission requirements at any time without notice.

As places in the degree programs of the Faculty of Health Sciences are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission. The University, therefore, reserves the right to grant admission to a limited number of students, and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.

Course Cancellations

Due to unforeseen circumstances, the Program(s) reserves the right to cancel courses on short notice.

Students will be notified of the cancellation as soon as possible through official communication channels (e.g., email, student portal).

In such circumstances, the Program(s) will provide an alternative ensuring students are still able to meet course requisites, and program progression can be achieved in a timely manner.

Falsification of Admission Information

An applicant supplying documentation or evidence which, at the time, or subsequently, is found to be falsified will be withdrawn from consideration. Any student admitted to the program having submitted false evidence will be withdrawn.

Health Screening Record for Admission

Before registering in a clinically based program, students must submit a McMaster Faculty of Health Sciences Health Screening Record. This form details a student's immunization history and tuberculosis (TB) screening. It must be completed by a health care professional and submitted before the submission deadline. More detailed information will be provided upon acceptance into the program or visit **https://fhs.mcmaster.ca/healthscreening/index.html**.

Police Records Check

Incoming students must provide an original Police Records Check, including Vulnerable Sector Screening (VSS). International or Visa students are required to provide an original Police Certificate from each country or territory they have resided for more than six months consecutively for the past five years. More detailed information will be provided upon acceptance into the program or visit **https://fhs.mcmaster.ca/pcbe/police_records_check.html**.

Clinical Course Requirements

Where the performance of the student in clinical practice may jeopardize or endanger the welfare of the patient or the patient's family, the student may be removed from clinical experience any time during the academic year, until continuation in the course is reviewed.

Information and Academic Counseling

In certain programs, a faculty member is selected for each student in the September of entry to a degree program and provides each student with advice on evaluations, electives and other educational needs throughout the program. Changes in advisors may be entertained as each student becomes acquainted with Faculty well enough to choose his or her own advisor. The academic advisory role for B.Sc.N. students is fulfilled by the Coordinator of Studies (Nursing). Students are also encouraged to consult individual faculty members regarding career planning.

Transportation

Students are responsible for expenses involved in transporting themselves to community agencies, making home visits, or in connection with clinical study.

License to Practice

All graduates who wish to engage in clinical practice in any of medicine, midwifery, nursing, occupational therapy and physiotherapy are subject to any qualifying examinations and other requirements by the licensing bodies for each of these professions. In addition students should be aware that a license may be denied if they have been convicted of a criminal offence for which a pardon has not been granted. A student in such a position should consult the respective licensing body about such a situation.

Honours Health Sciences Program

Michael G. DeGroote Centre for Learning and Discovery, Room 3300, ext. 22815
https://hhsp.mcmaster.ca/contact/
ASSISTANT DEAN, HONOURS HEALTH SCIENCES PROGRAM
S.A. Ritz, B.Sc. (Hons), M.Ed., Ph.D.
PROGRAM MANAGER
J.Hamilton B.A. (Hons)

Program Overview

This program, first offered in September 2000, is an innovative interdisciplinary program in which students take responsibility for their learning and in which there is recognition that both the knowledge and skill sets developed by students are integral parts of preparing for either further study or entry into the workforce. The principles of independent learning and an emphasis on both content and process are central to the provision of education within the Faculty of Health Sciences, and are reflected in this program. In addition, this program reflects the established tradition within the Faculty of understanding health from biological, behavioural and population-based perspectives. The program will draw on individuals from within the Faculty of Health Sciences and the larger university community to provide students with exposure to basic and applied researchers as well as health care practitioners, enabling students to learn about and experience the study of health from these various perspectives. The program will utilize both a small group, inquiry-based format as well as traditional lecture, lab, and tutorial based teaching formats to provide students with a solid knowledge base in health-related sciences as well as the skills necessary to critically evaluate and synthesize health-related information.
The program is designed to emphasize flexibility, recognizing that students may use this program to prepare for a variety of post-graduate options including graduate work in medical sciences, professional schools and entry into the workforce. Beyond the first year, students may select to focus on one perspective of health and develop relative expertise in this area, while other students may find that their needs are better met by pursuing a broader-based program of study through their senior years.
The program begins in Level I and leads to the degree Bachelor of Health Sciences (Honours) upon successful completion of Level IV. The four-level program offers the opportunity for specialization and focus areas through electives and through individual study or thesis courses.

Specializations, Concurrent Certificates, and Minors

The Honours Health Sciences Program offers a number of options to allow students to pursue a focused area of study on a particular topic. At the present time, we are offering a specialization for entry in Level II in Child Health, and three concurrent certificate programs (in Biomedical Sciences, Immunology, Microbiology & Virology, and Health Humanities & Social Sciences) administered by the Honours Health Sciences Program. Students in any Undergraduate degree program who are interested in these certificates may declare it at the time of graduation provided they have completed the course requirements, as outlined in the Certificate and Diploma Programs section of the Calendar. A focus in Global Health can be pursued through the Interdisciplinary Minor in Globalization Studies, which includes a sub-theme on Globalization and Health. Other concurrent certificates, interdisiciplinary minors, and minors are also available through other programs and departments.
Please refer to the details in the concurrent certificates and interdisciplinary minors section of the calendar for additional information on other concurrent certificates and interdisciplinary minors.

Child Health Specialization

The Child Health Specialization offers students an opportunity to apply the Inquiry problem-based learning model within the context of child health, development and community involvement.
The Child Health Specialization curriculum is based on three thematic pillars - education, research, and experiential/community learning - and cuts across academic disciplines related to child health such as paediatrics, psychiatry, psychology, social work, developmental rehabilitation, and education.
The Child Health Specialization utilizes existing expertise within the McMaster University and Hamilton communities; by doing so it allows for the integration of theory and knowledge with experiential learning and research skill development within the challenging context of child health. World-renowned teachers/facilitators, researchers and clinicians from across disciplines serve as supervisors/mentors for students with an interest in child health.
Upon acceptance into the Honours Health Sciences program and the completion of Level I, students can apply to this specialization in March for entry in Level II.

Admission Procedures and Requirements

Please note that the admission policy may be reviewed annually and the admission requirements may be changed in future years. As places in this program are limited, the admission process is competitive. Possession of the minimum requirements does not guarantee admission to the program. Application to the Honours Health Sciences Program of the Faculty of Health Sciences implies acceptance of the admission policies, procedures and methods by which applicants are chosen.

Admission Procedures

APPLICANTS FROM ONTARIO SECONDARY SCHOOLS

Applicants currently completing Grade 12 U or M courses apply through the:
Ontario Universities' Application Centre (OUAC)

170 Research Lane
Guelph, ON, N1G 5E2
www.ouac.on.ca

Applicants to Honours Health Sciences Program Level 1 must apply to OUAC by the specified deadline date. Secondary schools will forward mid-term and final transcripts directly to OUAC in support of applications.

Applicants are required to complete a mandatory Supplementary Application. Details about the Supplementary Application for the forthcoming year are posted on the program website (bhsc.mcmaster.ca), normally by the end of September. All applicants will receive an email with detailed instructions for submitting their Supplementary Application in early February.

APPLICANTS WITH QUALIFICATIONS EQUIVALENT TO ONTARIO SECONDARY SCHOOL

Applicants from other provinces should contact the Ontario Universities' Application Centre (OUAC) for an application package for admission consideration. Please refer to the OUAC address above. Applicants must also have their official transcripts forwarded to:

Office of the Registrar, Admissions
McMaster University Gilmour Hall Room 108
1280 Main Street West
Hamilton, Ontario, L8S 4L8

Applicants are also required to complete a mandatory Supplementary Application Form online by the specified deadline date. Supplementary Application details will be posted on the program website at: https://bhsc.healthsci.mcmaster.ca/.

Applicants from other countries should contact the Office of International Affairs at www.mcmaster.ca/oia or (905) 525-9140, ext 24211 for details.

TRANSFER APPLICANTS

Transfer applicants from McMaster University are required to complete a Program Application for Current Level I Students on-line via Mosaic during March to April and a mandatory Supplementary Application online by the specified deadline date. Level 2 transfer applicants must apply for Honours Health Sciences Program in Mosaic, **not** a sub-plan (for example; specialization). Applicants who apply for a sub-plan will not be reviewed for Honours Health Sciences Program and will be considered ineligible for this program. Applicants who receive and accept the admission offer to the Honours Health Sciences Program and express their interest in the Child Health Specialization may be considered if they are eligible and if space permits. Supplementary Application details will be posted on the program website at: https://bhsc.healthsci.mcmaster.ca/.

Applicants from other post-secondary institutions are required to apply through the *Ontario Universities' Application Centre (OUAC)* (please refer to the OUAC address above) by April 1st and complete a mandatory Supplementary Application by the specified deadline date. Supplementary Application details will be posted on the program website at: https://bhsc.healthsci.mcmaster.ca/.

SECOND DEGREE APPLICANTS

Applicants who have completed a University undergraduate degree or have completed more than one year or the equivalent of University undergraduate studies are ineligible to apply to the Honours Health Sciences Program. This restriction does not apply for those applying through the Facilitated Indigenous Admission Process.

FACILITATED INDIGENOUS APPLICATION PROCESS (FIAP)

With an understanding that Indigenous learners can face specific barriers or challenges when pursuing higher education, schools and programs within McMaster's Faculty of Health Sciences
have facilitated admissions streams for applicants with Indigenous North American (First Nations, Inuit or Métis) ancestry. This process is intended to provide equitable access to Indigenous applicants and aligns with the intent of the Truth and Reconciliation Commission of Canada Calls to Action. Applicants wishing to apply to the Honours Health Sciences Program using McMaster's FIAP need to complete the self-identification application in addition to McMaster University and program-specific application processes; details are available at https://ihll.mcmaster.ca/students/future-students/facilitated-admissions-self-identification/. Incomplete applications past the program(s) admission deadline will not be considered. Applicants must meet the same minimum academic criteria for admission as set out for the general pool of candidates.

EQUITABLE ADMISSIONS FOR BLACK APPLICANTS (EABA) PROCESS

The EABA process aims to reduce barriers that may discourage Black-identified applicants from applying to the Honours Health Sciences Program, and to enhance accessibility and inclusiveness for Black-identified learners. Applicants who wish to be considered for admission to the Honours Health Sciences Program using the EABA process need to apply for admission to the Honours Health Sciences Program through the normal processes described above; applicants will have the opportunity to self-identify for the EABA prior to the submission of the supplementary application. Applicants must meet the same minimum academic criteria for admission as for the general pool of candidates. More details about the EABA process are available on the Honours Health Sciences Program website: https://bhsc.mcmaster.ca/equitable-admissions-for-black-applicants-bhsc-hons-program/.

Admission Requirements

APPLICANTS FROM ONTARIO SECONDARY SCHOOLS

The selection method for Ontario Secondary School applicants is by academic qualifications and a mandatory Supplementary Application. The majority of Level I offers of admission are made in early May. A minimum of 90% on the 6 required courses (see below) is required for consideration. In early May, the following grade information will be used: Semester schools: all final Grade 12 U and/or M courses from first semester or prior years, and second-semester mid-term grades for Grade 12 U and/or M courses.

Non-semester schools: second term grades for full-year Grade 12 U and/or M courses. Offers based on interim and/or mid-term grades will be conditional upon maintaining satisfactory performance on final grades. All applicants will receive instructions for the electronic submission of their Supplementary Applications. A review of the mandatory Supplementary Application is a very important component of the admission selection process. Applicants who do not complete the Supplementary Application are not considered for admission.

REQUIREMENTS

The following are the minimum Grade 12 U and/or M requirements under the Ontario Secondary School curriculum:

1. English U;
2. Biology U;
3. Chemistry U;
4. one of Advanced Functions U, Calculus and Vectors U or Mathematics of Data Management U. For those applicants who present with more than one of these Mathematics courses, the highest grade on the transcript at the time of review will be used to calculate the admission average;
5. One U or M non-math/non-science (**note: courses in technological education, science or mathematics are not acceptable**);
6. One additional U or M course in any other subject area to total six courses.

APPLICANTS WITH QUALIFICATIONS EQUIVALENT TO ONTARIO SECONDARY SCHOOL

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed in the Grade 12 U or M course requirements in their secondary school graduation year.

TRANSFER APPLICANTS

Transfer applicants will be admitted to the Honours Health Sciences Program from other programs at McMaster and from other post-secondary institutions. The process will be competitive and will be based on the student's academic qualifications and a Supplementary Application. Enrolment is limited. Students interested in being considered for admission to Level II of the Honours Health Sciences Program must have completed the equivalent of six units of university

Level I Biology and six units of university Level I Chemistry. A Grade Point Average of at least 10.0 (minimum overall average of A-) will be required for admission consideration.

Academic Regulations

Continuation in the Program

Students who have a minimum GPA of 6.0 may continue in the program.
If a GPA of 5.5 to 5.9 is obtained a student may remain in the program but will be placed on program probation for one reviewing period. A student may be on program probation only once.
Students previously on program probation who achieve a GPA between 3.5 and 5.4, may transfer to the Honours Health Sciences General Program and, with permission, take Honours Health Sciences Program's required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration academic advising session in the Honours Health Sciences Program office. Students who, at next review, achieve a GPA of at least 5.5 may transfer to the Honours Health Sciences Program. Students who fail to meet the minimum requirements for transfer to Honours Health Sciences Program by the end of 90 units, must transfer to a non-Honours Health Sciences Program for which they qualify or graduate with a Health Sciences Program three-year degree provided a minimum 3.5 GPA is achieved and all program requirements have been met.
Students whose GPA is less than 3.0 at any academic review may not continue at the University.

Letters of Permission

Students enrolled in the Honours Health Sciences Program may apply to take courses at another university on a Letter of Permission via Mosaic. Students must achieve a grade of at least C- to receive credit.
Students are responsible to forward the transcript from the other university directly to the Honours Health Sciences Program office. If a grade of C- or better is attained, the transcript designation reads *T* indicating *transfer credit*, or NC indicating *not complete* if less than a C- grade is attained.
Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Cumulative or Fall/Winter Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission.
Students must be in good standing to be eligible to take courses on a Letter of Permission.

Level of Registration

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the Honours Health Sciences Program Office.

Reinstatement to the Honours Health Sciences Program

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $100 fee must be submitted to the Office of the Registrar by July 15 for September entry and November 30 for January entry.
The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support and the accompanying documentation.
Reinstatement is not guaranteed.
If students are reinstated to the University, their Grade Point Average will be re-set to 0.0 on zero units, although students may, at the discretion of the Faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the Grade Point Average. If at any review after reinstatement the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Registration and Course Changes

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your advisement report in Mosaic each time you drop or add courses and seek academic counselling from the Honours Health Sciences Program Office if you have any questions. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are enforced.

Academic Counselling

Academic counselling is available throughout the year from the Honours Health Sciences Program Office. It is recommended that students make an appointment with an advisor from the program office if they have any questions.

Graduation

A GPA of 5.0 is required for graduation.
Students who successfully complete Level III of the program may request permission from the Honours Health Sciences Program Office to graduate with a three-year B.H.Sc. degree. Please refer to the General Academic Regulations section in this Calendar for additional information related to graduation.

Bachelor of Health Sciences (Honours)

HONOURS HEALTH SCIENCES - B.H.SC. (HONS) - LEVEL 2 TRANSFER

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses
Maximum 9 units of project/thesis courses in Level 3
Maximum 18 units of project/thesis courses in Level 4

LEVEL I: 30 UNITS

30 units completed prior to admission to the Honours Health Sciences Program

LEVEL II: 30 UNITS

2 units
- HTHSCI 1G02 - Interdisciplinary Questions in Health

1 unit
- HTHSCI 1X01 A/B S - Praxis Pathways 1

6 units
- HTHSCI 2D06 A/B - Inquiry II: Introduction and Biochemistry *

6 units
from:
- HTHSCI 2F03 - Human Physiology and Anatomy I &
- HTHSCI 2FF3 - Human Physiology and Anatomy II

OR
- HTHSCI 2FA3 - Foundations for Inquiry in Anatomy & Physiology &
- HTHSCI 2FB3 - Inquiry in Anatomy & Physiology

3 units
- HTHSCI 2G03 - Statistics & Epidemiology 1

3 units
- HTHSCI 2GG3 - Statistics & Epidemiology 2

3 units
- HTHSCI 2K03 - Inquiry II: Cell Biology

3 units
- HTHSCI 2X03 A/B - Praxis Pathways 2

3 units
- Electives

1 course
- WHMIS 1A00 - Introduction to Health and Safety (to be completed by Level 2 transfer students who have not already completed the safety training course)

Note
*HTHSCI 2D06 A/B replaces HTHSCI 2E03-Inquiry II: Biochemistry

LEVEL III: 30 UNITS

3 units
- HTHSCI 3E03 - Inquiry III: Advanced Inquiry in Health Sciences

3 units
- HTHSCI 3G03 - Critical Appraisal of the Health Literature

3 units
- HTHSCI 3GG3 - Health Systems and Health Policy

3-6 units
- HTHSCI 3H03 A/B S - Inquiry Project
- HTHSCI 3H06 A/B S - Inquiry Project

1 course
- HTHSCI 3X00 A/B - Praxis Pathways 3

15-18 units
- Electives

LEVEL IV: 30 UNITS

6-15 units

from
- HTHSCI 4A09 A/B S - Thesis
- HTHSCI 4A12 A/B S - Thesis
- HTHSCI 4A15 A/B S - Thesis
- HTHSCI 4B06 A/B S - Senior Projects
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City
- HTHSCI 4D09 A/B S - Thesis in Engaging the City
- HTHSCI 4D12 A/B S - Thesis in Engaging the City

3 units
- HTHSCI 4XP3 A/B - Praxis Pathways 4

12-21 units
- Electives

HONOURS HEALTH SCIENCES - CHILD HEALTH SPECIALIZATION - B.H.SC. (HONS)

Notes

1. Entry to this program begins in Level II. Students wishing to apply must successfully complete Health Sciences I.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL II: 30 UNITS

3 units
- HTHSCI 2E03 - Inquiry II: Biochemistry *

3 units
- HTHSCI 2G03 - Statistics & Epidemiology 1

3 units
- HTHSCI 2GG3 - Statistics & Epidemiology 2

3 units
- HTHSCI 2K03 - Inquiry II: Cell Biology

3 units
- HTHSCI 2X03 A/B - Praxis Pathways 2

6 units
- HTHSCI 2CH6 A/B - CHS Inquiry Fundamentals

3 units
- HTHSCI 2CH3 A/B - CHS Learning Modules

6 units
- Electives

Note
*HTHSCI 2D06 A/B replaces HTHSCI 2E03 for Level II transfer students

LEVEL III: 30 UNITS

3 units
- HTHSCI 3G03 - Critical Appraisal of the Health Literature

3 units
- HTHSCI 3GG3 - Health Systems and Health Policy

9 units
- HTHSCI 3CH9 A/B - CHS Inquiry Intermediate

6 units
- HTHSCI 3CH6 A/B S - CHS Research Practicum

1 course
- HTHSCI 3X00 A/B - Praxis Pathways 3

9 units
- Electives

LEVEL IV: 30 UNITS

6 units
- HTHSCI 4CH6 A/B - CHS Inquiry Advanced

6-15 units

from
- HTHSCI 4C06 A/B S - Senior Project in Child Health
- HTHSCI 4C09 A/B S - Thesis in Child Health
- HTHSCI 4C12 A/B S - Thesis in Child Health
- HTHSCI 4C15 A/B S - Thesis in Child Health
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City
- HTHSCI 4D09 A/B S - Thesis in Engaging the City
- HTHSCI 4D12 A/B S - Thesis in Engaging the City

3 units
- HTHSCI 4XP3 A/B - Praxis Pathways 4

6-15 units
- Electives

HONOURS HEALTH SCIENCES PROGRAM - (B.H.SC.(HONS))

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses
Maximum 9 units of project/thesis courses in Level 3
Maximum 18 units of project/thesis courses in Level 4

LEVEL I: 30 UNITS

6 units
- HTHSCI 1I06 A/B - Cellular and Molecular Biology

6 units
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

6 units
- HTHSCI 1E06 A/B - Inquiry I: Introduction

2 units
- HTHSCI 1G02 - Interdisciplinary Questions in Health

1 unit
- HTHSCI 1X01 A/B S - Praxis Pathways 1

9 units
- Electives

1 course
- WHMIS 1A00 - Introduction to Health and Safety

LEVEL II: 30 UNITS

3 units
- HTHSCI 2E03 - Inquiry II: Biochemistry *

6 units
from
- HTHSCI 2F03 - Human Physiology and Anatomy I &
- HTHSCI 2FF3 - Human Physiology and Anatomy II

OR
- HTHSCI 2FA3 - Foundations for Inquiry in Anatomy & Physiology &
- HTHSCI 2FB3 - Inquiry in Anatomy & Physiology

3 units
- HTHSCI 2G03 - Statistics & Epidemiology 1

3 units
- HTHSCI 2GG3 - Statistics & Epidemiology 2

3 units
- HTHSCI 2K03 - Inquiry II: Cell Biology

3 units
- HTHSCI 2X03 A/B - Praxis Pathways 2

9 units
- Electives

Note
* HTHSCI 2D06 A/B replaces HTHSCI 2E03 for Level 2 transfer students

LEVEL III: 30 UNITS

3 units
- HTHSCI 3E03 - Inquiry III: Advanced Inquiry in Health Sciences

3 units
- HTHSCI 3G03 - Critical Appraisal of the Health Literature

3 units
- HTHSCI 3GG3 - Health Systems and Health Policy

3-6 units
- HTHSCI 3H03 A/B S - Inquiry Project
- HTHSCI 3H06 A/B S - Inquiry Project

1 course
- HTHSCI 3X00 A/B - Praxis Pathways 3

15-18 units
- Electives

LEVEL IV: 30 UNITS

6-15 units
from
- HTHSCI 4A09 A/B S - Thesis
- HTHSCI 4B06 A/B S - Senior Projects
- HTHSCI 4A12 A/B S - Thesis
- HTHSCI 4A15 A/B S - Thesis
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City
- HTHSCI 4D09 A/B S - Thesis in Engaging the City
- HTHSCI 4D12 A/B S - Thesis in Engaging the City

3 units
- HTHSCI 4XP3 A/B - Praxis Pathways 4

12-21 units
- Electives

Honours Bachelor of Health Sciences in Biomedical Discovery and Commercialization Program

Health Sciences Centre, Room 4H30, ext. 27335
https://bdcprogram.healthsci.mcmaster.ca/
DIRECTOR
Sara Andres/*(Biochemistry and Biomedical Sciences)* B.Sc. *(Guelph),* Ph.D. *(McMaster)*
PROGRAM OFFICE
bdcprogram@mcmaster.ca

Program Overview

The Biomedical Discovery and Commercialization (BDC) program is a multidisciplinary training program, concentrated in the biomedical sciences that will produce graduates with the combined strengths of discovery research skills and business acumen. An important goal of the BDC program is the exposure of students to business curriculum in the DeGroote School of Business to complement a strong foundation in the biomedical sciences obtained in the Faculty of Health Sciences. Further, the program seeks to make strong connections with the health research business community in order to provide internships and community mentors for its trainees. With this unique combination of skills and knowledge, BDC graduates will be well positioned for employment in the biotechnology, pharmaceutical and other biomedical science sectors of the economy. Likewise they will be equipped to pursue further training in, for example, graduate studies in research, Master of Business Administration, Law or Medicine. The format of the BDC program is a '4+1' Bachelor plus Master program. It is a four-year undergraduate Bachelor's degree that begins in Level III, followed by a fifth-year Master's degree. Thus candidates who successfully graduate from the four-year undergraduate BDC program may choose to apply for admission to the one-year non-thesis, course-based Master's program. Upon successful completion of each of the degree requirements, candidates will have graduated with an Honours Bachelor of Health Sciences degree in BDC and subsequently a Master of Biomedical Discovery and Commercialization.

Admission Procedures and Requirements

Please note that the admission policy may be reviewed annually and the admission requirements may be changed in future years. As places in this program are limited, the admission process is competitive. Possession of the minimum requirements does not guarantee admission to the program.

ADMISSION REQUIREMENTS

Selection will be based on academic achievement and a written statement of interest but requires, as a minimum, submission of an on-line application by the stated deadline, completion of Level II (or above) of a Science or Health Sciences program (including a full-year of first-year chemistry and biology courses (i.e. 6-units of chemistry and 6-units of biology, or ISCI 1A24 A/B)) with a Grade Point Average of at least 8.0 on the McMaster 12-point scale (equivalent to a grade of B). Refer to the "Apply" tab on the BDC website (https://bdcprogram.healthsci.mcmaster.ca/apply/) for further information and important dates and deadlines. Applicants from other disciplines may also be a good fit depending on their educational background. Successful completion of both CHEM 2OA3 - Organic Chemistry I and CHEM 2OB3 - Organic Chemistry II (or equivalent) is strongly recommended prior to entry into the program. CHEM 2OA3 must be completed by the end of Level III and CHEM 2OB3 must be completed by the end of Level IV. The program will be open to applicants who have completed equivalent Level II courses at another university. Applicants who have completed a University degree are also eligible to apply as a second degree student.

Academic Regulations

STUDENT ACADEMIC RESPONSIBILITY

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

In addition to the regulations in the General Academic Regulations section of this Calendar, the following Program regulations apply.

MINOR

This information is directed to BDC students who are interested in completing a minor in another subject area. A minor is not available in the Honours Bachelor of Health Sciences in Biomedical Discovery and Commercialization Program.

A Minor is an option available to a student enrolled in a four or five-level program. A Minor consists of a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the Minor. A student is responsible for registering for courses to be applied towards a Minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the Minor designation. Those who have the necessary requirements may apply for recognition of that Minor when they graduate. If recognition for a Minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a Minor, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section in this Calendar.

CONTINUATION IN THE PROGRAM

Students who have a minimum GPA of 6.0 may continue in the program.

If a GPA of 3.5 to 5.9 is obtained a student may remain in the program but will be placed on program probation for one reviewing period. A student may be on program probation only once.

Students previously on program probation who achieve a GPA between 3.5 and 5.4, may transfer to a non-BDC program for which he/she qualifies or graduate with a B.H.Sc. three-year degree provided a minimum 3.5 GPA is achieved and all program requirements have been met.

Students whose GPA is less than 3.0 at any academic review may not continue at the University.

LETTERS OF PERMISSION

Students enrolled in the Honours Bachelor of Health Sciences in Biomedical Discovery and Commercialization Program may apply to take courses at another university on a Letter of Permission (LOP) by submitting an LOP request in MOSAIC. Students must achieve a grade of at least C- to receive credit. Students are responsible to forward the transcript from the other university directly to the BDC Program Office (HSC-4H30). If a grade of C- or better is attained, the transcript designation reads *T* indicating *Transfer Credit*, or *NC* indicating *No Credit* if less than a C- grade is attained.

Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Cumulative or Fall/Winter Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission. Students must be in good standing to be eligible to take courses on a Letter of Permission.

LEVEL OF REGISTRATION

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the BDC Program Office.

REINSTATEMENT TO THE HONOURS BACHELOR OF HEALTH SCIENCES IN BIOMEDICAL DISCOVERY AND COMMERCIALIZATION PROGRAM

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $100 fee must be submitted to the Office of the Registrar by July 15 for September entry and November 30 for January entry.

The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support and the accompanying documentation. Reinstatement is not guaranteed.

If students are reinstated to the University, their Grade Point Average will be reset to 0.0 on zero units, although students may, at the discretion of the Faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the Grade Point Average. If at any review after reinstatement the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

REGISTRATION AND COURSE CHANGES

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your advisement report in MOSAIC on the working day following each time you drop or add courses and seek academic counselling from the Program Office if you have any questions. Dates for final registration and course changes appear in the *Sessional Dates* section of this Calendar and are enforced.

ACADEMIC COUNSELLING

Academic counselling is available throughout the year from the Biochemistry & Biomedical Sciences (BBS) Education Program Services Office. It is recommended that students make an appointment with an advisor from the program office if they have any questions.

GRADUATION

A GPA of 5.0 is required for graduation. Students who successfully complete Level III of the program may request permission from the BBS Education Program Services Office to graduate with a non-honours three-year Bachelor of Health Sciences degree. Please refer to the *General Academic Regulations* section in this Calendar for additional information related to graduation.

Bachelor of Health Sciences (Honours)

BACHELOR OF HEALTH SCIENCES (HONOURS) - BIOMEDICAL DISCOVERY AND COMMERCIALIZATION (B.H.SC.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. See *Academic Regulations* section of the Calendar for details. Admission is by selection and is based on completion of the supplementary application by the stated deadline and academic achievement, but requires, as a minimum, completion of Level II

(or above) of a Science or Health Sciences program with a Grade Point Average of at least 8.0 and completion of the following courses:

6 UNITS

- BIOLOGY 1A01
- BIOLOGY 1A02
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

Note

Students are eligible for admission with equivalent courses from another university. Successful completion of both CHEM 2OA3 - Organic Chemistry I and CHEM 2OB3 - Organic Chemistry II (or equivalent) is strongly recommended prior to entry into the program.

Program Notes

1. Students interested in pursuing a minor in Business should take COMMERCE 1AA3 and COMMERCE 2AB3 in place of COMMERCE 4AK3. For more information on completing a minor in Business, please refer to the *DeGroote School of Business (Faculty of Business)* section of the undergraduate calendar.
2. Students who have already completed COMMERCE 1AA3 will be required to complete COMMERCE 2AB3 instead of COMMERCE 4AK3.
3. Students interested in pursuing a minor in Business should take COMMERCE 1MA3 (or 2MA3) and COMMERCE 3MC3 in place of COMMERCE 3MD3. For more information on completing a minor in Business, please refer to the *DeGroote School of Business (Faculty of Business)* section of the undergraduate calendar.
4. Students who have already completed COMMERCE 1MA3 (or 2MA3) will be required to complete COMMERCE 3MC3 instead of COMMERCE 3MD3.
5. Students who entered the program in Fall 2022 or earlier will take BIOMEDDC 3C09 A/B. Students entering the program in Fall 2023 or later will take BIOMEDDC 3C06.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL I: 30 UNITS

30 units

- (See *Admission* above.)

LEVEL II: 30 UNITS

30 units

- (See *Admission* above.)

LEVEL III: 30 UNITS

15 units

- BIOMEDDC 3A03 - Ideas to Innovation in Biomedical Sciences
- BIOMEDDC 3B06 A/B - Drug Discovery and Development
- BIOMEDDC 3C09 A/B
- BIOMEDDC 3C06 - Research Skills Laboratory and Inquiry *(See Program Note 5 above.)*

6 units

- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 4AK3 - Accounting Information for Decision Making

(see Program Notes 1 and 2 above)

0-6 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids (if BIOCHEM 2B03 and 2BB3 were not completed prior to entry into the program)
- CHEM 2OA3 - Organic Chemistry I (if not completed prior to entry into the program)

3-9 units

- Elective(s)

LEVEL IV: 30 UNITS

18 units

- BIOMEDDC 4A15 A/B - Senior Research Thesis
- BIOMEDDC 4B03 - Road to Biomedical Commercialization

6 units

- COMMERCE 3MD3 - Introduction to Contemporary Applied Marketing (see *Program Notes 3* and *4* above)
- COMMERCE 4FW3 - Finance for Entrepreneurs

0-3 units

- CHEM 2OB3 - Organic Chemistry II (if not completed prior to entry into the program)

3-6 units

- Elective(s)

Department of Biochemistry & Biomedical Sciences (Faculty of Health Sciences)

https://biochem.healthsci.mcmaster.ca

Faculty as of January 15, 2025

CHAIR

Brian Coombes

ASSOCIATE CHAIR UNDERGRADUATE EDUCATION, BIOCHEMISTRY AND BIOMEDICAL SCIENCES (HONOURS)

C.E. Mullarkey

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John Whitney *(Graduate Studies)*

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Dawn Lilley

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Lori L. Burrows/B.Sc., Ph.D. *(Guelph)*

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Giuseppe Melacini/B.Sc., Ph.D. *(Milan)*

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Deborah Sloboda/B.Sc. *(Guelph)*, M.Sc. *(Western Ontario)*, Ph.D. *(Toronto)*

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Bernardo L. Trigatti/B.Sc., Ph.D. *(McMaster)*

Ray Truant/B.Sc., Ph.D. *(Toronto)*

Geoffrey Werstuck/B.Sc., Ph.D. *(McMaster)*

Gerard D. Wright/B.Sc., Ph.D. *(Waterloo)*

Daniel S.C. Yang/B.Sc., M.Sc. *(Alberta)*, Ph.D. *(Pittsburgh)*

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Felicia Vulcu/B.Sc., Ph.D. *(McMaster)*
John Whitney/B.Sc. *(Guelph)*, Ph.D. *(Toronto)*
Dawit Wolday/M.D., M.Sc. *(Addis Ababa)*, Ph.D. *(Karolinska Institute)*

ASSISTANT PROFESSORS

Sara Andres/B.Sc. *(Guelph)*, Ph.D. *(McMaster)*
Monica DePaoli/M.D. *(Udine)*, Ph.D. *(McMaster)*
Hong Han/B.Sc., *(UBC)*, Ph.D. *(Toronto)*
Jon Stokes/B.HSc., Ph.D. *(McMaster)*

ASSOCIATE MEMBERS

Stephanie A. Atkinson/*(Pediatrics)* B.A. *(Western Ontario)*, Ph.D. *(Toronto)*
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Jonathan L. Bramson/*(Pathology)* B.Sc., Ph.D. *(McGill)*
Marie Elliot/*(Biology)* B.Sc., Ph.D. *(Alberta)*
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Jeffrey I. Weitz/*(Medicine)* B.Sc., M.D. *(Ottawa)*
Samantha L. Wilson/*(ObsGyn)* BHSc *(Western)*, Ph.D. *(UBC)*

Notes Applicable to all Honours Biochemistry Programs

1. In addition to the Honours Biochemistry program, the Department offers a Specialization in Biomedical Research. The Honours program has a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Health Sciences), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may wish to apply to the Biomedical Research Specialization which is strongly recommended for students intending to pursue graduate studies.
2. **Admission to the Honours Biochemistry program is limited.** Selection is based on academic achievement but requires, as a minimum, completion of the Level I requirements listed below.
3. **Admission to the Honours Biochemistry - Biomedical Research Specialization program is limited.** Admission to this program begins at Level III and requires, as a minimum, completion of Level II Honours Biochemistry and completion of a supplementary application.
4. Students considering graduate studies in Biochemistry are recommended to complete one of BIOCHEM 4F09 A/B or 4T15 A/B.

Program Overview

The Department of Biochemistry and Biomedical Sciences offers three distinct Honours Biochemistry degree programs. The Honours Biochemistry (B.H.Sc.) program begins in Level II, while Biomedical Research Specialization and Co-op programs are available beginning at Level III. Program courses will develop scientific understanding in the application of chemistry to the exploration of biological systems at the cellular and molecular level. This knowledge will be further leveraged to examine pertinent topics in health and disease. Additionally, the program will focus on the acquisition of transferable skills in research, oral and written communication, and the application of theory to practice.
Honours Biochemistry programs require the completion of 120 units.

Degree Programs

Honours Biochemistry

The program begins in Level II and leads to the degree Bachelor of Health Sciences (Honours) upon successful completion of Level IV. A Biomedical Research Specialization is available beginning in Level III for students interested in gaining hands-on experience with cutting-edge research. This research-intensive option offers up to 21 units of additional laboratory experience to students who may be interested in pursuing graduate studies or a career in research and development.

Co-op Program

The Honours Biochemistry (B.H.Sc.) degree offers a co-op option, beginning in Level III. Refer to Admission Procedures and Requirements below for admission procedures.

Admission Procedures and Requirements

Please note that the admission policy may be reviewed annually, and the admission requirements may be changed in future years. As places in Honours Biochemistry programs are limited, the admission process is competitive. Possession of the minimum requirements does not guarantee admission to an Honours Biochemistry program.
Application to an Honours Biochemistry program in the Faculty of Health Sciences implies acceptance of the admission policies, procedures and methods by which applicants are chosen.

Admission Procedures

All Level I students who wish to be reviewed for admission to Honours Biochemistry (B.H.Sc.) for the following Fall/Winter Term must submit an Application for Admission to Level II through MOSAIC by the University stated deadline (normally in April). Students may rank up to four program choices. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.
Level I students must meet the admission criteria for Honours Biochemistry (B.H.Sc.) according to the Calendar in effect when they registered for Level I. Students must follow the program requirements of the Calendar in effect when they enter Level II, except when a later Calendar explicitly modifies such requirements.
Admission into Honours Biochemistry - Biomedical Research Specialization (B.H.Sc.) is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection and is based on completion of the supplementary application by the stated deadline and academic achievement, but requires, as a minimum, completion of Level II Honours Biochemistry with a Grade Point Average of at least 6.0.
Admission into Honours Biochemistry Co-op (B.H.Sc.) is limited and admission is by selection. Students must complete SCIENCE 2D00 and all mandatory orientation activities, including SCIENCE 3D00, prior to the start of the first

work term. Students must complete SCIENCE 2D00 prior to the start of Level III. Employment must be full-time, academically relevant and approved by the Science Career and Cooperative Education office in the (Faculty of) Science. Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 9 units in a term) and will be charged per unit registered. An annual administrative fee will be charged in each of the three years a student is enrolled in a Co-op program, and additional Science Co-op fees will be charged for each work term of a Co-op program. With written permission from the work term supervisor, academic work may be taken during each four-month period of a work term and the student will be responsible for the additional tuition. For further information, please consult Science Career and Cooperative Education in the Faculty of Science.

Transfer Applicants

Transfer applicants may be admitted to Honours Biochemistry programs and from other post-secondary institutions. The process will be competitive and will be based on the student's academic qualifications and may require completion of a supplementary application. Enrolment is limited. Students interested in being considered for admission to Level II of Honours Biochemistry must have completed the equivalent admission requirements outlined in the Honours Biochemistry (B.H.Sc.) section of the academic calendar. A Grade Point Average of at least 10.0 (minimum overall average of A-) will be required for admission consideration.

Bursaries

For information about bursaries, please refer to the Office of the Registrar, Aid & Awards website.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases, priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.
In addition to the regulations in the General Academic Regulations section of this Calendar, the following Program regulations apply.

Minor

This information is directed to Honours Biochemistry students who are interested in completing a minor in another subject area.
A Minor is an option available to a student enrolled in a four- or five-level program. A Minor consists of a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the Minor. A student is responsible for registering for courses to be applied towards a Minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the Minor designation. Those who have the necessary requirements may apply for recognition of that Minor when they graduate. If recognition for a Minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a Minor, but only at the Honours level. For further information please refer to Minors in the *General Academic Regulations* section in this Calendar.
A Minor in Biochemistry is available. Minors are available to students registered in an Honours program only. At least 12 units (above Level 1) toward the Minor must be considered elective to degree. Please see *Minors* in the *General Academic Regulations* section of this Calendar for further information. All courses have an enrolment capacity and the Faculty cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Continuation in the Program

You must have a Grade Point Average (GPA) of at least 6.0 to continue in the program. If your GPA is from 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.5 to 5.4, you must transfer to another program for which you qualify, or you may enrol in the Bachelor of Heath Science Program as a transition student for one reviewing period. During that period, with permission, you can take B.H.Sc (Honours) Biochemistry required courses (for which all course prerequisites have been met). At the end of the probation period, you may apply for readmission to the B.H.Sc. (Honours) Biochemistry Program . A minimum GPA of 6.0 is required. If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a transition student. During that period, with permission, you can take B.H.Sc (Honours) Biochemistry required courses (for which all course prerequisites have been met). You may be on academic probation only once. If your GPA is less than 3.0 you may not continue at the University. A student previously on Academic Probation who fails to achieve good standing (minimum 3.5) at a subsequent review, cannot continue at the university unless granted reinstatement. Please refer to the General Academic Regulations section in the undergraduate calendar.

Letters of Permission

All students in good academic standing, with the exception of students registered in second degree programs, may apply to the BBS Education Services Office to take courses at another university on Letter of Permission. Students must achieve a grade of at least C- for transfer of credit. The transcript designation reads 'T', indicating transfer, when a grade of C- or better is attained, or NC, indicating not complete, when a grade of less than C- is attained.
Required courses given by the department offering the program may not be taken elsewhere unless departmental approval is given. Electives may be taken elsewhere.
Courses taken at another university cannot be used to satisfy the University's minimum residence requirements, will not be included in the calculation of the Grade Point or Term Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on Letter of Permission.

Level of Registration

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the BBS Education Program Services Office.

Reinstatement

Students with an Academic Standing of *May Not Continue at the University* who wish to be considered for undergraduate studies must apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the stated deadline. The Faculty of Health Sciences does not consider Requests for Reinstatement for the Spring/Summer Term. See the *Application Procedures* section of this

Calendar. Reinstatement forms will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation and other appropriate documentation. Students may wish to include an explanation for their inadequate performance, corroborated by two letters of support. If a student was affected by an illness, disability or significant life event, they may choose to include a physician's letter documenting the impacts of the illness/disability/event on the student's academic performance. **Reinstatement is not automatic or guaranteed.** Decisions are normally made after June 30 for September entry.

The Grade Point Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. **Note: If at a review after reinstatement the Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.**

Registration and Course Changes

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your advisement report in MOSAIC each time you drop or add courses and seek academic counselling from the BBS Education Program Services Office if you have any questions. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are enforced.

Academic Counselling

Academic counselling is available throughout the year from the BBS Education Program Services Office. It is recommended that students make an appointment with an advisor from the program office if they have any questions.

Graduation

A GPA of 5.0 is required for graduation. Students who successfully complete Level III of the program may request permission from the BBS Education Program Services Office to graduate with a three-level non-honours B.H.Sc. exit degree. Please refer to the *General Academic Regulations* section in this Calendar for additional information related to graduation.

Students who registered in the Honours B.Sc. Biochemistry program in 2022 or prior and elected to transfer to the Honours B.H.Sc. Biochemistry program should refer to the 2022-23 Undergraduate Calendar or their personal Advisement Report for program requirements. Students may also contact an advisor from the BBS Education Program Services Office for program requirements.

Bachelor of Health Sciences (Honours)

HONOURS BIOCHEMISTRY (B.H.SC.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 6.0 including:

6 UNITS

- BIOLOGY 1A01
- BIOLOGY 1A02
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03

6 UNITS

from

- Science I Course List

Note

A grade of at least C+ in four of BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03, CHEM 1A03, 1AA3 and either MATH 1A03 or 1LS3 is required.

Program Notes

1. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
2. Students who do not complete a research, thesis, or advanced biochemistry laboratory course (BIOCHEM 3A03, 3LA3, 3R06 A/B S, 4F09 A/B, 4T15 A/B, 4Z03) must complete BIOCHEM 4C03.
3. Students considering transfer into Biochemistry in Level 3 should contact the BBS Educational Program Office - bbsug@mcmaster.ca for more information.
4. Pedagogical research is eligible for 3 units of BIOCHEM 3R03 or 4Z03 project course credit. Students completing pedagogical research projects may not use other BIOCHEM project course codes for these purposes.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- BIOMEDDC 2W03
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology

- HTHSCI 2MB3 - Microbiology in the Health Sciences
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics
- NEXUS 2A03 - Impact of Infectious Disease on Individuals and Society

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I
Maximum 9 units of project/thesis courses in Level 3
Maximum 18 units of project/thesis courses in Level 4

LEVEL I: 30 UNITS

30 units

- (See *Admission* above.)

LEVEL II: 30 UNITS

12 units

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 units

from

- *Biochemistry Course List*

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

9 units

- Electives

LEVEL III: 30 UNITS

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3 units

- BIOMEDDC 3WR3 - Biochemistry and Biomedical Scientific Writing: Right your Write

9 units

from

- the *Biochemistry Course List*

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOCHEM 3GN3 - Biochemical and Molecular Foundations of Genetics
- BIOLOGY 2C03 - Genetics

9 units

- Electives

LEVEL IV: 30 UNITS

3 units

from

Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

9 units

from

- the *Biochemistry Course List*

6-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project
- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Note 2* above.)

3-12 units

- Electives

HONOURS BIOCHEMISTRY - BIOMEDICAL RESEARCH SPECIALIZATION (B.H.SC.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection and is based on completion of the supplementary application by the stated deadline and academic achievement, but requires, as a minimum, completion of Level II Honours Biochemistry with a Grade Point Average of at least 6.0 and completion of the following courses:

12 UNITS

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 UNITS

from

- the *Biochemistry Course List*

6 UNITS

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

Program Notes

1. Registration in an Honours Biochemistry program does not guarantee access to all courses. Some courses have program restrictions. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
2. Completion of one of BIOCHEM 4F09 A/B, 4T15 A/B or 4Z03 is required in Level IV.
3. A 'research intensive' option, available to students registered in this Specialization, offers additional laboratory research experience through completion of BIOCHEM 3R06 A/B S and 4T15 A/B. This option is intended for students planning to pursue graduate studies or a career in research and development. Enrolment in the courses is limited and admission is by selection.
4. Pedagogical research is eligible for 3 units of BIOCHEM 3R03 or 4Z03 project course credit. Students completing pedagogical research projects may not use other BIOCHEM project course codes for these purposes.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions

- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- BIOMEDDC 2W03
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- HTHSCI 2MB3 - Microbiology in the Health Sciences
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics
- NEXUS 2A03 - Impact of Infectious Disease on Individuals and Society

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I
Maximum 9 units of project/thesis courses in Level 3
Maximum 18 units of project/thesis courses in Level 4

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Biochemistry

LEVEL III: 30 UNITS

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3-6 units

from

- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project

3 units

- BIOMEDDC 3WR3 - Biochemistry and Biomedical Scientific Writing: Right your Write

9 units

from

- the *Biochemistry Course List*

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOCHEM 3GN3 - Biochemical and Molecular Foundations of Genetics
- BIOLOGY 2C03 - Genetics

3 - 6 units

- Electives

LEVEL IV: 30 UNITS

3 units

from

Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

9 units

from

- the *Biochemistry Course List*

12-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Note 2* above.)

3-6 units

- Electives

HONOURS BIOCHEMISTRY CO-OP (B.H.SC.)

Effective September 2025, this program has been renamed Honours Biochemistry Co-op (B.H.Sc.). Students who enrolled prior to September 2025 will be given the choice to remain in Honours Biochemistry - Biomedical Research Specialization Co-op or transfer into Honours Biochemistry Co-op (B.H.Sc.).

On this Page:

- Requirements for Students Who Enter the Program in September 2025
  - Co-op Program Chart (For Students Who Enter in September 2025)
- Requirements for Students Who Enter the Program in September 2023-2024
  - Co-op Program Chart (For Students Who Enter in September 2023-2024)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Biochemistry with a Grade Point Average of at least 6.0 and completion of the following courses:

12 UNITS

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 UNITS

from

- the *Biochemistry Course List*

6 UNITS

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

1 COURSE

- SCIENCE 2D00 - Skills for Career Success in Biochemistry (or SCIENCE 2C00)

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in biochemistry related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2D00 (or SCIENCE 2C00) prior to the Fall Term of Level III. Students are required to complete SCIENCE 3D00 (or SCIENCE 3C00) before the first work placement.
4. Registration in an Honours Biochemistry program does not guarantee access to all courses. Some courses have program restrictions. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
5. Students who do not complete a research, thesis, or advanced biochemistry laboratory course (BIOCHEM 3A03, 3LA3, 3R06 A/B S, 4F09 A/B, 4T15 A/B, 4Z03) must complete BIOCHEM 4C03.
6. Pedagogical research is eligible for 3 units of BIOCHEM 3R03 or 4Z03 project course credit. Students completing pedagogical research projects may not use other BIOCHEM project course codes for these purposes.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- BIOMEDDC 2W03
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- HTHSCI 2MB3 - Microbiology in the Health Sciences
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics
- NEXUS 2A03 - Impact of Infectious Disease on Individuals and Society

Requirements (Effective September 2025)

120 units total (Levels I to V), of which no more than 48 units may be Level I
Maximum 9 units of project/thesis courses in Level 3
Maximum 18 units of project/thesis courses in Level 4

LEVEL I: 30 UNITS

30 Units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

Completion of Level II Honours Biochemistry, including completion of:

- SCIENCE 2D00 - Skills for Career Success in Biochemistry (or SCIENCE 2C00)
- (See Program Note 3 above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 Units

3 Units

- STATS 2B03 Statistical Methods for Science

3 Units

- BIOCHEM 3D03 Metabolism and Regulation

6 Units

from

- the Biochemistry Course List

3 Units

- Electives

1 course

- SCIENCE 3D00 Advanced Job Search Skills For Co-op Students

Winter Term

1 Course

- SCIENCE 3WT0 Science Co-op Work Term

Spring/Summer Term

Work Term

1 Course

- SCIENCE 3WT0 Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 Units

3 Units

from

Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 Inquiry in Biochemistry
- BIOCHEM 4F09 A/B Senior Thesis
- BIOCHEM 4T15 A/B Senior Thesis
- BIOCHEM 4Z03 Senior Project

3 Units

- BIOMEDDC 3WR3 Biochemistry and Biomedical Scientific Writing: Right your Write

3 Units

from

- BIOCHEM 3GN3 Biochemical and Molecular Foundations of Genetics
- BIOLOGY 2C03 Genetics

6 Units

from

- the Biochemistry Course List

6-15 Units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 Introductory Immunology
- HTHSCI 3K03 Principles of Virology
- HTHSCI 4II3 Advanced Concepts in Immunology
- HTHSCI 4O03 Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 3A03 Biochemical Research Practice
- BIOCHEM 3LA3 Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S Research Project
- BIOCHEM 4C03 Inquiry in Biochemistry

- BIOCHEM 4F09 A/B Senior Thesis
- BIOCHEM 4T15 A/B Senior Thesis
- BIOCHEM 4Z03 Senior Project

(See *Program Notes 5 and 6* above)

0-9 Units

- Electives

Spring/Summer Term

Work Term

1 Course

- SCIENCE 4WT0 Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 Course

- SCIENCE 5WT0 Science Co-op Work Term

Winter Term: 15 Units:

6 Units

from

- the Biochemistry Course List

9 Units

- Electives

Co-op Program Chart (Effective September 2025)

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III and SCIENCE 3D00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Requirements for Students Who Enter the Program in September 2023 - 2024

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

Completion of Level II Honours Biochemistry, including completion of:

- SCIENCE 2D00 - Skills for Career Success in Biochemistry (or SCIENCE 2C00)

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3 units

from

- Level III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

3 units

from

- the Biochemistry Course List

3 units

- Electives

1 course

- SCIENCE 3D00 - Advanced Job Search Skills For Co-op Students

Winter Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

3 units

- BIOMEDDC 3WR3 - Biochemistry and Biomedical Scientific Writing: Right your Write

6 units

from

- the *Biochemistry Course List*

12-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Note 5* above.)

3-6 units

- Electives

Spring/Summer Term

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term
1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
6 units
from
- the *Biochemistry Course List*

6 units
from
- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

3 units
- Electives

Co-op Program Chart (for Students Who Enter in September 2023 - 2024))

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III and SCIENCE 3D00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Note:

Students who registered in the Honours B.H.Sc. Biochemistry - Biomedical Research Specialization Co-op program in 2022 or prior should refer to the 2022-23 Undergraduate Calendar or their personal Advisement Report for program requirements. Students may also contact an advisor from the BBS Education Program Services Office for program requirements.

Honours Biology & Pharmacology Co-op Program (B.H.Sc.)

Health Sciences Centre, Room 2E21A, ext. 22312
https://healthsci.mcmaster.ca/biopharm
biophrm@mcmaster.ca
DIRECTOR
Jan D. Huizinga/B.Sc., M.Sc., Ph.D.
huizinga@mcmaster.ca
ADMINISTRATOR
biophrm@mcmaster.ca
BIOPHARM STUDENT SOCIETY
macbiopharm@gmail.com

Program Overview

The Honours Biology & Pharmacology Co-op Program is the longest-standing undergraduate co-operative education program at McMaster University, offered jointly between the Faculties of Health Sciences and Science. Highlights of the program include:

- limited enrolment program guarantees class sizes of 22 students or less. Most PHARMAC courses are taught in groups of 11.
- we offer specialized Pharmacology courses that explore human physiology as well as human pharmacodynamics, pharmacokinetics and pharmacogenetics: what drugs do to the body and what the body does to drugs.
- a dedicated full year laboratory course
- a full-time 4-months research thesis
- three mandatory semesters of paid co-op work terms in industry, academia or government, in Hamilton, surrounding area or world-wide.

The program equips students with a wide spectrum of skills and experiences and provides excellent preparedness for graduate and professional schools such as medicine, pharmacy, veterinary or employment in industry or government.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection.

Selection will be based on academic achievement, a written statement of interest and an interview but requires, as a minimum, submission of an on-line application by the stated deadline, completion of Level II (or above) of a Science or Health Sciences program with a Grade Point Average of at least 5.0 on the McMaster 12-point scale (Note: normally, a Grade Point Average of at least 8.0 is required). Refer to the "**Apply**" tab on the Honours Biology and Pharmacology Co-op program website (https://biopharm.healthsci.mcmaster.ca/prospectivestudent/university-student/applying-to-biopharm/) for further information and important dates and deadlines. Applicants from other disciplines may also be a good fit depending on their educational background. Successful completion of courses from the following areas of study are strongly recommended: human or animal physiology, genetics, organic chemistry, cell biology, microbiology and biotechnology, ecology, bio-analytical chemistry, physical chemistry.

The program will be open to applicants who have completed equivalent Level I and II courses at another university. Applicants who have completed a University degree are also eligible to apply as a second degree student.

Admission Requirements

Required courses include 6 units from Lists A (Biology), B (Chemistry) and C (Science). A required Level II course for admission is BIOLOGY 2A03 or HTHSCI 2F03 and HTHSCI 2FF3. Please note that BIOLOGY 2A03 may or may not be available as a spring course prior to September enrolment.

List A (Biology) *(6 units)* - BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), BIOLOGY 1M03, BIOLOGY 1P03, HTHSCI 1D06, HTHSCI 1H06, HTHSCI 1LL3, ISCI 1A24

List B (Chemistry) *(6 units)* - CHEM 1A03, CHEM 1AA3, CHEM 2E03, CHEM 1E03, ISCI 1A24

List C (Science) *(6 units)* - BIOLOGY 2B03, BIOLOGY 2C03, BIOLOGY 2EE3, BIOCHEM 2B03, BIOCHEM 2BB3, BIOCHEM 2EE3, BIOPHYS 2A03, BIOTECH 2BC3, BIOTECH 2M03, BIOTECH 2MB3, CHEM 2E03, CHEM 2II3, CHEM 2OA3, CHEM 2OB3, CHEM 2OD3, CHEM 2OG3, CHEMBIO 2A03, CHEMBIO 2L03, CHEMBIO 2OD3, CHEMBIO 2OG3, CHEMBIO 2P03, CHEMBIO 2Q03, HTHSCI 2E03, HTHSCI 2F03, HTHSCI 2FF3, HTHSCI 2H03, HTHSCI 2K03, HTHSCI 2L03, HTHSCI 2LL3, ISCI 2A18, LIFESCI 2BP3, LIFESCI 2CC3, MOLBIOL 2C03

Note

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Director of the Honours Biology and Pharmacology Co-op Program.

Program Notes

1. This is a five-level (year) co-op program, three terms of which must be spent in work related to biology or pharmacology placements under the auspices of the Science Career & Cooperative Education office in the Faculty of Science.
2. A senior thesis, PHARMAC 4T15, will be completed in the Summer term of level IV or Fall term of Level V. If 4T15 is taken in the summer term of level IV, a work term is done in the fall term of Level V; if 4T15 is taken in the fall term of Level V, a work term is done in the summer term of level IV. Work terms must be completed in the Spring/Summer term of Level III, Fall term of Level IV and Spring/Summer term of Level V. See Co-op program chart below.
3. PHARMAC 3A06 A/B, 3B06 A/B, 4A03, 4AA3, 4C03, 4D03 and 4E03 will use a self-directed problem-based learning approach.
4. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
5. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3D00 before the first work placement (note SCIENCE 3D00 is only available in the fall term).
6. Students should seek academic advising for this program from the Academic Program Advisor or the Director of the Honours Biology and Pharmacology Co-op Program.
7. If BIOCHEM 2B03 and 2BB3 have not been completed at the time of admission, BIOCHEM 3G03 must be completed in Level III. Students with credit in BIOCHEM 2B03 and 2BB3 are not required to complete further Biochemistry courses.
8. For B.H.Sc. students who are interested in taking a level III or IV BIOPHARM course for which BIOPHARM 3A06 is a requirement, an alternative to BIOPHARM 3A06 is BIOLOGY 3AA3.
9. Admission enquiries made after the deadline can be sent to biophrm@mcmaster.ca for consideration.

Academic Regulations

STUDENT ACADEMIC RESPONSIBILITY

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

In addition to the regulations in the General Academic Regulations section of this Calendar, the following Program regulations apply.

Minor

A Minor is an option available to a student enrolled in a four or five-level program. A Minor consists of a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the Minor. A student is responsible for registering for courses to be applied towards a Minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the Minor designation. Those who have the necessary requirements may apply for recognition of that Minor when they graduate. If recognition for a Minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a Minor, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section in this Calendar.

A minor is not available in Biology and Pharmacology.

Continuation in the Program

Students who have a minimum Grade Point Average (GPA) of 6.0 may continue in the program.

If a GPA of 3.0 to 5.9 is obtained a student may remain in the program but will be placed on program probation for one reviewing period. A student may be on program probation only once.

Students previously on program probation who achieve a GPA between 3.0 and 5.4, may transfer to a program for which he/she qualifies or graduate with a B.H.Sc. three year degree provided a minimum 3.5 GPA is achieved and all program requirements have been met.

Students whose GPA is less than 3.0 at any academic review may not continue at the University.

Letters of Permission

Students enrolled in the Honours Biology and Pharmacology Co-op program may apply to take courses at another university on a Letter of Permission (LOP) by submitting an LOP request in MOSAIC. Students must achieve a grade of at least C- to receive credit.

Students are responsible to forward the transcript from the other university directly to the Honours Biology and Pharmacology Co-op Program Office (HSC-2E21A). If a grade of C- or better is attained, the transcript designation reads *T* indicating *Transfer Credit*, or *NC* indicating *Not Complete* if less than a C- grade is attained.

Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Cumulative or Fall/Winter Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission. Students must be in good standing to be eligible to take courses on a Letter of Permission.

Reinstatement to the Honours Biology and Pharmacology Co-op Program

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the fee must be submitted to the Office of the Registrar by July 15 for September entry.

The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support and the accompanying documentation. Reinstatement is not guaranteed.

If students are reinstated to the University, their Grade Point Average will be reset to 0.0 on zero units. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition

based on the Grade Point Average. If at any review after reinstatement the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Registration and Course Changes

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that students review their advisement report in MOSAIC on the working day following each time courses are dropped or added and seek academic counselling from the Program Office if they have questions. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are enforced.

Academic Advising

Academic advising is available throughout the year but only from the Faculty of Health Sciences. Address your question first to the Academic Program Advisor (biophrm@mcmaster.ca). If needed, the Director of the program is available for any further advice (huizinga@mcmaster.ca).

Graduation

A GPA of 5.0 is required for graduation. Please refer to the *General Academic Regulations* section in this Calendar for additional information related to graduation .

Transferring to Graduate with a B.H.Sc. Degree from the B.H.Sc. (Honours) Biology and Pharmacology Co-op Program: Students who successfully complete at least 120 units including all admission requirements and program-specific course requirements up to the end of at least Level IV of the B.H.Sc. (Honours) Biology and Pharmacology Co-op Program, with a minimum Grade Point Average of 5.0 may request permission from the Biology and Pharmacology Program office for transfer to graduate with a non-honours B.H.Sc. (exit) degree.

Bachelor of Health Sciences (Honours)

HONOURS BIOLOGY AND PHARMACOLOGY CO-OP (B.H.SC.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection.

Selection will be based on academic achievement, a written statement of interest and an interview but requires, as a minimum, submission of an online application by the stated deadline, completion of Level II (or above) of a Science or Health Sciences program with a Grade Point Average of at least 5.0 on the McMaster 12-point scale (Note: normally, a Grade Point Average of at least 8.0 is required). Refer to the "**Apply**" tab on the Honours Biology and Pharmacology Co-op program website (https://biopharm.healthsci.mcmaster.ca/prospectivestudent/university-student/applying-to-biopharm/) for further information and important dates and deadlines. Applicants from other disciplines may also be a good fit depending on their educational background. Successful completion of courses from the following areas of study are strongly recommended: human or animal physiology, genetics, organic chemistry, cell biology, microbiology and biotechnology, ecology, bio-analytical chemistry, physical chemistry.

The program will be open to applicants who have completed equivalent Level I and/or II courses at another university. Applicants who have completed a University degree are also eligible to apply as a second degree student.

ADMISSION REQUIREMENTS

Required courses include 6 units from Lists A (Biology), B (Chemistry) and C (Science). A required Level II course for admission is BIOLOGY 2A03 or HTHSCI 2F03 and HTHSCI 2FF3. Please note that BIOLOGY 2A03 may or may not be available as a spring course prior to September enrolment.

List A (Biology) *(6 units):*

- BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02)
- BIOLOGY 1M03
- BIOLOGY 1P03
- HTHSCI 1D06
- HTHSCI 1H06
- HTHSCI 1LL3
- ISCI 1A24

List B (Chemistry) *(6 units):*

- CHEM 1A03
- CHEM 1AA3
- CHEM 1E03
- ISCI 1A24

List C (Science) *(6 units):*

- BIOLOGY 2B03
- BIOLOGY 2C03
- BIOLOGY 2EE3
- BIOCHEM 2B03
- BIOCHEM 2BB3
- BIOCHEM 2EE3
- BIOPHYS 2A03
- BIOTECH 2BC3
- BIOTECH 2M03
- BIOTECH 2MB3
- CHEM 2E03
- CHEM 2II3
- CHEM 2OA3
- CHEM 2OB3
- CHEM 2OD3
- CHEM 2OG3
- CHEMBIO 2A03
- CHEMBIO 2L03
- CHEMBIO 2OD3
- CHEMBIO 2OG3
- CHEMBIO 2P03
- CHEMBIO 2Q03
- HTHSCI 2E03
- HTHSCI 2F03
- HTHSCI 2FF3
- HTHSCI 2H03
- HTHSCI 2K03
- HTHSCI 2L03
- HTHSCI 2LL3
- ISCI 2A18
- LIFESCI 2BP3
- LIFESCI 2CC3
- MOLBIOL 2C03

NOTE

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Director of the Honours Biology and Pharmacology Co-op Program.

Program Notes

1. This is a five-level (year) co-op program, three terms of which must be spent in work related to biology or pharmacology placements under the auspices of the Science Career & Cooperative Education office in the Faculty of

Science.
2. A senior thesis, PHARMAC 4T15, will be completed in the Summer term of level IV or Fall term of Level V. If 4T15 is taken in the summer term of level IV, a work term is done in the fall term of Level V; if 4T15 is taken in the fall term of Level V, a work term is done in the summer term of level IV. Work terms must be completed in the Spring/Summer term of Level III, Fall term of Level IV and Spring/Summer term of Level V. See Co-op program chart below.
3. PHARMAC 3A06 A/B, 3B06 A/B, 4A03, 4AA3, 4C03, 4D03 and 4E03 will use a self-directed problem-based learning approach.
4. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
5. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3D00 before the first work placement (note SCIENCE 3D00 is only available in the fall term).
6. Students should seek academic advising for this program from the Academic Program Advisor or the Director of the Honours Biology and Pharmacology Co-op Program.
7. If BIOCHEM 2B03 and 2BB3 have not been completed at the time of admission, BIOCHEM 3G03 must be completed in Level III. Students with credit in BIOCHEM 2B03 and 2BB3 are not required to complete further Biochemistry courses.
8. For B.H.Sc. students who are interested in taking a level III or IV BIOPHARM course for which BIOPHARM 3A06 is a requirement, an alternative to BIOPHARM 3A06 is BIOLOGY 3AA3.
9. Admission enquiries made after the deadline can be sent to biophrm@mcmaster.ca for consideration.

Course List*

- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- CHEM 4IB3 - Bio-Inorganic Chemistry
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics
- HTHSCI 2G03 - Statistics & Epidemiology 1
- HTHSCI 2GG3 - Statistics & Epidemiology 2
- HTHSCI 3BA3 - Symptomatology
- HTHSCI 3E03 - Inquiry III: Advanced Inquiry in Health Sciences *Bioinformatics section only
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3U03 - Medical Genetics
- HTHSCI 4BB3 - Neuroimmunology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INNOVATE 1X03 - The World of Entrepreneurship
- INNOVATE 2X03 - Lean Startup

Requirements

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of any Level II program including courses as outlined in Admission statement

(See *Admission* above.)

LEVEL III

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

0-3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 7* above.)

3-6 units

from

- *Course List*

3 units

- BIOLOGY 3P03 Cell Physiology

3 units, during the first year of the program from

- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3ET3 - Ecotoxicology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3UU3 - Animal Physiology - Regulatory Systems
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- MOLBIOL 3B03 - Advanced Cell Biology

12 units

- PHARMAC 3A06 A/B - Introduction to Pharmacology
- PHARMAC 3B06 A/B - Methods in Pharmacology

3 - 9 units

- Electives

1 course

- SCIENCE 3D00 - Advanced Job Search Skills For Co-op Students

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WW0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Winter Term), Co-op Work Term (Fall Term), and completion of senior thesis or Co-op Work Term (Spring/Summer Term). Students may choose to complete the senior thesis (Level 5, fall semester) before the last Co-op Work Term (Level 4, Spring/Summer Term), depending on the availability of a co-op placement and/or thesis advisor.

Fall Term:

Work Term

1 course

- SCIENCE 4WW0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

- PHARMAC 4A03 - Receptor-Drug Interactions
- PHARMAC 4C03 - Principles of Toxicology

0-3 units

- STATS 2B03 - Statistical Methods for Science

6 units

from

- *Course List*

0-3 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 5WW0 - Science Co-op Work Term

LEVEL V

Consists of Co-op or Thesis Term (Fall Term) and academic studies (Winter Term)

Fall Term: 15 units:

15 units

- PHARMAC 4T15 - Senior Thesis

(See *Program Note 2* above.)

Winter Term: 15 units:

6 units

from

- HTHSCI 4TE3 - The Teaching Hospital
- PHARMAC 4AA3 - Advanced Topics in Pharmacology
- PHARMAC 4D03 - Drug Design
- PHARMAC 4E03 - Social Pharmacology

3 units

from

- *Course List*

6 units

- Electives

CO-OP PROGRAM CHART

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	Academic Term Level III + SCIENCE 3D00	Academic Term Level III	Work Term SCIENCE 3WW0
Level IV	Work Term SCIENCE 4WW0	Academic Term Level IV	Work Term SCIENCE 5WW0
Level V	Senior Thesis Fall term Thesis can be switched with SCIENCE 5WW0	Academic Term Level IV	

Integrated Biomedical Engineering and Health Sciences Program (IBEHS)

Michael G. DeGroote Centre for Learning, Room 3515, ext. 28347
http://ibiomed.mcmaster.ca/

Faculty as of January 15, 2025

CO-DIRECTORS

Michelle L. MacDonald/B.Sc., Ph.D. *(McMaster)*
Colin McDonald/B.Sc., Ph.D. *(Western University)*, P.Eng.

ASSOCIATE DIRECTORS

Anna Korol/B.Sc. (Honours), M.Sc., Ph.D. *(McMaster)*
Vincent Leung/B.Eng Biosci., M.A.Sc., Ph.D. *(McMaster)*

ACADEMIC DEPARTMENT MANAGER

Alexa Béhar-Bannelier/B.Com. (Honours) *(McMaster)*

The Integrated Biomedical Engineering and Health Sciences (IBEHS) Programs are offered jointly by the Faculty of Engineering and the Faculty of Health Sciences. These programs lead to the B.Eng.BME or a B.H.Sc. (Honours) degree.

At McMaster, IBEHS students take a common Level I program comprising Mathematics, Materials, Physics, Chemistry, Cellular and Molecular Biology, Graphics Design, Introduction to Professional Engineering and Design, Computation and complementary studies electives. The specialized programs are entered at Level II.

All Level I students who wish to be reviewed for admission to a Level II program in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program for the following Fall/Winter term must submit an Application of Admission to Level II through MOSAIC by the University stated deadline. Students in the IBEHS program must rank both degree options in order of preference, and are permitted to rank up to twelve program choices in total. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0. All Level II programs are limited enrollment and entry into a Level II program is competitive. The admission into each Level II program is determined by the Cumulative Grade Point Average (GPA) and order of ranked programs. All McMaster University courses completed (including electives and upper year courses) are calculated into Cumulative Grade Point Average (GPA) up to the time of Level II program admission review. Grades earned in summer school, after program admission review, will not change student Level II program eligibility. A student in IBEHS I with a Grade Point Average (GPA) less than 4.0 can no longer continue in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.

Students must follow the program requirements of the Calendar in effect when they enter Level II.

Courses offered by the IBEHS program include two types of elective courses, which are governed by regulations, as follows:

- **Complementary Studies Electives** are broadening courses with subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences. In addition to ENGINEER 4A03, or equivalent, complementary studies electives are required in the IBEHS program.
- **IBEHS Technical Electives** are approved courses offered by the Integrated Biomedical Engineering & Health Sciences program or various departments throughout the University in subjects relevant to the particular program. A list is available on the program website.
- **Health Sciences Electives** are courses administered by the Bachelor of Health Sciences (Honours) Program in subjects relevant to the health sciences, including immunology, molecular biology, infectious disease, neurosciences, behavioural sciences, clinical epidemiology, health economics and health policy. Students must meet course pre-requisites. Health sciences electives are required in the IBEHS program.

TRANSFERRING TO GRADUATE WITH A B.H.SC. DEGREE FROM THE B.H.SC. (HONOURS) HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP (HESE) STREAM OF THE INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES PROGRAM

Students who successfully complete at least 90 units including all admission requirements and program-specific course requirements up to the end of at least Level III of the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) stream of the Integrated Biomedical Engineering and Health Sciences Program, with a minimum Grade Point Average of 4.0 may request permission from the Integrated Biomedical Engineering and Health Sciences office for transfer to graduate with the B.H.Sc. (exit) degree.

TRANSFERRING TO GRADUATE WITH A B.A.SC. DEGREE FROM ONE OF THE B.ENG.BME BIOMEDICAL ENGINEERING PROGRAMS OF THE INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES PROGRAM

Students who successfully complete at least 90 units including all admission requirements and program-specific course requirements up to the end of at least Level III of one of the B.Eng.BME Biomedical Engineering programs of the Integrated Biomedical Engineering and Health Sciences Program, with a minimum Grade Point Average of 4.0 may request permission from the Office of the Associate Dean of Engineering (Academic) for transfer to graduate with the B.A.Sc. (exit) degree.

IBEHS I:

- Integrated Biomedical Engineering and Health Sciences (IBEHS) I/ Integrated Biomedical Engineering and Health Sciences (IBEHS) I Co-op

Level II program(s) leading to the B.Eng.BME degree include:

- Chemical and Biomedical Engineering, Chemical and Biomedical Engineering Co-Op (B.Eng.BME)
- Civil and Biomedical Engineering, Civil and Biomedical Engineering Co-Op (B.Eng.BME)
- Electrical and Biomedical Engineering, Electrical and Biomedical Engineering Co-Op (B.Eng.BME)
- Engineering Physics and Biomedical Engineering, Engineering Physics and Biomedical Engineering Co-Op (B.Eng.BME)
- Materials and Biomedical Engineering, Materials and Biomedical Engineering Co-Op (B.Eng.BME)
- Mechanical and Biomedical Engineering, Mechanical and Biomedical Engineering Co-Op (B.Eng.BME)
- Mechatronics and Biomedical Engineering, Mechatronics and Biomedical Engineering Co-Op (B.Eng.BME)
- Software and Biomedical Engineering, Software and Biomedical Engineering Co-Op (B.Eng.BME)

Level II program(s) leading to the B.H.Sc. (Honours) degree include:

- Health, Engineering Science and Entrepreneurship (HESE) Specialization; Health, Engineering Science and Entrepreneurship (HESE) Specialization Co-Op (B.H.Sc.(Honours))

Bachelor of Health Sciences (Honours)

HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP (HESE) SPECIALIZATION; HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP (HESE) SPECIALIZATION CO-OP (B.H.SC.(HONOURS))

Admission to Level II IBEHS Programs

Admission to either the B.H.Sc. (Honours) Health, Engineering Science and Entrepreneurship (HESE) specialization or the B.Eng.BME Biomedical Engineering (BME) specialization requires successful completion of all non-elective Level I IBEHS courses with a minimum Grade Point Average (GPA) of 4.0.

All students who successfully complete the first year of the program will have a space in one of the two degree options. As enrolment is limited in each of the two degree options (HESE or BME), where there is more demand than spaces, competition will be based on first-year academic achievement. **Note: BME is a five-year program, while HESE is a four-year program (effective September 2022)**.

Entry into the five-year Honours Bachelor of Health Sciences (B.H.Sc. (Honours)), Health, Engineering Science & Entrepreneurship (HESE) program was last available in September 2022.

Effective September 2023, Level I students interested in the B.H.Sc. (Honours) HESE program will apply for the four-year program.

Students who enrolled in the five-year B.H.Sc. (Honours) HESE program prior to September 2022 and are not scheduled to graduate in June 2022, are given the choice to remain in the five-year program or transfer into the four-year B.H.Sc. (Honours) HESE program.

Students seeking admission to the BME specialization will be admitted to one of eight Level II Engineering programs (Chemical, Civil, Electrical, Engineering Physics, Materials, Mechanical, Mechatronics, or Software). Admission to a Level II Engineering program is guaranteed for all students who meet the general progress requirements. All engineering programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on GPA.

Students who do not meet the requirements to proceed to Level II in May will have a *Pending* flag put on their allocation. The *Pending* flag will be removed in August if the student completes the requirements over the summer.

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4 month work term.
2. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to eight units of research project or independent study courses. A full listing can be found on the IBEHS website.
3. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.
4. Students planning to take IBEHS 4QZ3 should note that IBEHS 3S03 or IBEHS 4C03 is a prerequisite.

Requirements

LEVEL II: 31 UNITS

16 units

- CHEM 1AA3 - Introductory Chemistry II
- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IBEHS 2PA2 - Health Solutions Design Projects II-A: Lab Skills in Genetic Engineering
- IBEHS 2PB2 - Health Solutions Design Projects II-B: Project in Genetic Engineering
- MATH 2Z03 - Engineering Mathematics III

6 units

- IBEHS 2EH3 - Innovating Care: Navigating Canada's Healthcare System
- IBEHS 2EE3 - From Idea to Innovation

3 units

- Health Sciences Electives

6 units

- Electives

LEVEL III: 31 UNITS

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I

13 units

- HTHSCI 2G03 - Statistics & Epidemiology 1
- HTHSCI 3G03 - Critical Appraisal of the Health Literature
- IBEHS 3A03 - Biomedical Signals and Systems
- IBEHS 3P04 - Health Solutions Design Projects III: Economic Analysis and Risk Management

9 units

- HTHSCI 2K03 - Inquiry II: Cell Biology
- IBEHS 3E03 - Fundamentals of Business Strategy
- IBEHS 3EE3 - Project Management

1 course

- IBEHS 1HS0 - Health Screening and Clinical Safety Training

6 units

- Electives

LEVEL IV: 30-31 UNITS

6-7 units

from

- IBEHS 3S03 - Statistical Methods in Biomedical Engineering
- IBEHS 4A03 - Biomedical Control Systems
- IBEHS 4B03 - Biomechanics
- IBEHS 4D03 - Introduction to Medical Imaging
- IBEHS 4F04 - Biomedical Instrumentation and Measurement
- IBEHS 4QZ3 - Modelling of Biological Systems

18 units

- IBEHS 4E09 A/B S - Health, Engineering Science and Entrepreneurship Thesis
- IBEHS 4EE6 A/B - Innovators in Scrubs
- IBEHS 4P03 - Health Solutions Design Projects IV: Decision Making and Project Management

6 units

- Electives

Requirements for Students Who Entered the Program Prior to September 2022

LEVEL V: 30 UNITS

3 units

- IBEHS 4QZ3 - Modelling of Biological Systems

15 units

- IBEHS 5E15 A/B S - Health, Engineering Science and Entrepreneurship Thesis

12 units

- electives

INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I/INTEGRATED BIOMEDICAL ENGINEERING AND HEALTH SCIENCES (IBEHS) I CO-OP

Notes

1. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete IBEHS 1EE0. IBEHS 2EC0 will be added to the academic record for each 4 month work term.
2. Admission to Level II Engineering and Biomedical Engineering programs requires completion of all 34 units of required IBEHS I courses. Students must maintain a Cumulative Grade Point Average (GPA) of 4.0. All programs have limited enrolment; should there be more applicants than the limiting number in any program, admission to that program will be based on the students Cumulative Grade Point Average. A student in IBEHS I whose Grade Point Average (GPA) is less than 4.0 can no longer continue in IBEHS.
3. Students enrolled in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program may take up to 8-units of research project or independent study courses. A full listing can be found on the IBEHS website.
4. Students enrolled in a B.Eng.BME program wishing to enrol in a research project or independent study course will require a faculty member supervisor or co-supervisor with an appointment at McMaster University.

Requirements

37 units total

LEVEL I: 37 UNITS

16 units

- IBEHS 1EP6 A/B - Entrepreneurship in Biomedical Innovation: From Bench to Market
- IBEHS 1P10 A/B - Health Solutions Design Projects I: Introduction to Engineering Fundamentals and Design

3 units

- CHEM 1E03 - General Chemistry for Engineering I

9 units

- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A
- MATH 1ZC3 - Engineering Mathematics II-B

6 units

- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 units

- Complementary Studies

(See *Elective Courses Available To Level I Students)*

3 courses

- BIOSAFE 1BS0 - Biosafety Training
- WHMIS 1A00 - Introduction to Health and Safety
- IBEHS 1EE0 - Introduction to Career Planning & Employment

Bachelor of Health Sciences (Honours) Integrated Rehabilitation and Humanities Program

Institute of Applied Health Sciences, Room 403
https://srs.healthsci.mcmaster.ca/irh/

DIRECTOR

B.H. Vrkljan, B.A. (Hons.), M.Cl.Sc., Ph.D., O.T. Reg. (Ont.)

Program Overview

The Bachelor of Health Science (B.H.Sc.) (Honours) Integrated Rehabilitation and Humanities (IRH) undergraduate program at McMaster University is the first of its kind in Canada and globally. This unique program combines critical and foundational elements of the creative arts for which the Humanities is known with the clinical and evidence-based approaches of Rehabilitation Science. Recent evidence highlights the benefits of including arts-based approaches in the training of health professionals, which can improve their communication, reflexivity, and observation skills. Professionals who understand the complex nature of health and well-being are better positioned to address the needs of individuals and their communities.

Courses from the Faculty of Humanities address a range of topics focused on foundational knowledge necessary for understanding health. Examples include the history of medicine and healthcare, linguistics, philosophy, ethics, and other areas related to peace and cultural studies. In coursework focused on Rehabilitation Science, students will explore key underpinnings of rehabilitation practice and research, including evidence-based rehabilitation, communication, and observation skills, as well as clinical reasoning. Across all IRH courses there is a strong focus on the social determinants of health. Issues specific to equity, diversity, inclusion, and Indigenous reconciliation will be explored in the context of past and current conceptualizations of health, function, and disability, as reflected in local (provincial/national) and global approaches to quality of life and well-being. Students in the B.H.Sc. (Honours) IRH program will have experiential learning components alongside options for contributing to clinical and applied research, as well as opportunities for community engagement, including fieldwork placements.

In this degree, just over half of the content will be offered by the Faculty of Health Sciences (FHS) through the School of Rehabilitation Science and other FHS programs, just over one-third by the Faculty of Humanities, and the remaining one-sixth from other university courses.

B.H.Sc. (Honours) IRH Program Objectives

The B.H.Sc. (Honours) IRH program aims to integrate principles and courses from the Faculties of Humanities and Health Sciences (School of Rehabilitation Science) to accomplish the following objectives:

1. Teach students what it means to be human at its most fundamental level, as reflected in the various aspects of humanities, including history, philosophy, literature, and the creative arts.
2. Introduce students to the multiple interfaces between the humanities, health, and rehabilitation that can help them engage and transform their communities.
3. Engage students in experiential learning and critical reflection that advances their understanding of the complex nature of health and well-being to ensure they have the knowledge and skills to address such complexity by combining humanities and rehabilitation perspectives.
4. Prepare students for future excellence through critical thinking and collaborative problem-solving in the classroom and beyond. To accomplish the above objectives, the program will emphasize interprofessional interactions, knowledge-informed decision making, community engagement, experiential learning, and exposure to research.

Admissions

Admission Policy

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level 1 program with a cumulative Grade Point Average of at least 6.0, Grade 12 Biology or BIOLOGY 1P03, and submission of a supplemental application to the School of Rehabilitation Science.

Notes:

1. The program has limited enrolment.
2. Selection will be based on academic achievement in Level 1, alongside a supplemental application. Further details are available on the program website (Future Students - Integrated Rehabilitation & Humanities (mcmaster.ca)).
3. Before choosing courses, students should be familiar with prerequisites to determine course selection in subsequent years.

Academic Regulations

Student Academic Responsibility

Students are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases, priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in MOSAIC.

Minor

This information is directed to B.H.Sc. (Honours) IRH students who are interested in completing a minor in another subject area. A minor is not available in the B.H.Sc. (Honours) Integrated Rehabilitation and Humanities Program.

A Minor is an option available to a student enrolled in a four- or five-level program. A Minor consists of a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the Minor. A student is responsible for registering for courses to be applied towards a Minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the Minor designation. Those who have the necessary requirements may apply for recognition of that Minor when they graduate. If recognition for a Minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a Minor, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section of this Calendar.

Continuation in the Program

You must have a Grade Point Average (GPA) of at least 6.0 to continue in the program. If your GPA is 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once.

If your GPA is 3.5 to 5.4, you must transfer to another program for which you qualify, or you may enroll in the Bachelor of Heath Science Program as a transition student for one reviewing period. During that period, with permission, you can take B.H.Sc. IRH required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration academic advising session in the Faculty of Humanities Academic Advising. At the end of the probation period, you may apply for readmission to the B.H.Sc. (Honours) IRH Program; a minimum GPA of 6.0 is required.

If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a transition student. During that period, with permission, you can take B.H.Sc. IRH required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration academic advising session in the Faculty of Humanities Academic Advising. The purpose of this period is to prepare yourself for a program outside the B.H.Sc. (Honours) Program. You may be on academic probation only once.

If your GPA is less than 3.0 you may not continue at the University.

A student previously on Academic Probation who fails to achieve good standing (minimum GPA of 3.5) at a subsequent review, cannot continue at the university unless granted reinstatement. Please refer to the *General Academic Regulations* section in the undergraduate calendar.

Concurrent Certificates

Concurrent certificates are an option available to any student in an undergraduate degree program and may be completed as part of a student's elective credit. Some concurrent certificates will require a student be admitted to this option, while others may involve completion of the course requirements and declaring the certificate at the time of graduation. Students should refer to the course requirements and details available in the Certificate and Diploma Programs section of the Calendar. One concurrent certificate program is currently administered by the School of Rehabilitation Science: Concurrent Certificate in Rehabilitation Science.

Letter of Permission

Students enrolled in the B.H.Sc. - (Honours) IRH Program may apply to take courses at another university on a Letter of Permission via MOSAIC. Students must achieve a grade of at least C- to receive credit.

Students are responsible for forwarding the transcript from the other university directly to the Program Director (IAHS 403). If a grade of C- or better is attained, the transcript designation reads *T* indicating *transfer credit*,

or *NC* indicating *not complete* if less than a C- grade is attained.
Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Cumulative or Fall/Winter Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission.
Students must be in good standing to be eligible to take courses on a Letter of Permission.

Level of Registration

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the B.H.Sc. (Honours) IRH Program Office.

Deferred Examinations and Deferred Term Work

Students who have been granted more than one deferred examination or term-work privilege may be required by their Faculty/Program office to reduce their course load during the term in which the deferred examinations are being written. The decision on a reduced load will be made and communicated with the decision on the application for deferred examinations.

Reinstatement to the B.H.Sc. (Honours) IRH Program

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $100 fee must be submitted to the Office of the Registrar by July 15 for September entry and November 30 for January entry.
The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened, and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support, and the accompanying documentation. **Reinstatement is not guaranteed.**
If students are reinstated to the University, their GPA will be re-set to 0.0 on zero units, although students may, at the discretion of the faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the GPA. If at any review after reinstatement the student's GPA falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Registration and Course Changes

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your advisement report in MOSAIC each time you drop or add courses and seek academic counselling from the Faculty of Humanities Program Office if you have any questions. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are enforced.

Academic Counselling

Academic counselling is available throughout the year from the Faculty of Humanities Advising Office. It is recommended that students make an appointment with an advisor from the program office if they have any questions.

Graduation

A GPA of 5.0 or greater is required for graduation. Students who successfully completed 90 units, including the first three levels of the B.H.Sc IRH program may request permission from the B.H.Sc. (Honours) IRH Program Office to transfer to graduate with a non-honours three-year B.H.Sc (exit) degree. Please refer to the General Academic Regulations section in this Calendar for additional information related to graduation.

Bachelor of Health Sciences (Honours)

BACHELOR OF HEALTH SCIENCES (HONOURS) INTEGRATED REHABILITATION AND HUMANITIES PROGRAM

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and a supplemental application to the School of Rehabilitation Sciences. As a minimum:

- Completion of any Level 1 program
- and a cumulative GPA of at least 6.0
- and Grade 12 Biology or completion of BIOLOGY 1P03

Notes:

1. The program has limited enrolment.
2. Selection will be based on academic achievement in Level 1, alongside a supplemental application. Further details are available on the program website (Future Students - Integrated Rehabilitation & Humanities (mcmaster.ca)).
3. Before choosing courses, students should be familiar with prerequisites to determine course selection in the subsequent year(s).

Course Lists

COURSE LIST A (HUMANITIES)

- ART 2AA3 Introduction to the Practice of Art Therapy
- ARTHIST 2AA3
- ENGLISH 2NH3
- ENGLISH 3AA3 Theories of Gender and Sexuality
- ENGLISH 3GS3 Reading the Embodied Past: Gender and Sexuality
- ENGLISH 3NH3 Narratives of Health
- GENDRST 2AA3 Feminist Thought
- GKROMST 2MT3 Ancient Roots of Medical Terminology
- GKROMST 3MT3 Advanced Ancient Roots of Medical Terminology
- HISTORY 1Q03 History of Medicine
- HUMAN 3LM3
- LINGUIST 1A03 Introduction to Linguistics: Speaking, Signing, and Hearing
- LINGUIST 1AA3 Introduction to Linguistics: Words, Sentences, and Meaning
- LINGUIST 2L03 Phonetics
- LINGUIST 2LC3 Historical Linguistics: Language Evolution and Change
- LINGUIST 2LL3 Languages of the World and Linguistic Universals
- LINGUIST 2PH3 Phonology

- LINGUIST 2PS3 Psycholinguistics
- LINGUIST 2S03 Language and Society
- LINGUIST 2SL3 Introduction to American Sign Language
- LINGUIST 2SY3 Syntax
- LINGUIST 3AA3 Applied Linguistics
- LINGUIST 3AS3 Language and Communication in Autism Spectrum Disorder
- LINGUIST 3C03 Child Language Acquisition
- LINGUIST 3DS3 ASL and Deaf Studies
- LINGUIST 3F03 Anatomy and Physiology for Speech, Language, and Hearing
- LINGUIST 3II3 Semantics
- LINGUIST 3LA3 Introduction to Second Language Acquisition
- LINGUIST 3M03 Morphology
- LINGUIST 3NL3 Cognitive Neuroscience of Language
- LINGUIST 3P03 Pragmatics
- LINGUIST 3PG3 Introduction to Programming for Linguistics
- LINGUIST 3SL3 Intermediate American Sign Language
- LINGUIST 3TT3
- MUSIC 2MT3 Introduction to the Practice of Music Therapy
- MUSIC 2MU3 Introduction to Music Therapy Research
- PEACJUST 2B03
- PEACJUST 2LS3 Language and Society
- PEACJUST 2XX3 Social and Structural Determinants of Health
- PEACJUST 3B03 Peacebuilding and Health Initiatives
- PEACJUST 3XX3 Human Rights in History
- PHILOS 2CT3 Critical Thinking
- PHILOS 2G03 Social and Political Issues
- PHILOS 2U03 Philosophy of Health and Medicine
- PHILOS 2YY3 Ethics
- PHILOS 3C03 Advanced Bioethics
- PHILOS 3GH3 Global Health Ethics

COURSE LIST B (HEALTH SCIENCES AND OTHER PROGRAMS)

- ANTHROP 2HE3 Heritage, Economy, and Ethics
- ANTHROP 2HI3 Medical Anthropology
- ANTHROP 2U03 Plagues and People
- ANTHROP 2MA3 Art and Activism
- ANTHROP 3ET3 Anthropology of Ethics
- ANTHROP 3HH3 Globalization, Social Justice, and Human Rights
- ANTHROP 3Y03 Indigenous Community Health and Wellbeing
- ARTSSCI 3GJ3 Global Justice Inquiry
- ENVSOCTY 2HI3 Health and Place
- GLOBALZN 3A03 Globalization, Social Justice, and Human Rights
- HLTHAGE 2C03 Health Economics and its Application to Health Policy
- HLTHAGE 2GG3 Mental Health and Society
- HLTHAGE 2HI3 Health & Place
- HLTHAGE 2M03 Aging in Modern (and Post-Modern) Families
- HLTHAGE 2N03 Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 3AB3 Kindred Spirits: Animals, Health and Society
- HLTHAGE 3D03 Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3E03 Ethical Issues in Health and Aging
- HLTHAGE 3HP3 Population, Health and Aging
- HLTHAGE 3K03 Social Determinants of Population Health in Canada
- HLTHAGE 3M03 Approaches to Mental Health and Resilience
- HLTHAGE 3N03 Aging and Mental Health
- HLTHAGE 3R03 Health Inequalities
- HLTHAGE 3S03 Global Health and Environmental Policy
- HLTHAGE 3T03 Health and Incarceration
- HLTHAGE 3YY3 Indigenous Community Health and Wellbeing
- HTHSCI 2AE3 Artistic Explorations of Community Issues
- HTHSCI 2DS3 Global Health and the Complexities of Disease
- HTHSCI 2T03 Sex, Gender, and Health
- HTHSCI 3AH3 Indigenous Health
- HTHSCI 3CC3 Theater for Development
- HTHSCI 3DD6 A/B Engaging the City: An Introduction to Community-Based Research in Hamilton
- HTHSCI 3DM3 Demystifying Medicine
- HTHSCI 3DR3 Demystifying Research
- HTHSCI 3EA3 Introduction to Expressive Arts Therapy
- HTHSCI 3EE3 Biomedical Graphics
- HTHSCI 3E03 Inquiry III: Advanced Inquiry in Health Sciences
- HTHSCI 3HL3 Health Law: Current and Emerging Issues
- HTHSCI 3L03 Introduction to Bioethics
- HTHSCI 3MH3 Critical Examinations of Mental Health
- HTHSCI 3MU3 Music, Health, and the Community
- HTHSCI 3N03 Creative Writing in the Health Sciences
- HTHSCI 3PH3 The Politics of Health
- HTHSCI 3RH3 Racism and Health
- HTHSCI 3WT3 What Trauma Teaches Us: Lessons from Listening
- PSYCH 1F03 Survey of Psychology
- PSYCH 1FF3 Survey of Biological Basis of Psychology
- PSYCH 1N03 Introduction to Psychology, Neuroscience and Behaviour
- PSYCH 1NN3 Foundations of Psychology, Neuroscience and Behaviour
- PSYCH 1X03 Introduction to Psychology, Neuroscience and Behaviour
- PSYCH 1XX3 Foundations of Psychology, Neuroscience and Behaviour
- PSYCH 2AA3 Child Development
- PSYCH 2B03 Personality
- PSYCH 2H03 Human Learning and Cognition
- PSYCH 2E03 Sensory Processes
- PSYCH 2NF3 Clinical Neuropsychology
- PSYCH 3BN3 Cognitive Neuroscience
- PSYCH 3C03 Child Language Acquisition
- PSYCH 3GG3 Essentials of Developmental Psychology
- SCAR 2ER3 Religion, the Body, and the Machine
- SCAR 2HA3 Religion and Health in Antiquity
- SCAR 2M03 Death and Dying: Comparative Views
- SCAR 2N03 Death and Dying: The Western Experience
- SCAR 2WW3 Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 Health, Healing and Religion: Comparative Views

COURSE LIST C (LEVEL IV COURSES ACROSS HUMANITIES, HEALTH SCIENCES, AND OTHER PROGRAMS)

- ENVSOCTY 4HD3 Disability, Society, and Environment
- ENVSOCTY 4HH3 Environment and Health
- PEACJUST 4G03 Peace Through Health Praxis
- PEACJUST 4L03 Peace, Environment, and Health
- HLTHAGE 4M03 Environment and Health
- HTHSCI 4CU3 Cultural Competency in Health Sciences
- HTHSCI 4DN3 Dance in Health and Wellness
- HTHSCI 4IH3 Indigenous Health Research
- HTHSCI 4KT3 Demystifying Science: Advanced Knowledge Translation and Science Communication
- HTHSCI 4LD3 Global Health Governance, Law, and Politics
- HTHSCI 4MS3 The Social Lives of Molecules
- HTHSCI 4NN3 Creative Writing in Health Sciences II
- HTHSCI 4PA3 Global Health Innovation
- HTHSCI 4SC3 Social Determinants of Child Health
- HTHSCI 4SR3 Global Sexual and Reproductive Health and Rights
- HTHSCI 4TE3The Teaching Hospital
- HTHSCI 4Y03 Science, Culture, and Identity
- HTHSCI 4ZZ3 Global Health Advocacy
- HISTORY 4FF3 History of Health and Medicine in the Colonial World

- HUMAN 4CM3 Cross-Cultural Mentoring and Coaching Practicum
- HUMAN 4LC3 Major Leadership Project: Theory and Practice
- HUMAN 4RM3 Boundaries and Bridges: Relationship Skills for Effective Leaders

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

30 UNITS

- From the Level I program completed prior to admission into the program.

LEVEL II: 30 UNITS

21 Units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IRH 2CS3 - Communication Skills in Rehabilitation and Humanities
- IRH 2HI3 - Rehabilitation and Humanities Inquiry I
- IRH 2RM3 - Evidence-based Rehabilitation and Measurement Theory for Rehabilitation
- IRH 2ST3 - Introduction to Statistics for Rehabilitation Science
- PHILOS 2D03 - Bioethics

6 Units

- Course List A (Must be level I or II courses)

3 Units

- Electives which may include courses from Course List B

LEVEL III: 30 UNITS

9 Units

- IRH 3EP3 A/B S - Experiential-Focused Practicum
- IRH 3HI3 - Rehabilitation and Humanities Inquiry II
- IRH 3UD3 - Understanding Disability

6 Units

- Course List A (Must be level II or III courses)

6 Units

- Course List B

9 Units

- IRH 3TR3 - Selected Topics in Rehabilitation and Humanities
- Course List C
- Electives which may include courses from Course List A and B

LEVEL IV: 30 UNITS

9 Units

- IRH 4ER3 - Entrepreneurship and Commercialization in Health and Rehabilitation
- IRH 4HI3 - Rehabilitation and Humanities Inquiry III
- IRH 4IR3 - Innovations in Rehabilitation

6 Units

- IRH 4RT6 - Research Thesis Project
- Course List C

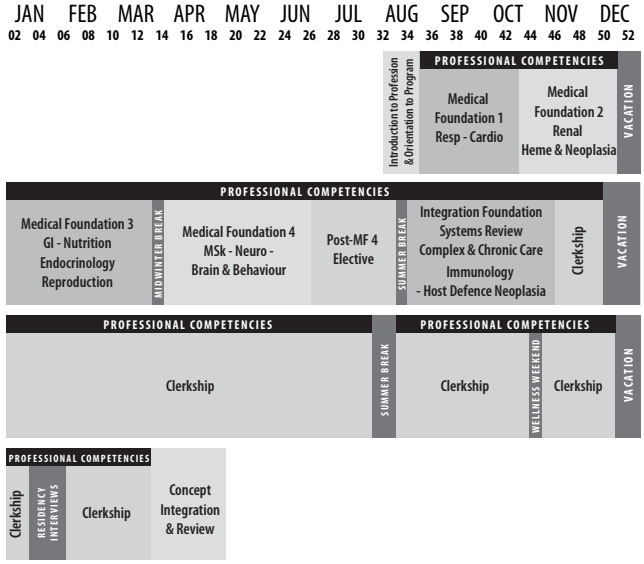
6 units

- Electives which may include courses from Course List A, B, and C

9 Units

- Course List A (Must be Level III courses)

Doctor of Medicine (M.D.) Program



Michael G. DeGroote Centre for Learning and Discovery, Room 3101, ext. 22141
https://mdprogram.mcmaster.ca

ASSOCIATE DEAN

M. Sibbald, M.D., M.H.P.E., M.Sc., Ph.D., F.R.C.P.C.

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REGIONAL ASSISTANT DEAN - WATERLOO REGIONAL CAMPUS

M. Mountjoy, M.D., Ph.D., C.C.F.P.(SEM), F.C.F.P.

PROGRAM MANAGER

C. McLaughlin, Ph.D.

REGIONAL PROGRAM ADMINISTRATOR - NIAGARA REGIONAL CAMPUS

S. Walker

REGIONAL PROGRAM ADMINISTRATOR - WATERLOO REGIONAL CAMPUS

T. Everding

Program Information

The School of Medicine, established in 1965 and renamed the Michael G. DeGroote School of Medicine in 2004, offers major programs in undergraduate, postgraduate and graduate medical education. The clinical programs use the teaching hospital and ambulatory care and research facilities at the McMaster University Medical Centre division of Hamilton Health Sciences, as well as clinical teaching units at community healthcare centres and hospitals in Hamilton, Waterloo, Niagara and surrounding regions.

The Undergraduate Doctor of Medicine Program mission is to educate and inspire future physicians for the health and well-being of all. The MD degree was initiated in 1969, graduating its first students in May 1972. Currently, 217 students will be admitted to the program. Upon successful completion of the program, students are awarded the Doctor of Medicine (M.D.) degree.

Waterloo Regional and Niagara Regional Campuses

For the incoming classes, 32 of the 217 positions are designated to the Waterloo Regional Campus and 32 positions are designated to the Niagara Regional Campus. All applicants invited to the McMaster Multiple-Mini Interview (MMI) will be asked to rank their site choice (Hamilton, Waterloo Region or Niagara Region) as 1, 2, 3 or no preference. Offers of admission to the medical school will be made from the master rank list irrespective of geographical preference. Subsequent to filling the 217 positions, registrants to the class will be offered a position based on their preference and geographical background.

The offer of admission is binding to a specific site.
Students accepted into the Waterloo Regional Campus and the Niagara Regional Campus will begin the curriculum in their home campus with some shared educational experiences in Hamilton. The costs associated with transportation and/or accommodation will be covered by the student. Each Regional Campus is approximately a one-hour drive from Hamilton.
The academic program operates on an 11 months-a-year basis in first and second year, and 8 months in third year and students qualify for the MD degree at the end of the third academic year. The curriculum has been designed to involve medical students in a broad range of human health problems throughout their education and to prepare them for effective working relationships with patients, colleagues and society.
Postgraduate training programs currently include: Anesthesia (and subspecialties), Clinical Investigator Program, Family Medicine (and subspecialties), Internal Medicine (and subspecialties), Laboratory Medicine (and subspecialties), Obstetrics and Gynecology (and subspecialties), Oncology (and subspecialties), Pediatrics (and subspecialties), Psychiatry (and subspecialties), Public Health, Radiology (and subspecialties), and Surgery (and subspecialties).
More details on these postgraduate programs are available from the Postgraduate Medical Education Office.

Three-Year Program

UNDERGRADUATE DOCTOR OF MEDICINE (M.D.) PROGRAM

The three-year program in Medicine uses a problem-based approach to learning that should apply throughout the physician's career. The components have been organized in sequential blocks with early exposure to patients and case management.

Undergraduate MD Program Goals

The Undergraduate MD Program at McMaster University fosters a cooperative, supportive and respectful environment. The curriculum evolves continuously, responsive to the changing needs of Ontario society, nurturing the development of the following competencies at the time of graduation:

1. **Medical Expert:** Students will be able to apply scientific principles from human biology, behaviour and population health to the solution of health problems; they will have the ability to seek out new information and evaluate this information critically.
2. **Communicator/Collaborator:** Students will demonstrate effective communication skills, sensitive to the needs of patients and cognizant of the roles of other members of the health care team in delivering patient care.
3. **Advocate/Resource Manager:** Graduating students will be knowledgeable about the determinants of health and be proactive advocates for their individual patients and for healthy public policy within the context of the health care system.
4. **Scholar/Learner:** Students will be self-directed lifelong learners, whose exposure at McMaster to role models in research and clinical care will encourage them to apply innovative approaches to solving health care problems.
5. **Self-Reflective Practitioner:** Graduating students will be expected to have developed an awareness of the influence of their attitudes, values and assumptions, how these affect their practice of medicine and the impact of the practice of medicine on themselves as individuals.

The specific competencies in which students will be trained and that students must demonstrate by completion of the program can be found here: https://ugme.healthsci.mcmaster.ca/education/our-curriculum/#tab-content-curriculum. Upon successful completion of the program, students are awarded the Doctor of Medicine (M.D.) degree.

The Pre-Clerkship Curriculum

The Pre-Clerkship curriculum focuses on the mastery of fundamental concepts in medicine. It continues the McMaster tradition of Problem-Based Learning and incorporates important research findings from cognitive psychology.
The curriculum is structured on the integration of critical concepts and each step of the curriculum is based on the growth of important concepts learned previously. The central focus of the Pre-Clerkship program is the tutorial. Tutorial problems are selected to illustrate concepts in a clinical setting and when students are exploring tutorial problems, they will be directed towards asking questions of "what", "why" and "how".
The Pre-Clerkship curriculum is divided into five foundations: four Medical Foundations that provide an introduction to all major organ systems and an Integration Foundation that focuses on the purposeful and structurally-supported consolidation of important concepts to improve readiness for Clerkship. A novel feature of the curriculum is a horizontal Professional Competencies curriculum which runs throughout the three years of the program. There is also elective time.

Learning Methods

In the Pre-Clerkship Foundations, students are presented with a series of tutorial problems, requiring the understanding of underlying biological, population and behavioural principles, the appropriate collection of data and the critical appraisal of evidence. Learning by a process of inquiry is stressed. The class is divided into small groups of 9 students, each with a tutor. In the tutorial session students develop a series of learning objectives from each tutorial case and negotiate how they will approach their learning tasks. They then acquire the knowledge and skills to meet the objectives of the Foundation in which they are working. They also learn to work as a team, helping and learning from peers. The study habits and sense of responsibility to self and others provide a basis for lifelong working and learning habits.
In the Professional Competencies curriculum, students work in groups of 8 to 10, with two facilitators, one an MD, the other a clinician from an allied health care field. Learning formats include large group sessions, small group tutorials, work with standardized patients, role-plays, written projects and reflections which are collected as the student's Reflective Physician Portfolio.
To achieve the objectives of the Undergraduate Medical Program, students are introduced to patients within the first Foundation of the curriculum. In this way, students understand the relevance of what they are learning, maintain a high degree of motivation and begin to
understand the importance of responsible professional attitudes.
Students admitted to the Undergraduate Medical Program have the responsibility and privilege of taking an active role in the planning and evaluation of the education program. Through representation on most policy-making and implementing committees, students can influence decisions in such areas as education, philosophy, faculty recruitment and curriculum design. It is expected that all students will participate in the continuing reappraisal and improvement of the program. Such participation is a hallmark of the Program.

Student Assessment Methods

The assessment format has been designed to complement learning in the Undergraduate Medical Program. Assessment methods have been developed to measure how well the student achieves the stated educational objectives in the various components of the program. Continual assessment of students occurs within all small-group learning experiences. Students are expected to conduct self-assessment, as well as participate in the assessment of other students in their small groups. Students will also be assessed by faculty and residents, including tutors in problem-based learning tutorials, longitudinal facilitators in Professional Competencies, and preceptors in clinical skills. Several short, low-stakes assessment exercises occur during each Foundation and at regular intervals during the Professional Competencies component

of the program. Tutors complete a summary of student learning progress at the completion of each Foundation reflecting student self-assessment, peer assessment, clinical skills preceptor assessment, and performance on assessment exercises, incorporating the tutor's progress assessments throughout the Foundation.At the completion of the Foundation or the Professional Competencies assessment period, the tutor or facilitator is responsible for the final summary statement of student learning progress.
Longitudinal Facilitators complete a summary of student learning progress at the completion of each Medical Foundation based on student self-assessment, peer assessment, performance on written and skills assessments, incorporating the facilitators' progress assessments throughout the preceding assessment period. The Professional Competencies assessment at the conclusion of the Integration Foundation serves as the final Professional Competencies assessment that will be reflected on students' transcripts.
Elective supervisors complete a summary of student performance at the completion of each elective, including as assessment of the student's progress on achieving the proposed learning
objectives.
Core clinical rotation supervisors complete a summary of student performance at the completion of each rotation. These assessment summaries reflect student clinical assessments by faculty and residents, written assessments, and assignments unique to each clinical rotation.
In addition to the component-based assessment, the accumulation of medical knowledge is assessed at regular intervals by means of the Personal Progress Index. This is in a multiple-choice format. Results are available to the students for self-assessment and, in summary form, to the Student Advisor. The Personal Progress Index is in addition to, and does not replace, tutorial and other curricular assessments. The Program monitors longitudinal student progress, and provides support for students showing persistently low progress.
The acquisition of clinical and professional skills is assessed by clinical skills preceptors in each Foundation and in Clerkship through direct observation and feedback. This is transitioning towards an Association of Faculties of Medicine of Canada (AFMC) Entrustable Professional Activities (EPAs) framework in place throughout the Undergraduate Medical Program beginning with the Class of 2026.
In addition to this component-based assessment, accumulation of clinical and professional skills is assessed at key transition points in the program through 3 Objective Structured Clinical Examinations (OSCEs) interacting with Standardized Patients. The first occurs in pre-clerkship prior to pre-clerkship electives participating in clinical environments; the second OSCE occurs prior to the transition to clerkship phase of training; and the third OSCE occurs prior to the transition to residency phase of training. Beginning with the Class of 2026, OSCEs are also assessed using an Association of Faculties of Medicine of Canada (AFMC) Entrustable Professional Activities (EPAs) framework. These assessments ensure students meet the technical standards to progress in the program as defined by the Council of Ontario Faculties of Medicine (COFM).
All student assessment data described above is available to students and their advisors via the online Medical Student Information System (MedSIS).
The Program Evaluation and Student Assessment Committee (PESA), with oversight of the Curriculum Committee and the Medical Executive Committee, has the responsibility of working with the Medical Program to assist with the development and implementation of psychometrically sound assessment methods to provide timely and helpful information to assist students and faculty in assessing student progress.

Curriculum Plan - COMPASS Curriculum

The order, timing, duration, and focus of all components of the curriculum may change in response to changing conditions with respect to the healthcare environment. Changes that occur contemporary with ongoing programming are approved by the relevant curriculum component committee, the program Curriculum Committee, and the program Executive Committee. Students will be notified of changes to the curriculum with as much notice as possible.

MEDICAL FOUNDATION 1:

This 11-week Foundation, which encompasses a three week "Introduction to Medicine", dubbed "IMed" provides an in-depth introduction to:

i. areas of personal and professional development that will be required to study medicine;
ii. the pedagogies and assessments that are employed in the Program;
iii. the healthcare systems in which students will be learning and working; and
iv. the policies and practices of the MD Program.

Students' knowledge- and skill-development then focuses on the respiratory and cardiovascular systems' contributions to concepts of oxygenation and homeostasis.

MEDICAL FOUNDATION 2:

This 8-week Foundation focuses on the renal and hematologic systems' contribution to concepts of oxygenation and homeostasis. Students' knowledge- and skill-development also addresses the immunologic, and neoplastic aspects of hematology. Following this Foundation, students have a two week break from study.

MEDICAL FOUNDATION 3:

This 12-week Foundation focuses on concepts of energy, homeostasis, and reproduction through knowledge- and skill-development that centers on the digestive, endocrine, and reproductive systems. Following this foundation, students will take a week of holidays.

MEDICAL FOUNDATION 4:

This 12-week Foundation focuses on concepts of locomotion and of neurosensory and behavioural responses to the environment through knowledge- and skill-development that centers on the musculoskeletal system, the neurological system, and psychiatric (brain & behaviour) medicine. Following this Foundation, students will take 7 weeks of clinical electives and a week of holidays throughout the first summer of the program before beginning the Integration Foundation in late August of second year.

INTEGRATION FOUNDATION:

This 12-week Foundation focuses on review and integration of key concepts from the four Medical Foundations in the context of

i. complex, multi-system diseases;
ii. chronic illness;
iii. concepts centering on immunology, host defense, and neoplasia; and,
iv. Maternal and child health risks and aging related care.

The Integration Foundation allows students to consolidate medical concepts and skills, clinical skills, and professional competencies, offering an opportunity to enhance clinical transfer and support students' transition to and readiness for Clerkship.

PROFESSIONAL COMPETENCIES

The Professional Competencies curriculum is longitudinal. There are seven learning domains of this component of the curriculum: effective communication; population health and its determinants; interprofessional education; medical decision-making; moral reasoning and ethical judgment; professionalism and self-awareness; and social, cultural, and humanistic dimensions of health.
The Professional Competencies curriculum is a safe learning lab for the acquisition of the dynamic and fluid reasoning and interpersonal skills required to be a physician. In their groups, students have the chance to practice many skills.
During the Clerkship, the curricular content relating to the Professional Competencies domains becomes integrated into the core teaching in each clerkship rotation and is developed by the clerkships in their own formats.

CLERKSHIP

Clerkship is the prime opportunity for students to participate in the direct care of patients while continuing to learn the knowledge, skills and attitudes required to become a physician. The Clerkship curriculum is firmly linked to the Pre-clerkship concept-based curriculum and includes continuation of

the Professional Competencies curriculum. The student moves from tutorial cases developed around simulated patient scenarios to experiencing the care of real patients and populations. Students integrate their skills of learning and assessment into the hospital and clinic environments. Students experience three phases of Clerkship: Transition to Clerkship, Clerkship Foundations, and Transition to Residency. The core and electives rotations occur in the last two phases. Students continue to have periods of dedicated teaching time throughout the core clerkship program in all three phases. This clerkship-specific curriculum delivery includes: large group sessions, small group tutorials, in-person and virtually-delivered sessions, on-line modules, and guided self-study.

Students begin with Transition to Clerkship in Fall. Students move into Clerkship Foundations, which consists of 44 clinical weeks: seven 4-week core rotations (Internal Medicine, Surgery,

Family Medicine, Psychiatry, Pediatrics, Obstetrics and Gynecology, and Emergency Medicine), two 2-week cores (Anesthesia and Orthopedic Surgery) and six 2-week electives.

The Clerkship Foundations program has six 2-week Clerkship Electives to allow students to hone their skills and explore a variety of clinical areas as well as have the opportunity for dedicated research time. Transition to Residency (TTR) consists of 16 weeks of rotations and will begin after the Clerkship Foundations ends. Students in (TTR) will have an opportunity to function as "senior" clinical clerks. These two-week rotations will focus on ensuring students have generalist "residency-ready" clinical skills, knowledge, and attitudes within each of the (TTR) rotation areas (Specialty Selectives, Internal Medicine, Surgery, Pediatrics, Family Medicine, Psychiatry and two 2-week Electives).

The Clerkship rotations take place in hospitals and clinics in the Hamilton, Niagara, and Waterloo Regions as well as the MacCARE Clinical Education Campuses: Grand Erie Six Nations, Burlington, Halton and Osler. In the winter of their third year of medical school, students have a three-week break aligning with the national residency interview period.

ELECTIVES

Elective studies form an integral part of the Curriculum Plan. They may be considered the epitome of self-directed learning, since students must define goals for electives which are appropriate for their own learning objectives. These objectives represent specific areas of educational need or interest. The responsibility for planning electives rests with each student in collaboration with the student advisor, with support from career counselors.

The two types of electives in the Undergraduate Medical Program are:

1. **Block Electives:** These are blocks of curriculum time dedicated to full-time elective activities. Their satisfactory completion is a mandatory component of the Undergraduate Medical Program. Block Electives occur after Medical Foundation 4 and during the Clerkship, for a total of 23 weeks. To achieve disciplinary diversification, students must adhere to the National Diversification Policy. https://www.medportal.ca/sf-docs/default-source/electives/ug-national-electives-diversification-policy.pdf?sfvrsn=fe381b4f_6
2. **Horizontal Electives:** These observership/shadowing experiences are undertaken concurrently with other parts of the curriculum during pre-clerkship in addition to the Family Medicine Experience. Horizontal electives are entirely optional, not being required for completion of the program, but are used for career exploration purposes or to review a specific area of knowledge or practice in more detail.

It is particularly important that the student's advisor be engaged in all decisions concerning the selection and carrying out of horizontal electives.

CONCEPT INTEGRATION AND REVIEW (CIR)

Concept Integration and Review (CIR) is the final course of the Program spanning 5 weeks. It begins with one week after the residency interview break and continues for 4 weeks after the last Transition to Residency Clerkship blocks. The goals of the block are to help students review and synthesize important concepts that are essential for transitioning to postgraduate medicine programs and to help prepare students for the MCCQE Part 1 Licensing Exam through concept review and exposure to test-taking strategies. Dedicated self-study time throughout the block is provided and students are expected to review content prior to attending scheduled sessions. Large group sessions focus on highlighting key concepts and test-taking skills are provided by content experts while in-person medium group sessions allow students the opportunity to work through case-based questions with content experts.

ENRICHMENT PROGRAM

The purpose of the Enrichment Program to allow advanced training and specialization in research, scholarly endeavors, and other activities among medical students, and to provide an opportunity for students to gain collaborative exposure with adjunctive, alternative, and complementary careers in academic medicine and medical research. These experiences will not normally begin until the Pre-Clerkship is completed. Applications will not be considered for the Post-Clerkship period.

MD/PH.D. PROGRAM

The McMaster MD/PhD Program has been training future clinician-scientists since 2007. The rapid pace of healthcare-related research and discovery requires exceptional people who are trained to bridge the gap between basic sciences and clinical application. The McMaster MD/PhD program combines the strength of a unique, patient-oriented medical education with a strong, internationally renowned healthcare research environment.

At present time, students enrolled in the MD/PhD program may carry out the PhD component of their studies in one of the following graduate programs affiliated with the Faculty of Health Sciences at McMaster University: Medical Sciences, Biochemistry, Health Research Methodology, Neurosciences, Biomedical Engineering, Chemical Biology and Health Policy. Additional McMaster PhD programs may be considered on a case-by-case basis in consultation with the MD/PhD Program Director.

Minimum criteria for admission is a 4-year Honours BSc or BHSc with a Grade Point Average (GPA) of 3.8 or greater on a 4 point scale in the final two years of Bachelor's degree study (with an overall 4-year GPA of at least 3.00/4.00), and a score of 127 or higher on the Critical Analysis and Reasoning (CARS) section of the MCAT. The MCAT must be written within five years of the application year. Please note that McMaster will use the most recent MCAT score for those who write the MCAT more than once.

As some PhD programs may have additional requirements specific to their program, applicants should review the relevant sections of the McMaster School of Graduate Studies Calendar.

Eligible students will have a proven record of research involvement at the undergraduate or graduate level. Existing in-program Master's students or students in their first year of PhD training in an eligible Health Sciences Affiliated Graduate program at McMaster University are also welcome to apply to the MD/PhD Program with the written consent of his or her research supervisor. Students from other Universities may apply if they will finish their graduate degree requirement before enrolling in the McMaster MD/PhD program. Existing McMaster MD students with a strong research background are also welcome to apply in their first year of medical school.

To apply to the MD/PhD Program, applicants must submit a separate application in the McMaster Graduate Studies Application Portal (Slate), in addition to the OMSAS application. To gain admission, applicants must be accepted to both the MD Program at the Michael G. DeGroote School of Medicine and one of the PhD programs listed above. Application to the MD component is through OMSAS and must be submitted by the deadline they set. The PhD component of the application is due on November 1st of the application year. Further information and the PhD application can be found at: http://fhs.mcmaster.ca/mdphd/

REGULATIONS FOR LICENCE TO PRACTISE

A degree in medicine does not in itself confer the right to practise medicine in any part of Canada. To acquire this right, university graduates in medicine must hold a certificate of the College of Physicians and Surgeons of the province in which they elect to engage in practice. Post-graduate learners (residents) in Ontario will be required to register with the College of Physicians and Surgeons of Ontario (CPSO). Students intending to practise outside Ontario are urged to consult the licensing body of that province regarding registration as residents.

Licensing requirements vary somewhat among the provinces. The current Ontario requirements for issuance of a Certificate of Registration Authorizing Independent Practice are:

1. Certification by the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada;
2. Parts I and II of the Medical Council of Canada Qualifying Examination;
3. Canadian Citizenship or Landed Immigrant Status.

CANADIAN RESIDENT MATCHING SERVICE (CARMS)

The Matching Service is a clearing-house designed to help final year medical students obtain the post-MD program of their choice, and to help program directors obtain the students of their choice. It provides an orderly method for students to decide where to train and for program directors to decide which applicants they wish to enroll. For both students and directors, it removes the factors that generate unfair pressures and premature decisions. In the winter of their third year of medical school, students have a three-week break aligning with the national residency interview period.

BASIC LIFE SUPPORT TRAINING

All students are required to provide evidence of a current Basic Life Support (BLS) for Health Care Providers (C) certificate (i.e. Red Cross CPR/AED Level HCP; St. John Ambulance Level C HCP; Heart and Stroke BLS for Healthcare Provider C) by July 31st of the year of entry. Information is sent to successful applicants prior to registration. The cost of this course is the responsibility of the student. Courses are readily available in most communities.

HEALTH SCREENING

Learners in the Undergraduate Medical Education Program will participate in courses which include clinical activities with direct patient contact and standardized patients and are therefore required to complete the Faculty of Health Sciences Year One Health Screening Record and submit by July 15th of their incoming year. Health screening must be cleared prior to the start of the program. During the program, the seasonal influenza vaccine and a TB screening update will be required on an annual basis. Failure to complete these requirements will result in suspension of clinical activities. Information will be sent to successful applicants prior to registration. For more information, see: https://fhs.mcmaster.ca/healthscreening/.

POLICE RECORDS CHECK

Through the course of their medical school program, all medical students will serve vulnerable populations. In an effort to protect these vulnerable people against potential risk of harm, the Ontario Faculties of Medicine and many clinical agencies require that all medical students provide an annual Vulnerable Sector Check (VSC). As a condition of continued registration, students must submit an original VSC by July 31st of their incoming year and on an annual basis in each academic year for which they are registered. VSCs are site specific therefore McMaster University must be listed as the requesting institution.

A Vulnerable Sector Check will include the following information:

- Criminal convictions from the National Canadian Police Information Centre (CPIC) database and/or local databases
- Summary convictions, for five years, when identified
- Findings of Guilt under the Youth Criminal Justice Act within the applicable disclosure period and only for persons applying for a position with a government agency (federal, provincial, municipal)
- Outstanding entries, such as charges and warrants, judicial orders, Peace Bonds, Probation and Prohibition Orders
- Absolute and conditional discharges for 1 or 3 years respectively
- Non-conviction dispositions including, but not limited to, Withdrawn and Dismissed and where it meets the Exceptional Disclosure Assessment
- Not Criminally Responsible by Reason of Mental Disorder
- All record suspensions as authorized for release by the Minister of Public Safety

Files of applicants who have presented a Not Clear Vulnerable Sector Check will result in consideration by the Police Records Check Advisory Panel as outlined in the FHS Police Record Check Policy (https://fhs.mcmaster.ca/pcbe/documents/FHSPoliceRecordCheckPolicyJune262019.pdf).

LAPTOP REQUIREMENT

The MD Program delivers lectures, course materials, and assessments online and communicates with students and faculty between the three campuses through the use of email as well as various software programs, including web conferencing and exam applications. Thus, the MD Program requires that each student own a PC or Apple laptop running an up-to-date Windows or Apple operating system with webcam capabilities while attending the program.

TRANSPORTATION COSTS

Students are expected to travel outside their home campus area for mandatory teaching sessions, clinical placements and clerkship rotations. Students are responsible for their own transportation and associated costs in order to complete program requirements. It is anticipated that further rotations will be developed in rural, under-serviced and remote areas. In certain cases, there will be some external funding available.

For students who are accepted into the Waterloo Regional Campus and the Niagara Regional Campus, curriculum will begin within the regional campuses with some common educational experiences in Hamilton. Students will be expected to cover the cost of commuting and/or accommodations. Program changes in response to changing healthcare environment may alter these arrangements. Students will be notified of such changes with as much notice as possible. Each Regional Campus is approximately a one-hour drive from Hamilton.

The elective experience can be spent in various activities utilizing local, regional or distant resources. Students are expected to cover all transportation and associated costs for electives. Funding may be available for elective travel expenses through a number of funding programs.

Admission Policy for the Doctor of Medicine Program

The official admission policy and deadlines for the Undergraduate Medical Program shall be as published in the Ontario Medical School Information Booklet. This booklet is available through:

Ontario Medical School Application Service (OMSAS)
170 Research Lane
Guelph, Ontario, N1G 5E2
(519) 823-1063
http://www.ouac.on.ca/omsas
omsas@ouac.on.ca

Please note that the admission policy is reviewed annually, and the admission requirements from the previous year may not apply. Because of the nature of the selection procedures, deadlines are strictly enforced. All relevant documentation must be provided by the specified deadlines. Applicants must follow the instructions precisely. All applicants should be aware that the Admissions Office is committed to the protection of personal information. Use of personal information is strictly limited to the appropriate handling of applications, record-keeping for those admitted to the program, and research intended to further the efficacy of Medical Education Program procedures. **The University reserves the right to change the admission requirements at any time without notice.**

Admission and Registration

Registration in the Undergraduate Medical Program implies acceptance by the student of the objectives of the program, and the methods which evaluate progress toward the achievement of those objectives. The following describes the regulations governing admission and registration in the Undergraduate Medical Program. The final application deadline is October 1st. **The deadline is strictly enforced.**

Admission Policy and Procedure

The intention of the McMaster Undergraduate Medical Program is to prepare students to become physicians with the capacity and flexibility to work in any area in the broad field of medicine. The applicant is selected with this goal in mind. Faculty, medical students and members of the community are involved in the admissions process.

Application to the medical program implies acceptance by the applicant of the admission policies and procedures, and the methods by which candidates are chosen for the program. Applicants who will not be ready or able to begin studies as expected may withdraw their applications without prejudice. Application fees cannot be refunded.

Several hundred applicants will be invited for an interview in March or April. From this group a class of 217 is selected.

All applicants are notified in writing, by McMaster University, of the results of their application. These letters will be sent electronically to applicants on the second Tuesday in May.

Falsification of Admission Information

Applicants should understand that where it is discovered that any application information is false or misleading, or has been concealed or withheld, the application will be deemed to be invalid. This will result in its immediate rejection. If the applicant has already been admitted and registered as a student, withdrawal from the University may be required. The MD Admissions Committee will normally not allow the applicant to reapply to the Medical Program for seven (7) years.

Functional Abilities for Students Entering Medical School

The Ontario Faculties of Medicine are responsible to society to provide a program of study that graduates Doctors of Medicine with the knowledge, skills, professional behaviours and attitudes necessary for postgraduate medical training and independent medical practice in Canada. Graduates must be able to assess, diagnose and manage health problems and provide comprehensive, compassionate care to their patients while ensuring patient safety. For this reason, students admitted into the MD Program must demonstrate - with or without the use of reasonable accommodation and/or assistive technology - functional abilities in the domains of: learning and assessment of learning; communication; knowledge integration; patient safety and quality; and professionalism. "Functional Abilities for Students Entering Medical School"

Academic Eligibility Requirements

All applicants must fulfill the requirements described below:

a. By May of the year of entry, applicants must have completed a minimum of three years of undergraduate work. To satisfy the minimum requirements, academic credentials obtained from a Canadian University must be from an institution with academic standards and performance consistent with those of member institutions of the Council of Ontario Universities (COU). The applicant must be able to demonstrate a high level of academic achievement consistently throughout their undergraduate career.
b. A minimum of 15 full-courses, or 30 half-courses (three years) of Undergraduate university work from a recognized university is required. There is no requirement that applicants carry a full course load. Marks from supplementary and summer courses will be included in the grade point average calculation. If requested, applicants must provide evidence that this requirement has been met by May 30th of the year of entry. Courses graded only by the assignment of Pass or Credit are counted for credit, but will not be included in the GPA calculation. In this case, a minimum of five half-year or five full year courses with letter or numerical grades is required.
c. An applicant who has completed a diploma at a CEGEP must have completed by May of the year of entry, at least two additional full academic years of degree credit work at an accredited university.
d. Applicants who have completed the requirements for a baccalaureate degree in less than three years by the October 1st deadline, are also eligible.
e. By October 1st, applicants must have achieved an overall simple average of at least a 3.0 on the OMSAS 4.0 scale. While an overall simple average of at least 3.0 on the OMSAS 4.0 scale meets the minimal criterion for consideration for admission, prospective applicants should be aware that given the rapidly rising level of competition for a limited number of positions, a significantly higher GPA would provide them with a more reasonable chance of admission. Due to yearly changes in the competitiveness of applications, an exact figure cannot be provided.
f. Medical College Admissions Test (MCAT) - The MCAT is required for application and must be written within five years of the application year. The score from the Critical Analysis and Reasoning section will be used in both formulae (offer of interview and offer of admission). A minimum score of 123 on the Critical Analysis and Reasoning component is required. All other MCAT component scores **will not be considered** in the selection process. For those applicants who write the MCAT more than once, the score from the most recent MCAT will be used.
g. Computer-based Assessment for Sampling Personal characteristics (Casper): All applicants to the Michael G. DeGroote School of Medicine, McMaster University will be required to complete a 90 minute computer-based test, called Casper, as part of the selection process. Casper is a web-based assessment of interpersonal skills and decision-making, to be completed at a computer. Applicants must register for Casper, which is offered in the Fall of each application year, at https://acuityinsights.app/.

No other aspects of the application will be considered if these requirements are not met.

Indigenous Applicants

With an understanding that Indigenous learners can face specific barriers or challenges when pursuing higher education, schools and programs within McMaster's Faculty of Health Sciences have facilitated admissions streams for applicants with Indigenous North American (First Nations, Inuit or Métis) ancestry. This process is intended to provide equitable access to Indigenous applicants and aligns with the intent of the Truth and Reconciliation Commission of Canada Calls to Action. Applicants wishing to apply through McMaster's Facilitated Indigenous Admissions Process (FIAP) need to complete the self-identification application in addition to the McMaster University and program specific application processes. The FIAP application is submitted to McMaster's Indigenous Health Task Force (IHTF) through the online application housed on the Indigenous Health Learning Lodge office website.

Information on the policy, application requirements and the online application can be found at: https://ihll.healthsci.mcmaster.ca/students/future-students/

One self-identification application is used for all Faculty of Health Sciences programs that have a facilitated Indigenous admissions stream, and should only be completed once even if an applicant is applying to multiple programs. Applicants identify the program(s) they are applying to on the Self-identification Application. The applicant is responsible for ensuring the Self-identification Application is submitted by the application deadline(s) for the program(s) they are applying to in addition to completing any other

application required for that program(s). If applicants are applying to multiple Faculty of Health Sciences programs, the Self-identification Application must be completed by the earliest deadline date.
Indigenous applicants are also required to complete the Undergraduate MD Program application package as provided by the Ontario Medical School Application Service (OMSAS).
Applicants must meet the same minimum academic criteria for admission as described in the "Academic Eligibility Requirements" section.
***** In order to reduce barriers for Indigenous applicants, provision of MCAT critical analysis and reasoning score may be deferred beyond October 1st. Those Indigenous applicants wishing to delay taking the MCAT until after invitations to interview are sent out are free to do so, but should be aware that they MUST forward a minimum MCAT critical analysis and reasoning score of 123 or higher to the Admissions Office by the offer date (the second Tuesday in May), in order to maintain eligibility. Indigenous applicants wishing to explore this option should book their MCAT in the Fall to be certain of a spot. A cancellation fee would be applied by MCAT if the applicant is not successful in obtaining an interview and subsequently cancels their MCAT test.

Black-Equity Stream (BESt)

As a part of McMaster's Michael G. DeGroote School of Medicine's commitment to equity in medical school admissions, a Black-Equity Stream was introduced for the 2022/23 application cycle. This process is intended to provide more equitable access to Black applicants and aligns with the McMaster MD Program's commitment to the principles of equity, diversity, inclusion and social justice in all that we do, and McMaster University's statement on Building an Inclusive Community with a Shared Purpose https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/.
All the applicants applying through BESt are required to complete the Undergraduate MD Program application package as provided by the Ontario Medical School Application Service (OMSAS) by the specified deadline, where they will self-identify to indicate their interest.
A supplementary application which will accompany their application, consisting of a personal essay from the applicant to describe their interest in applying through the BESt, is also required. Applicants must meet the same minimum academic criteria for admission as set out for the general pool of candidates.

Geographical Consideration

The geographical status of the applicant is determined from the Autobiographic Sketch. Applicants may be asked to provide evidence of geographical status. In selecting applicants for interview, the bona fide place of residence will be based upon: 1) the province of Ontario; or 2) the rest of Canada and other countries. To qualify for Ontario status, an applicant must be a Canadian citizen or permanent resident of Canada by October 1st, and have resided for at least three years in the province of Ontario since the age of 14 by the date of possible entry into the program.

Transcript Requirements and Transcript Request Forms (TRF)

All transcripts must be ordered by OMSAS via the Transcript Request Form (TRF) where that procedure has been established. Applicants must request all other transcript materials prior to September 15th, to allow adequate time for processing requests and for receipt at OMSAS by the prescribed deadline. If an applicant is registered at a post-secondary institution at the time of the application deadline and that registration is not reported on the transcript, the applicant must arrange to have the Registrar of the institution send a **Statement of Registration** to OMSAS by October 1st. This statement must indicate the in-progress course name(s) and number(s). Evidence to show that applicants requested transcripts and Registrar statements in a timely fashion may be requested by McMaster University. Applicants should retain all receipts and correspondence related to their transcript request.
It is solely **the applicant's responsibility** to ensure that all of the above are received at OMSAS by October 1st. **Failure by the applicant to meet these requirements will result in the disqualification of the application.**
All transcripts must be submitted directly to OMSAS by the post-secondary institutions attended. McMaster requires that applicants provide transcripts of all courses/programs attended at any post-secondary institution. This includes community colleges, CEGEPs, junior colleges, pre-university programs, etc. Failure by the applicant to comply with the instructions or to meet the deadlines will result in disqualification of the application.

Graduate Students

Those applicants with a completed and conferred Master's or Ph.D. at the time of application will receive a small amount of extra weighting in the formula used to determine the likelihood of invitation to an interview. Individual grades for course work taken as part of a graduate degree will not be included in the calculation of the grade point average.
Graduate students enrolled in a graduate program at the time of application must arrange for their Supervisor, a member of their Supervisory Committee, or the Chair of the Department to provide a letter indicating they are aware the applicant is intending to apply to medical school. Applicants should arrange for this letter to be received at OMSAS by October 1st. If the applicant's graduate degree supervisor is acting as one of their references, a second letter is not required.

Credentialing of Non-Canadian Grades

Applicants, Canadian or non-Canadian, who have not met the minimum course **number** criterion utilizing their Canadian data and require inclusion of their international education data to meet the minimum course number criterion are required to have their foreign transcript assessed by World Education Services (WES). Credentialing assessment means converting foreign academic credentials into their Ontario educational equivalents. A course-by-course evaluation along with the calculation of an overall GPA is required. Applicants must have their transcripts sent directly from their university to WES *and* OMSAS and be able to prove (with dated letter and dated post office receipt) that an attempt was made to have the transcript issued by their university and sent to OMSAS by October 1st. Those requiring WES assessment must also ensure that transcripts are received by WES in time for their assessment to reach OMSAS by October 1st. A WES Assessment is not required for courses or programs completed on foreign exchanges.

English Language Proficiency

Applicants whose first language is not English must satisfy by October 1st, at least one of the following conditions:

1. Provide evidence of a combined score on the TOEFL iBT test with an overall score of at least 86 with minimum scores of 20 in each of the four components, or the equivalent on other recognized tests has been achieved (McMaster University code for TOEFL test score submissions is #0936); or
2. Have attended an educational institution, where instruction was in English, for at least three years; or
3. Have resided for at least four years in an English-speaking country.

Interviews

Several hundred applicants will be invited to interview.
The interview process entitled the Multiple Mini Interview (MMI), is primarily composed of a series of 8-10 ten-minute encounters over a two-hour period. The MMI is held virtually.

Selection

All the information resulting from the process described above, as well as the Confidential Assessments from referees, may be reviewed and used in the final selection. Applicants will be notified in writing, by McMaster University, of the results of their application. These letters are sent electronically to applicants on the second Tuesday in May. Anyone accepting an offer of admission must provide, within two weeks of acceptance, a deposit in the amount of $1,000 (Canadian), non-refundable, which will subsequently be applied towards tuition. The MD Program begins in early-August. Students accepting their offer of admission must be available to begin the program on the scheduled start date and must attend all day-time program-related sessions.

Application for Deferred Registration

Deferred registration may be granted **only** under **exceptional** circumstances. The request for deferral must normally be submitted within two weeks of the offer of admission and will be considered by the UGME Deferral Board. Deferral for parental/family, illness or other personal/compassionate reasons may be considered if received after this deadline where circumstances did not allow the applicant to meet the deadline.

International Applicants

Interested International applicants may apply through the regular process. International (Visa) students should be aware that admission to the Undergraduate MD Program does not confer eligibility to apply subsequently through the Canadian Residency Matching Service (CaRMS) for a residency training position in Canada. Applicants should check the CaRMS web site (http://www.carms.ca/) for further information.

Applicants Currently or Previously Registered in a Canadian or US Medical School

Typically, the Michael G. DeGroote School of Medicine, McMaster University, does not admit students registered (currently or previously) in medical school in Canada or the United States. Should an applicant wish to pursue admission in this case, the Admissions Committee will require a letter outlining the extenuating circumstances guiding the application to McMaster. The letter should clearly address why the move to a new and different medical school is necessary, compelling, and unable to be addressed at the current/previous medical school.
The Admissions Committee reserves the right to investigate and confirm the claims made in the letter. This may include contacting the current or previously attended medical school.

Advanced Standing/Transfer

The structure of the McMaster Program requires that all students begin in Medical Foundation 1. There is no provision for advanced standing or transfer into the program.

Unsuccessful Applicants

Application files, including transcripts, from one year are not held over to another year. If an unsuccessful applicant wishes to reapply, a new application package, including supporting documentation must be submitted, using the OMSAS Application and the OMSAS Information Booklet, for the new admission selection cycle.
There is no appeal of the admission decision. If an applicant believes that the decision is incorrect, they may, within one week of receiving the decision, request a review by the MD Admissions Office, stating why they think the decision is incorrect. This review will be undertaken by the Chair, UGME Admissions.
Please note: Meeting the minimum admissions requirements does not guarantee admission to the program as the number of qualified applicants significantly exceeds the number of available seats. Due to the significant competition and limits on the class size, not all qualified applicants will be offered an interview or admission to the Michael G. DeGroote School of Medicine MD program. Qualified applicants who are not admitted are welcome to reapply in the next application cycle.
Feedback is not provided to those applicants who are unsuccessful in gaining an interview or offer of admission.

Retention of Documents

All documentation submitted in support of an application for admission becomes the property of the University and is not returnable. If an applicant is not accepted, or fails to enroll following acceptance, the identifiable documentation will be destroyed at the end of the admissions cycle in keeping with university policy.

Financial Information

Financial difficulties are among the most frequent problems experienced by students in undergraduate medical schools. At McMaster, these are intensified by the lack of opportunity for summer employment.
In this situation, it is incumbent on students admitted to the MD Program to clarify immediately their personal financial situation and to secure or identify sufficient support to meet their financial obligations over the subsequent three years. The Undergraduate MD Program cannot assume this responsibility.
In 2024/25, the academic fees (tuition and student supplementary fees) for a student in the McMaster Undergraduate Medical Program were:

Canadian Citizens and Landed Immigrants

Year I	$26,284.45 (OOP $31,118.27)
Year II	$26,216.30 (OOP $30,177.39)
Year III	$26,254.30 (OOP $28,830.11)

International (Visa) Students

Each Year	$96,154.49

In addition, the cost of books and diagnostic equipment for a Year I student was approximately $3,000. It is strongly recommended that students purchase the full complement of medical equipment necessary for clinical skills. Equipment lists and special prices will be offered to medical students within the first few months of medical school. Students are also responsible for their transportation costs related to their training.
Financial assistance is available to Ontario residents from the federal and provincial governments through the Ontario Student Assistance Program (OSAP). To be eligible a student must be a Canadian Citizen or permanent resident of Canada and fulfill certain requirements for residency in Ontario. Students who are legal residents of other provinces need to check with their respective provincial financial aid programs about eligibility for support prior to acceptance. In addition, the following sources of funding are available to undergraduate medical students:

Bursaries

There is a bursary program which has been developed by the Faculty of Health Sciences and the central University campus. Bursaries are awarded to students who are Canadian citizens and demonstrate financial need. All bursaries are distributed during the late fall of each year. Bursaries are intended to offset provincial financial assistance and cannot supplement the full cost of medical education.

The Undergraduate Medical Program has in the past indicated its preparedness to recognize students who distinguish themselves and the University by virtue of their scholarship and their contribution to the university community. At the same time, the School has indicated that the terms of reference for such awards should neither compromise the spirit of cooperative scholarship which characterizes its MD Program nor replace its priority of concern for assisting those students with the greatest financial need..

A growing number of estates and agencies have donated funds to the University and the Undergraduate Medical Program for purposes of recognizing scholastic merit among medical students. In order to meet the requirements of these awards within the spirit of cooperative scholarship, these funds are available to support individual students in their pursuit of specific elective or research projects and activities. MD Program Donor Bursary applications can be accessed through AwardSpring during the annual UGME Bursary Program in September/October.

School of Nursing

Health Sciences Centre, Room 2J36, ext. 22140
http://www.fhs.mcmaster.ca/nursing

VICE-DEAN (HEALTH SCIENCES) AND EXECUTIVE DIRECTOR, SCHOOL OF NURSING

S. Carroll/B.Sc. *(Toronto)*, Ph.D. *(McMaster)*, R.N.

ASSISTANT DEAN, UNDERGRADUATE NURSING EDUCATION

J. Pierazzo/B.Sc.N. *(Western Ontario)*, B.Ed. *(Brock)*, M.Sc.N.(A.C.N.P), Ph. D. *(Western Ontario)*, R.N.

PROFESSORS

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Pamela Baxter/B.A. *(Wilfrid Laurier)*, B.Sc.N, M.Sc., Ph.D. *(McMaster)*, R.N
Denise Bryant-Lukosius/B.Sc.N. *(McMaster)*, M.Sc. *(D'Youville)*, Ph.D. *(McMaster)*, R.N.
Sandra Carroll/B.Sc. *(Toronto)*, Ph.D. *(McMaster)*, R.N.
Maureen Dobbins/B.Sc.N. *(McMaster)*, Ph.D. *(Toronto)*, R.N.
Susan Jack/B.Sc.N. *(Alberta)*, Ph.D. *(McMaster)*, R.N.
Sharon Kaasalainen/B.Sc.N. *(McMaster)*, M. Sc. *(Toronto)*, Ph.D. *(McMaster)*, R.N.

ASSOCIATE PROFESSORS

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Michelle Butt/B.Sc., B.N. *(Memorial)*, M.Sc. *(Queen's)*, Ph.D. *(McMaster)*, R.N.
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Ruth Chen/B.A. *(California-Berkeley)*, M.Sc. *(Yale)*, Ph.D. *(McMaster)*, R.N.
Bernice Downey/B.Sc.N. *(Ottawa)*, M.A., Ph.D. *(McMaster)*
Rebecca Ganann/B.Sc.N., M.Sc., Ph.D. *(McMaster)*
Lynn Martin/B.Sc.N. *(McMaster)*, M.Sc.N. *(Western Ontario)*, D.Ed. *(Toronto)*, R.N.
Michael McGillion/B.Sc.N. *(McMaster)*, Ph.D. *(Toronto)*, R.N.
Joanna Pierazzo/B.Sc.N. *(Western Ontario)*, B.Ed. *(Brock)*, M.Sc.N.(A.C.N.P), Ph.D. *(Western Ontario)*, R.N.
Diana Sherifali/B.Sc.N., Ph.D. *(McMaster)*, R.N.
Patricia Strachan/B.Sc.N. *(McMaster)*, M.Sc. *(Guelph)*, Ph.D. *(McMaster)*, R.N.

ASSISTANT PROFESSORS

Emily Belita/B.Sc.N. *(McMaster)*, MN *(Ryerson)*, Ph.D. *(McMaster)*
Sheila Boamah/B.Sc.N. *(Windsor)*, Ph.D. *(Western Ontario)*
Vanessa Cavalieri/B.Sc.N., MSc. *(McMaster)*
Kirsten Culver/B.Sc. *(Queen's)*, Ph.D. *(McMaster)*
Robin Enns/B.Sc.N. *(Dalhousie)*, M.Sc. *(McMaster/Maastricht)*, Ph.D. *(Toronto)*, R.N.
Steve Gandza/ B.Sc.N. *(McMaster)*, MN *(Ryerson)*
Jillian Halladay/B.Sc.N., M.Sc., Ph.D. *(McMaster)*, R.N.
Cynthia Hammond/B.Sc.N. *(McMaster)*, M.N. *(Toronto)*, R.N.
Ruth Hannon/B.N.Sc. *(Queen's)*, M.H.A. *(Wales)*, M.S.F.N.P. *(D'Youville)*, N.P.-P.H.C.
Peter Helli/ B.Sc. *(Guelph)*, Ph.D. *(McMaster)*
Shaunattonie Henry/ B.Sc.N. *(Ryerson)*, M.Sc.N. *(Ryerson)*, M.A. Education *(Central Michigan)*, Ph.D. *(McMaster)*, R.N.
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Marie-Lee Yous/B.Sc.N., M.Sc.N., Ph.D. *(McMaster)*, R.N.

PROGRAM MANAGER

M. Kadic/B.A.

ACADEMIC ADVISORS

T. Barecevic/B.A.
A. van Baalen-Lamondin/B.A., M.Ed.

Note

The School of Nursing has a large number of part-time faculty appointed from health-care agencies. A complete list is available from the office of the Vice-Dean (Health Sciences) and Executive Director, School of Nursing.

The B.Sc.N. Program

In 1942, McMaster University began its first program in Nursing, a cooperative effort between the University and the Hamilton General Hospital. Since the establishment of McMaster University's School of Nursing in 1946, students have received a Bachelor of Science in Nursing (B.Sc.N.) degree upon graduation. In July 1974, the Schools of Nursing and Medicine became the Faculty of Health Sciences.

The B.Sc.N. Program promotes the development of nursing as a caring, client-centered, scientific and humanistic profession. With an emphasis on person-based learning within a problem-based approach, and group and self-directed learning, the program provides a baccalaureate education in nursing for the preparation of professional nurses who will practise in a variety of health-care settings. Central to our mission is the preparation of nurses who will work to advance the health and well-being of individuals, families, communities and society. In fulfilling its mission, the B.Sc.N. Program promotes skills in its graduates to prepare them for life-long, self-directed learning, critical thinking, evidence informed decision making, advocacy and collective action.

Provincial legislation on entry to practice requires all new graduating nurses to have a baccalaureate degree in nursing. In response, McMaster University, Mohawk College and Conestoga College have formed an educational consortium to offer the McMaster Nursing degree through the McMaster Mohawk Conestoga B.Sc.N. Program. Effective 2023, there has been a change in partnership and Conestoga College is no longer part of the Consortium. Currently the Basic (A) and Accelerated (F) Streams are offered at the McMaster site. Students wishing to register in the B.Sc.N. Program at McMaster should pay particular attention to the information which

immediately follows this introduction. The Basic (A) and Post Diploma R.P.N. (E) Streams are offered at the Mohawk site. Students who wish to register in the B.Sc.N. Program at Mohawk College should refer to the Collaborative B.Sc.N. (A) and (E) Stream references throughout the School of Nursing section of the Calendar. Students are advised to contact the Office of the Registrar or Admission Office at the respective site for additional information. **Please note that any information that is site specific is noted in the appropriate section of the Calendar; otherwise, information can be assumed to apply to students at all sites and in all streams of the B.Sc.N. Program.**

In 2021 the B.Sc.N. Programs at McMaster, Mohawk and Conestoga received seven-year accreditation from the Canadian Association of Schools of Nursing, the highest level of accreditation possible.

In 2009, the B.Sc.N. Curriculum was renewed and is now called the Kaleidoscope Curriculum. The Curriculum is recognized as a responsive curriculum, one that continues to be updated based on both health and nursing care learning needs. All streams share a common curriculum in their final year of the program.

Students will be expected to meet the program goals that were in place the year in which they entered. All students from all years have seen a change in emphasis in small group, tutorial classes with a renewed focus on the McMaster model of nursing and nursing education which has been in place since 1989. Consistent with the philosophy, the person is re-emphasized as the central focus for learning, and person-based learning within a problem-based approach has been adopted. In addition, students are exposed to different ways of knowing including empirical, ethical, personal, aesthetic and emancipatory.

Four types of courses are taken within the curriculum: (1) nursing (NURSING) courses (professional practice and problem-based nursing concept courses); (2) required health sciences (HTHSCI) courses (e.g. anatomy, physiology, biochemistry); (3) elective courses (i.e. course taken from subjects of a student's choosing). Additionally, students in the Basic (A) Stream are required to complete psychology (PSYCH) courses as part of their program.

As students move through the program the focus of learning progresses in the following ways. In Levels I and II students are provided with a strong basis in the health and social sciences and are able to choose a variety of electives. They learn about themselves and their clients as individuals. The focus is on health, health assessment and the promotion of health. In Levels II and III students begin to consider the family and the community as client. Students begin to deal with more acute and complex situations. In Levels III and IV, there is a strong focus on nursing and the integration and appraisal of knowledge based on the different ways of knowing into client care in both the classroom and professional practice setting. Students also begin to consider health care from the national and global perspective. Students initially learn about the roles of nursing in health care and, through inter-professional education opportunities, they gain greater understanding of the inter-professional health care team.

There are three themes that encompass the concepts in the BScN Kaleidoscope Curriculum: 1) Personhood and Caring, 2) Context, Health and Healing, and 3) Learning and Knowing. It is acknowledged that a great deal of overlap exists across concepts and themes. A concept-based approach needs to be conceptual not only in structure, but also in process. Conceptual learning is a process by which students learn how to organize information in logical mental structures, thus challenging students to become increasingly skilled at thinking. Conceptual teaching and learning complement the constructivist paradigm in fostering critical inquiry and deep understanding through the connections students make to past learning, their application of concepts in multiple contexts, and their development of an understanding of interrelated concepts.

BScN Program Goals

The concepts and themes inform the goals for the BScN Program. Graduates of the McMaster University BScN Program will be prepared to provide competent professional practice in a variety of health care contexts and with diverse clients across the lifespan (individual, family,
group, communities, populations) who have stable and unstable outcomes and multi-factorial influences (internal and external) on their health status.
Graduates will:

1. Provide competent care with a holistic awareness of the impact of the internal and external context on health and healing.
2. Integrate an understanding of the client's unique perspective on his/her health, and how this

perspective influences participation in one's health care.

3. Identify the need for appropriate change in health care. Create a climate for adopting change. Contribute to effecting and evaluating change.
4. Build relationships in a team environment and be actively engaged in team decision making around client care.
5. Contribute to the body of nursing knowledge through demonstrating an inquiring approach to practice.
6. Provide technologically appropriate care in a variety of contexts.
7. Contribute to the future of the nursing profession through a commitment to lifelong learning and professional growth. Integrate critical inquiry into professional practice.
8. Assume leadership roles in partnership with clients and the health care team.
9. Assume advocacy roles in partnership with clients and the health care team and challenge inequities that impact on the health of clients.
10. Practice within the professional standards, guidelines, legislation and values of the nursing profession.
11. Establish therapeutic partnerships with clients to enhance health and healing. Communicate effectively in a variety of media.

Registration to Practice Nursing in Ontario

On receiving the B.Sc.N. degree after successful completion of the program, graduates are eligible to write the National Council Licensure Exam (NCLEX). The exam is administered by the College of Nurses of Ontario (CNO) as a requirement of registration to practice nursing in Ontario. To facilitate this process, the School of Nursing provides information to the CNO confirming each student's expected program completion term and verification of program completion. Students will be contacted in their final year of the program to consent to the release of this information to the CNO. If you have any questions related to practice as an R.N. or the Regulated Health Professions Act, please contact the College of Nurses of Ontario directly.

Admission Policy, Procedure, and Requirements

Admission Policy

Enrolment in all B.Sc.N. programs is limited. Possession of the minimum admission requirements does not guarantee an offer of admission. As a by-select admission program, all final admission decisions will be made internally by the B.Sc.N. program and in accordance with program approvals and accreditation.

Application to the B.Sc.N. Program in the Faculty of Health Sciences implies acceptance of admission policies, procedures and the methods by which applicants are chosen for the program. The selection method for all applicants is by academic qualifications and assessment of personal and professional characteristics.

There are three streams of study leading to the completion of the B.Sc.N. degree.

- **Basic (A) Stream** requires four years of full-time study, and is available

to those applying directly from an Ontario secondary school with Grade 12 U or M courses; to those who have qualifications equivalent to Grade 12 U or M courses; and to applicants with other qualifications who meet the admission requirements. **Note:** *Any differences in the application process or course of studies are noted in the appropriate section below.*

- **Post Diploma R.P.N. (E) Stream** is available to diploma prepared Registered Practical Nurses only. Graduates of an approved Diploma Practical Nurse Program who are admitted are granted 30 units of advanced credit. This program requires three years of full-time study. **Note:** *The Post Diploma R.P.N. (E) Stream is offered only at the Mohawk site.*
- **Accelerated (F) Stream** is open to applicants who have completed another university degree or have completed a minimum of 54 units (2 years) of university degree credits. Applicants with a nursing background will not be considered for this Stream. This program is available on a full-time basis and requires five consecutive terms of study. **Note:** *The Accelerated (F) Stream is offered only at McMaster University.*

An applicant supplying documentation or evidence which, at the time or subsequently, is found to be falsified will be withdrawn from consideration. Any student admitted to the program having submitted false documentation will be withdrawn.

The School of Nursing is committed to equality of opportunity. Disability is not grounds for exclusion from the School. Every attempt will be made to remove barriers and create accommodation provided any accommodation maintains the same academic and professional practice standards for all students and does not require program change. Applicants should consult Student Accessibility Services at (905) 525-9140, ext. 28652 or TTY (905) 528-4307.

The College of Nurses of Ontario (CNO) has released a statement about Requisite Skills and Abilities for Nursing Practice in Ontario. This statement can be found at https://www.cno.org/globalassets/docs/reg/41078-skillabilities-4pager-final.pdf. The CNO states that "Individuals considering a career as a nurse in Ontario should review this document and assess their ability to meet the criteria. The requisite skills and abilities serve as a benchmark, outlining the requirements to meet the minimum standard necessary to ensure public safety." (CNO, pg 3)

Admission Procedure

MCMASTER B.SC.N. PROGRAM BASIC (A) OFFERED AT MCMASTER AND MOHAWK SITES AND ACCELERATED (F) STREAMS OFFERED ONLY AT MCMASTER SITE

Applicants From Ontario Secondary Schools to the Basic (A) Stream

Applicants currently completing Grade 12 U or M courses apply through the Ontario Universities' Application Centre (OUAC). http://www.ouac.on.ca/ Applications for all studies beginning in September must be received by OUAC no later than **January 12**. Note that this is a limited enrolment program.

Applicants With Qualifications Equivalent to Ontario Secondary School to the Basic (A) Stream

Applicants apply online to the Ontario Universities' Application Centre (OUAC) at http://www.ouac.on.ca/. Applicants must also have official transcripts forwarded from their secondary school to the Office of the Registrar by **January 12**.

Applicants With Other Qualifications to (A) Stream and Accelerated (F) Streams

Applicants apply online to the Ontario Universities' Application Centre (OUAC) at http://www.ouac.on.ca/ mcmaster.ca/nursing by February 1. Applications for all studies beginning in September must be received by **February 1.**

- **Ontario Universities' Application Centre (OUAC)**

170 Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca/

- **BScN Admission Team**

McMaster University, HSC-2J34
1280 Main Street West
Hamilton, ON, L8S 4L8
bscnadm@mcmaster.ca

FACILITATED INDIGENOUS ADMISSIONS TO BASIC (A) STREAM AND ACCELERATED (F) STREAM

In accordance with the Self-Identification policy of the Faculty of Health Sciences, Indigenous (First Nations, Inuit and Métis) applicants who wish to apply to a program that has a facilitated Indigenous admissions stream must complete the supplementary Self-identification Application. Information on the policy, application requirements and the online application can be found at: https://ihll.mcmaster.ca/students/future-students/facilitated-admissions-self-identification/#tab-content-applicationadmissions/self-identification. One self-identification application is used for all Faculty of Health Sciences programs that have a facilitated Indigenous admissions stream, and should only be completed once even if an applicant applied to multiple programs. Applicants identify the program(s) they applied to on the Self-identification Application. The applicant is responsible for ensuring the Self-identification Application is submitted by the application deadline(s) for the program(s) they applied to in addition to completing any other application required for that program(s). If you applied to multiple Faculty of Health Sciences programs, the Self-identification Application must be completed by whatever the earliest deadline date is for the programs for which you have applied to.

MCMASTER B.SC.N. POST-DIPLOMA R.P.N. (E) STREAMS OFFERED AT THE MOHAWK SITE

Applicants apply online to the Ontario Universities' Application Centre (OUAC) at http://www.ouac.on.ca/ mcmaster.ca/nursing by February 1. Applications for all studies beginning in September must be received by February 1.

- **Ontario Universities' Application Centre (OUAC)**

170 Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca/

- **BScN Admission Team**

McMaster University, HSC-2J36
1280 Main Street West
Hamilton, ON, L8S 4L8
bscnadm@mcmaster.ca

Admission Requirements

NON ACADEMIC REQUIREMENTS FOR ALL STREAMS

In order to ensure the safety of all students and patients, the School of Nursing requires that all students adhere to Standards of Practice in Nursing. More detailed information will be provided upon acceptance into the program . For information on health screening at the McMaster site, please visit https://fhs.mcmaster.ca/healthscreening/formsandsubmission.html. For information on police clearance (Vulnerable Sector Screen VSC) please visit https://fhs.mcmaster.ca/pcbe/police_records_check.html. Please see site-specific guidelines for Mohawk and Conestoga sites and ensure you have met all requirements by the deadline. It is the student's professional responsibility to ensure this deadline is met. The process for notification, submission and verification of NARs varies by site. It is the student's professional responsibility to ensure this deadline is met.

Additional requirements include:

- Basic Life Support for Healthcare Providers (CPR - HCP with AED & BVM)
- Online Health and Safety modules available through Avenue to Learn
- Mask Fit Testing & Training (quiz)

Students must provide proof that ALL requirements have been met before practicing in a lab or professional practice setting. Students who fail to provide this proof will:

1. Not be allowed to enter a lab or professional practice setting, or
2. Be removed from a lab or professional practice setting until requirements

are met.
3. Be reviewed under the Faculty of Health Sciences Professionalism Policy for failing to meet a requirement in a professional program

CASPER ASSESSMENT REQUIREMENT FOR ALL STREAMS

Applicants to the B.Sc.N. Program are required to complete a mandatory, online computer-based Casper assessment, as a component of the selection process. The assessment must be completed on one of the dates listed for McMaster Nursing on https://acuityinsights.app/.

Note: Indigenous (First Nations, Inuit and Métis) applicants who have self-identified through the Facilitated Indigenous admission process will not be required to complete this assessment.

MCMASTER B.SC.N. BASIC (A) STREAM - MCMASTER AND MOHAWK SITE ADMISSION REQUIREMENTS

Applicants Directly From Ontario Secondary Schools

To be considered to this category, applicants must not have attended **any** post-secondary educational program prior to application.

The selection method for Ontario secondary school applicants is by academic qualifications and an assessment of personal characteristics. Early conditional offers of admission are made in mid to late April based on the following:

a. six appropriate midterm/interim Grade 12 U or M course grades (see list of required courses below), or
b. at least three final Grade 12 U or M course grades plus enrolment in the appropriate three additional Grade 12 U or M courses (see list of required courses below) and,
c. Casper assessment.

Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

Required Courses:

The following are the minimum Grade 12 U and M requirements under the Ontario Secondary School curriculum:

1. English U;
2. Biology U;
3. Chemistry U;
4. One of Advanced Functions U, Calculus and Vectors U or Mathematics of Data Management U;
5. Two additional Grade 12 U or M courses to total six courses.

Admission is by selection. Typically a minimum of 85% average is required for consideration.

Applicants with Qualifications Equivalent to Ontario Secondary School

To be considered, applicants from other provinces and countries must achieve the equivalent to the qualifications listed above in their secondary school graduation year.

Applicants with a University Degree or with University Degree Credits

To be considered applicants must:

1. achieve a cumulative Grade Point Average (cGPA) of at least B in all university degree credit courses taken. If applicants have not taken university science courses, then they must have obtained a B (75) in Chemistry 12U and Biology 12U and 12U Math in OSS curriculum. Possession of this GPA does not guarantee an offer of admission due to limited number of available spots and high number of applications. A minimum of 12 units with final grades or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.);
2. apply online to OUAC at http://www.ouac.on.ca/ by February 1 (current McMaster students are not required to apply through OUAC must complete a returning Student On-Line Application form if in their graduating year or internal applicant form for all other current McMaster students. You are not required to submit transcripts. Details can be found on the nursing.mcmaster.ca website application process pages. For more information please contact bscnadm@mcmaster.ca.; or
3. applicants who are in the final year of their degree when applying or are applying as a second degree do not have to submit their high school transcript;
4. if the applicant has not taken university science courses they must have obtained a B(75) in Chemistry 12U and Biology 12U and Math 12U in OSS curriculum or equivalent.
5. complete the mandatory online computer-based Casper assessment.

Applicants from a Pre-Health Sciences Program

Applicants who have successfully completed a pre-health sciences Advanced Diplomas and Degrees program at an Ontario College of Applied Arts and Technology (CAAT) will be considered for admission to Level I of the B.Sc.N. Program Basic (A) Stream. Applicants who are currently registered in a pre-health sciences program may be given a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program or does not meet the required admission Grade Point Average (GPA).

To be considered applicants must:

1. complete at least two semesters, including at least one full (two semesters) or two half courses in each of Biology, Chemistry, Mathematics and English. Applications will not be considered from applicants who possess one credit only in the required subjects. Please contact the Admissions Coordinator for the list of approved programs;
2. achieve a GPA in the pre-health sciences program that meets the minimum cut-off average of Ontario secondary school applicants to the program of 85%; please note a 75% is required in each of Biology, Chemistry, Mathematics and English.
3. apply online to OUAC at http://www.ouac.on.ca/ no later than February 1;
4. submit all secondary and post-secondary transcripts to the Office of the Registrar at McMaster University by February 1;
5. complete the mandatory online computer-based Casper assessment.

Note: For admission consideration, completion of the full Pre-Health Science Certificate must be done within one year of the anticipated start date to the undergraduate Nursing 1 program. Transfer credit will not be granted for any pre-health sciences courses.

MCMASTER B.SC.N. POST DIPLOMA R.P.N. (E) STREAM OFFERED AT MOHAWK SITE ADMISSION REQUIREMENTS

To be considered applicants must:

1. possess a current CNO annual registration payment card by May 31 of the year of application; to achieve this deadline, typically applicants have already been in practice a year prior to applying to the program
2. have a diploma in practical nursing (two-year program) from an Ontario College of Applied Arts and Technology or equivalent with a minimum overall average (GPA) of 75% or higher and are registered and in good standing with the College of Nurses of Ontario. This registration status must continue for the duration of the program.
3. applicants who have satisfactorily completed a diploma practical nurse program but who have not achieved the required Grade Point Average (GPA) may become academically eligible by completing at least twelve units of university degree credit in any subject area with a GPA of at least B (75%). This minimum GPA does not guarantee admission;
4. have grade 12 U English or equivalent and one of the following grade 12 U Mathematics courses: Advanced Functions, Calculus and Vectors or Mathematics of Data Management or equivalent. A minimum of 60% is required in each course.
5. apply to the OUAC by February 1. All applications must be received by OUAC on or before February 1 to be given equal consideration;
6. complete the mandatory online computer-based Casper assessment.

B.SC.N. ACCELERATED (F) STREAM - MCMASTER SITE ADMISSION REQUIREMENTS

The Accelerated (F) Stream is available to those students applying from a university science program of studies. Students may complete the program of studies in five academic terms.

Note: Admission to the Accelerated (F) Stream is not open to students currently enrolled/registered in the Basic (A) Stream or any other nursing program. Applicants with two undergraduate degrees will not be considered for the Accelerated (F) Stream. Please see the policy under the *General Academic Regulations* section of the Undergraduate Calendar.

To be considered applicants must:

1. achieve a cumulative average of at least B (75%) in the last 2 full years of university degree credit courses taken (minimum 54 units), this minimum GPA does not guarantee admission.
2. applicants must achieve a grade of at least C- (60%) on each of the following required courses:
   - six units of Introductory Psychology (over 2 consecutive semesters), OR 3 units at the introductory level, the other 3 units must focus on human aspects of psychological science;
   - six units of Human Physiology **or** six units of Human Anatomy and Physiology; applicants may also have a variation of these courses, provided all human systems are covered (Nervous, Endocrine, Cardiac, Respiratory, Digestive, Reproductive, Urinary, Musculoskeletal and Acid/Base balance);
   - three units of Statistics that covers: analysis of data, descriptive statistics, probability, hypothesis testing, ANOVA, correlation and non-parametric tests
   - six units in the following: Biology, Chemistry, Biochemistry, Nutrition or Kinesiology

Note: We are not able to assess courses or transcripts prior to application.

Note: Six units are equivalent to one full credit or two half credits; three units are equivalent to one half credit.

Students must have completed or be currently registered in the required courses at the time of application. Official transcripts **must** be submitted by February 1 otherwise the application will not be considered. The required courses must be completed within the last five years.

3. apply online at http://www.ouac.on.ca/ no later than February 1; Current McMaster students are not required to apply through OUAC;
4. submit all secondary and post-secondary transcripts to the Office of the Registrar at McMaster University by February 1. Applicants who are in their final year of their degree when applying or are applying as a second degree do not have to submit their high school transcript.
5. complete the mandatory online computer-based Casper assessment.

Offers of Admission

Deadlines for acceptance of an offer are strictly enforced. Failure to meet the conditions and/or submit required documentation by the specified deadline outlined in the admission package will result in cancellation of the offer of admission. Applicants should ensure that they review all correspondence and accept their offer of admission as directed well before the specified deadline. All final decisions related to offers of admission are made internally by the B.Sc.N. program.

Application for Deferral of Admission

McMaster does not normally grant a deferral of an offer of admission unless special extenuating circumstances exist. Each case is evaluated on its own merits. Deferral of Admission is only available after the candidate has been admitted to the program and has accepted the offer. Registration may be deferred for one year only. Deferral of admissions may not be possible during times of increased need for seats and workforce gaps. As such, all deferrals of admission are currently suspended in the B.Sc.N. program until further notice. For additional information and inquiries, please contact the Office of the Assistant Dean at bscnad@mcmaster.ca.

Unsuccessful Applicants

Applications are not held over from one year to another. An unsuccessful applicant may reapply to the B.Sc.N. Program by submitting a new application, including supporting documentation.

Academic Regulations

STUDENT ACADEMIC RESPONSIBILITY

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

ACCESS TO COURSES

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic. Mandatory professional practice courses are pre-planned 6-8 months in advance. As such, late enrollment is not possible in these courses.

STUDENT COMMUNICATION RESPONSIBILITY

It is the student's responsibility to:

- Maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- Use the university provided e-mail address.
- Regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- Accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

In addition to meeting the General Academic Regulations of the University, students enrolled in all streams of the B.Sc.N. Program shall be subject to program specific academic regulations as specified below.

Registration in the B.Sc.N. Program implies acceptance on the part of the student of the objectives of that program and the methods by which progress toward the achievement of those objectives is evaluated. Since the academic regulations are continually reviewed, the University reserves the right to change the regulations.

Continuation in the B.Sc.N. Program

ACADEMIC STANDING

At the conclusion of the each term, the student's academic record and performance will be reviewed by the School of Nursing to determine if they have met the academic requirements. In order to continue in the B.Sc.N. Program a student must achieve the following academic requirements:

1. **Minimum Grade Point Average:** A student must achieve a cumulative Grade Point Average (GPA) of at least 5.0 at the end of the Winter and/or Spring/Summer term(s) to be eligible to continue in the program.
2. **Passing Grades in Required Health Science and Graded Nursing Courses:** A student must achieve a grade of at least C- in the required Health Science (HTHSCI) and graded Nursing (NURSING) courses. A student is permitted to repeat a total of only two required HTHSCI or graded NURSING course in which they failed to achieve the minimum passing grade requirement; if a student fails to meet the minimum passing grade requirement after repeating a course, the student may not continue in the program. If a student fails to meet the minimum passing grade requirement on more than two HTHSCI and/or graded NURSING course, the student may not continue in the program.

3. **Passing Grades in Professional Practice Nursing Courses:** A student must achieve a Pass (i.e. P/C-/60%) designation in all professional practice Nursing (NURSING) courses (see *Professional Practice Regulations* for a complete list of NURSING courses designated as professional practice courses). A student is permitted to repeat only one professional practice NURSING course in which they failed to achieve a Pass designation; if a student fails to achieve the Pass designation requirement after repeating the course, the student may not continue in the program. If a student fails to achieve a Pass designation on more than one professional practice NURSING course, the student may not continue in the program.
4. **Course Completion:** For required Nursing (NURSING) and Health Science (HTHSCI) courses, students must enroll in and successfully complete all the course work of one level before proceeding to the course work specified for the next level. For each of the streams (A, E and F), courses must be taken in the sequence specified by the program requirements. All elective requirements must be completed prior to the start of the final term of Level IV.

The following courses must be completed before the start of Level III course work of the Basic (A) Stream:

- PSYCH 1X03 (McMaster and Mohawk) or PSYCH 1N03 (Conestoga): Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 (McMaster and Mohawk) or PSYCH 1NN3 (Conestoga): Foundations of Psychology, Neuroscience & Behaviour

5. **Continuous Enrolment:** Students must enrol in at least one required Nursing (NURSING) or Health Science (HTHSCI) course in each academic year in order to continue in the program, unless they have been granted a Leave of Absence (see Leave of Absence regulations). Students have a maximum number of years from the time of initial enrolment in the program to complete the program requirements for graduation. The completion time for BScN (Stream A) is 6 years and Post Diploma R.P.N. (Stream E) is 5 years and the Accelerated (F Stream) is 4 years.

PROGRAM PROBATION

To continue in the B.Sc.N. Program in good academic standing a student must obtain a cumulative GPA of at least 5.0. A student whose cumulative GPA is at least 4.5 may continue in the program and will be placed on program probation for the duration of one academic year. A student may be placed on program probation only once during the program.

REMOVAL FROM PROGRAM

A student whose cumulative GPA is less than 5.0, and who has not been granted program probation, may not continue in the program. A student who fails to raise their cumulative GPA to 5.0 or above at the completion of the program probation may not continue in the program. After repeating a required Health Science (HTHSCI) or Nursing (NURSING) course, a student who fails to meet the minimum passing grade requirement or Pass designation may not continue in the program. A student may normally repeat a level of work only once. Students are permitted to repeat 2 graded HTHSCI/NURSING course and only 1 professional practice NURSING course. A student who fails to meet the minimum passing grade requirement, may not continue in the program. A student who does not maintain continuous enrollment in the program without having been granted a Leave of Absence and/or who fails to complete the program requirements for graduation within the maximum allowable time may not continue in the program.

REINSTATEMENT TO THE PROGRAM AND UNIVERSITY

Former Nursing students who were required to withdraw due to academic standing will be considered for reinstatement to the B.Sc.N. Program after one full academic year. Students may only apply to be reinstated into the stream from which they were removed. Students seeking reinstatement must contact the Office of the Registrar at McMaster University to submit a Reinstatement Request Form and the required fee. Students are considered for reinstatement for September entry only and must apply by February 1. Students will be considered for reinstatement to the B.Sc.N program upon the completion of 24 units of university work taken on a full-time basis in a non-Nursing program with a minimum average of 7.0 (B-). **Reinstatement is not guaranteed**. Decisions are normally communicated in May or June for September entry.

A student who is granted reinstatement to the B.Sc.N Program will be required to complete a reintegration course that will facilitate returning to the B.Sc.N. Program prior to enrollment of courses. Due to the importance of this course for safe return to professional practice, late enrollment is not permitted. Additionally, the student may be required to repeat any or all of their previously completed courses in the program, which will be explicitly outlined in the terms and conditions of their reinstatement.

Students who are granted reinstatement to the B.Sc.N. Program will be placed on program probation for a period of one academic year, and calculation of their Grade Point Average (GPA) will begin anew. If at any review after reinstatement the student's GPA falls below 5.0, the student will be removed from the program. Students who are approved for reinstatement to the program may not apply for subsequent re-entry or reinstatement if removed again.

VOLUNTARY WITHDRAWAL FROM THE PROGRAM

Students must follow the withdrawal procedures for McMaster University in addition to their respective college sites (if applicable). It is encouraged that these students contact the program's Academic Advising Services.

READMISSION AFTER VOLUNTARY WITHDRAWAL

Former Nursing students who voluntarily withdrew from the B.Sc.N. Program must apply for readmission by February 1. Readmission requests are carefully reviewed by the Admissions Committee and the evidence considered will include the student's academic performance in the program, a letter outlining the decision to return and activities since last registered in the program. Readmission is not automatic or guaranteed. Decisions are normally communicated between May and June for September entry. Successful readmission will require an individually developed academic plan to ensure a safe return to professional practice.

LEAVE OF ABSENCE (LOA)

The School of Nursing recognizes that students may need to suspend their studies from the program due to extenuating personal or medical reasons. Students can request one leave of absence (LOA) from the program for a period of up to 1 year. Requests for an LOA are made by submitting a Petition for Special consideration (Form A) (see Petitions for Special Consideration and Appeals Section). During an LOA, a student may enroll in elective courses; however, they will not be permitted to enroll in mandatory courses in the nursing program. While on an LOA, a student must comply with the completion of all annual non-academic requirements and associated deadlines as per site specific guidelines.

It is the student's responsibility to notify Academic Advising Services of their intention to return to their studies by the date specified in the terms of the LOA. Students who were on a LOA due to medical circumstances may be required to submit medical documentation from their physician indicating their ability to return to professional practice duties, as per the CNO requisite skills and abilities. All students returning from a LOA will be required to complete a Reintegration Course in the term preceding their return. Failure to notify of return from LOA by date specified is considered a Voluntary Withdrawal from the program. Refer to the section above entitled Readmission after Voluntary Withdrawal for details about reapplying to the program.

TRANSFER BETWEEN SITES

Students attend the institution to which they are admitted for the entire program. Transfer between sites is typically not an option. Exceptional circumstances may be considered and decided upon by the B.Sc.N. Consortium Leadership team.

TRANSFER BETWEEN STREAMS

A transfer between streams of the B.Sc.N. Program is not permitted.

DROPPING/WITHDRAWING FROM COURSES

Please refer to the Sessional Dates outlined in the Undergraduate Calendar for specific deadlines for enrollment and changes, and for withdrawing from courses without failure by default. Students are able to add and drop courses without academic or financial penalty until the last day for enrollment changes. These dates are specific to each term and are different for single-term and multi-term courses.

Students who wish to add or withdraw from required nursing (NURSING) or health science (HTHSCI) courses after the last day for enrollment are strongly encouraged to contact Academic Advising Services to discuss the impact on their progression through the Program.

TRANSFER CREDITS/COURSE EXEMPTIONS

Students who have completed courses at the university level prior to commencing studies in the B.Sc.N. Program may be eligible to receive transfer credits/course exemption for elective requirements of their degree program. These credits must have been completed no more than 5 years prior to admission to the program and should not have been previously used as a requirement for an already-conferred degree. Only courses completed at a University are eligible for consideration. Courses completed at a College are not eligible for review. Courses completed through the Advanced Placement (AP) Program and the International Baccalaureate (IB) will only be considered for transfer credits for Level I electives, taken in the first year of the program up to 18 units. No course for which a grade of less than C- (60%) has been achieved will be considered for transfer credit/course exemption towards elective course requirements.

Mandatory HTHSCI and NURSING courses are not eligible for transfer credit/course exemption due to the professional, integrated nature of the curriculum in the B.Sc.N. Program. In addition, mandatory HTHSCI and NURSING courses taken in one stream of the B.Sc.N. program will not be considered for transfer credit/course exemption in another stream.

Students who are interested in requesting transfer credit/course exemption for electives must submit a *Transfer Credit/Course Exemption* request form to Academic Advising Services within one year of program start-date.

The granting of advanced credits, transfer credits and course exemptions for BScN students is at the discretion of the BScN program. Please see the *McMaster University General Policy for Transfer Credits* for general information.

Letter of Permission

All students in good academic standing who wish to attend another university to take courses for credit toward a McMaster degree must first request a Letter of Permission (LOP) through the Student Centre in Mosaic. The School of Nursing requires that students must achieve a minimum grade of C- (60%) in courses used for elective requirements to receive the transcript designation of 'T' indicating successful completion. Courses taken at another university cannot be used to satisfy McMaster University's minimum residence requirements, and will not be included in the calculation of the Grade Point Average. LOPs are not accepted for mandatory courses due to the integrated nature of concepts in the B.Sc.N. curriculum. If a rare exception is granted for an LOP after a first unsuccessful attempt of a mandatory course, a minimum course grade of B-(70%) is required for the transfer credit and the LOP must be 85% equivalent to the mandatory course.

Students who are interested in taking a course on LOP to satisfy elective requirements should refer to the guidelines regarding electives found in the Requirements for their stream.

Professional Practice Regulations

As a mandatory portion of the BScN programs, nursing students must fulfill unpaid training or work experience requirements during clinical courses.

Before entering the professional practice setting, every student who participates in a mandatory unpaid placement must sign a WSIB Declaration form.

If illness or an accident resulting in personal injury (e.g. needlestick injury, fall, actual or near miss, violence in the workplace) occurs during the unpaid training/placement program, the student must immediately:

1. Seek first-aid or emergency services if needed. Follow agency/workplace procedures;
2. Notify the faculty instructor and professional practice placement preceptor (who then notifies the supervisor);
3. Notify the professional practice placement coordinator;
4. Complete a McMaster University Injury/Incident Report and submit to the B.Sc.N. program manager.

PROFESSIONAL PRACTICE COURSES

The following courses are designated professional practice (PP) Nursing (NURSING) courses:

- Basic (A) Stream: NURSING 1I02, 1J03, 2L03, 2P03, 3CN3, 3MH2, 3X04, 3Y04, 4J07, 4K10
- Post Diploma R.P.N. (E) Stream: NURSING 3A04, 3CN3, 3MH2, 3RY4, 4J07, 4K10
- Accelerated (F) Stream: NURSING 2I04, 2J04, 2U03, 3CN3, 3MH2, 3ZA3, 3ZB3, 4J07, 4K10

Professional Practice (PP) courses are subject to change, depending on availability and pressures within the health care system. As such, these course changes and/or substitute courses will be made at the discretion of the B.Sc.N. program and in accordance with the requirements of nursing accreditation and licensing bodies.

REMOVAL FROM COURSES

The B.Sc.N. Program reserves the right to remove a student from a professional practice course or laboratory setting at any point during the term if the student exhibits unsafe professional practice or behaviour that places the patient or others at risk or is deemed a serious breach of professional behaviour. Such removal will result in the student receiving a grade of F in the course and may result in dismissal from the program. The professional practice activities associated with any professional practice course must be successfully achieved for attainment of a passing grade in the course.

CLEARANCE TO PARTICIPATE

If the School of Nursing has concerns that a student's participation in a professional practice course may pose a risk to the health and safety of the student, their peers, instructors, clients/patients, or staff members of the professional practice setting the student may be required to produce documentation from a health care practitioner (typically the student's attending physician) indicating that the student is medically able to perform the full duties required in the professional practice placement. Students may be precluded from participating in the professional practice course until such time that they are able to produce the documentation, and obtain clearance/approval from the School of Nursing. This may result in the student having to take the course in a different term if, as a result, the student is absent from the professional practice setting for a significant portion of the course.

REINTEGRATION TO PROFESSIONAL PRACTICE

Any student who has either (a) failed a professional practice course, and/or (b) has experienced a gap of 2 terms between professional practice courses as a result of a leave of absence from the program, repeating mandatory NURSING/HTHSCI course(s), or following a reduced course load, is required to complete a reintegration course in consultation with a faculty member designated by the School of Nursing. The purpose of the reintegration course (NURSING 1RP1) is to re-familiarize the student course concepts and refresh their professional practice skills to ensure the student's return to a professional practice setting is safe and successful for all stakeholders. The reintegration course must be completed to the satisfaction of the faculty member over the term (according to the University Registrar term dates) immediately prior to the student commencing professional practice course(s). Students who are required to

complete a reintegration course will receive notice of this in their academic review letter or upon approval of a leave of absence. It is up to the student to initiate enrollment in this course based on return plan.

Examinations

A valid government photo identification card or a McMaster student photo identification card is required at all examinations, including online. Students attending the Program at the Mohawk College or Conestoga College sites also require a photo identification card from the college site at all examinations, regardless of location of examination. Further details of acceptable I.D. and processes can be found in the University Undergraduate Examination Policy.

Non-Academic Regulations

A student must comply annually before the start of classes with all non-academic requirements as outlined by the program. Failure to do so will result in removal from class and/or professional practice courses. This regulation applies to all learners regardless of academic plan.

NON-ACADEMIC REQUIREMENTS

In order to ensure the safety of all students and patients, the School of Nursing requires that all students adhere to Standards of Practice in Nursing.
More detailed information will be provided upon acceptance into the program. For the McMaster site information on health screening please visit https://fhs.mcmaster.ca/healthscreening/formsandsubmission.html. For information on police clearance (Vulnerable Sector Screen VSC) please visit https://fhs.mcmaster.ca/pcbe/police_records_check.html. For the Mohawk and Conestoga sites please see site-specific guidelines and ensure you have met all requirements by the deadline, The process for notification, submission and verification of NARs varies by site. It is the student's professional responsibility to ensure this deadline is met.
Additional McMaster sire requirements include:

- Basic Life Support for Healthcare Providers (CPR - HCP with AED & BVM)
- Online Health and Safety modules available through Avenue to Learn
- Mask Fit Testing & Training (quiz)

Students must provide proof that ALL requirements have been met before practicing in a lab or professional practice setting. Students who fail to provide this proof will:

- Not be allowed to enter a lab or professional practice setting, or
- Be removed from a lab or professional practice setting until requirements are met.
- Be reviewed under the Faculty of Health Sciences Professionalism Policy for failing to meet a requirement in a professional program

Immunization

The Ontario Public Hospitals Act requires all students placed in a hospital setting to meet certain criteria related to surveillance for infectious diseases. Detailed medical information, including a record of completion of required immunizations, will be required upon acceptance and annually thereafter. Failure to produce this information will result in a student being precluded from commencing professional practice course(s) or a suspension from professional practice course(s) until such time that they are able to produce the information and have fulfilled the requirements, which may result in the student having to take the course(s) in a different term. Information on specific medical information that is required will be sent to students prior to commencing their studies in the program and each year thereafter prior to the start of the academic year.

Police Records Check

During the course of the B.Sc.N Program, all nursing students will work with vulnerable populations. As a result, in order to protect these vulnerable people from potential harm, the Council of Ontario University Programs in Nursing recommends and many professional practice agencies require that all nursing students provide confirmation of the absence of a criminal conviction or outstanding criminal charges. All students are required to have a satisfactory Police Record Check completed **annually**. The Police Record Check must include Vulnerable Sector Check (VSC). Expenses for the Police Record Check are the responsibility of the student. Ensure you request two original copies from your Police Services as your placement may also request an original VSC, or follow the direction from the FHS Professionalism Office to submit your VSC with a self-addressed stamped envelope for return of the original copy. Registered students who have been convicted of an offense under the Criminal Code (Canada) for which they have not been pardoned may be denied the opportunity to enter professional practice placement.

CPR Certification

Students are required to provide evidence of a valid certificate in cardiopulmonary resuscitation (CPR) at the Basic Cardiac Life Support for Health Care Provider level with training in AED. Please note that for health care providers, certification is valid for one year from the date of the course. As a result, annual recertification is mandatory. The cost of a course is the responsibility of the student. Courses are readily available in most communities. Certification obtained through an online provider will not be accepted. Certificate must be obtained in Canada.

TRAVEL WITHIN THE PROGRAM

Students are responsible for arranging their own travel to and from learning settings external to the University (regardless of site) and for covering any cost incurred. Students who enroll in the BScN Program are expected to travel to learning settings in the Hamilton and surrounding area, including but not limited to Halton, Peel, Brant, Haldimand-Norfolk, Niagara and Wellington Regions (McMaster and Mohawk sites); and Kitchener-Waterloo and surrounding area, including but not limited to Wellington, Brant and Halton regions (Conestoga site).

Access to Clinical Courses

Students in any stream who register for a clinical NURSING course must participate in placement survey(s) and/or site selector. Students who fail to meet survey(s)/selector deadline will be assigned a placement setting based on course outcomes. Students who do not register two months in advance and who fail to meet the survey(s)/selector deadline will normally be required to defer their placement until the next term in which the course is offered.
The final assignment of learning settings for any course is constrained by the availability of the requested setting and faculty resources. Students may therefore be required to complete the practicum component of a course in a learning setting that is not of their choosing.

Northern/International Health Professional Practice

Level IV students in Basic (A) Stream, Post Diploma R.P.N. (E) Stream and Accelerated (F) Stream have the option to complete health professional practice placements in international or remote outpost settings for NURSING 4J07 or 4K10. Prerequisites include, but are not limited to, (1) attaining a GPA of 8.0 in all mandatory NURSING/HTHSCI courses prior to registering for this level 4 placement.; (2) a pass in all professional practice NURSING courses; (3) a minimum grade of C- in NURSING 4H03 if required for the placement.
Additional criteria may also be required to assess readiness to participate in a global health placement. This will be decided by the program, upon review of external variables and any elements of risk associated with travel.

Specialized/Critical Care Professional Practice Placements

Specialized/Critical Care placements in NURSING 4J07 and/or NURSING 4K10 are only available to students who have met the following criteria below. These placements are typically in critical care or high acute clinical contexts.

1. a cumulative GPA of 8.0 in all mandatory NURSING/HTHSCI courses

completed prior to entry to Level IV course work
2. a pass in all professional practice courses on the first attempt.

Additional criteria may also be required and considered by the School of Nursing to ensure safety in the practice setting. A pass in all professional practice courses does not necessarily mean that a student is ready to participate in an unpredictable or highly acute setting. Achieving the above noted criteria is not a guarantee that a student will receive a specialized/ critical care placement as placements are limited.

Documentation for Licensure outside of Canada

Documentation for Licensure outside of Canada is done by the B.Sc.N. Program Office. Typically, this process requires up to 20 weeks notice, variable depending on documentation required for the licensing body. A fee for each request, is charged for providing the documentation and sending, by courier, to the agency requesting such documentation. Please check the program website for details regarding fees. Forms requesting this documentation are available on the School of Nursing website https://nursing.mcmaster.ca/studetn-life-services-school -of-nursing-mcmaster-university/grad-convo-entry-to-practice/

Bachelor of Science in Nursing

ACCELERATED (F) STREAM (B.SC.N)

Requirements (EFFECTIVE FALL 2025)

Advanced Credit: 48 units; Units Taken at McMaster: 74 units

Professional Practice (PP) courses are subject to change, depending on availability and pressures within the health care system. As such, these course changes and/or substitute courses will be made at the discretion of the B.Sc.N. program and in accordance with the requirements of nursing accreditation and licensing bodies.

LEVEL III: 46 UNITS

Fall Term: 15 units

8 units
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2H03 - Introductory Pharmacology
- HTHSCI 2C03 - Research Appraisal and Utilization in Evidence Informed Decision Making

7 units
- NURSING 2I04 - Introduction to Professional Nursing and Health for Accelerated Stream
- NURSING 2U03 - Introduction to Nursing Practice I for Accelerated Stream (PP)

1 course
- WHMIS 1A00 - Introduction to Health and Safety

Winter Term: 14 units

3 units
- HTHSCI 2HH3 - Introductory Microbiology

11 units
- NURSING 2J04 - Professional Nursing Practice II for Accelerated Stream (PP)
- NURSING 2V04 - Nursing Concepts in Health & Illness for Accelerated Stream I
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice

Fall-Winter Terms: 3 units

3 units
- HTHSCI 2PF3 A/B - Introduction to Integrated Pathophysiology for Accelerated Stream

Spring/Summer Term: 14 units

1 unit
- HTHSCI 3PF1 - Integrated Pathophysiology for Accelerated Stream

13 units
- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power (PP)
- NURSING 3V04 - Nursing Concepts in Health & Illness for Accelerated Stream II
- NURSING 3ZA3 - Professional Nursing Practice III for Accelerated Stream (PP)
- NURSING 3ZB3 - Professional Nursing Practice IV for Accelerated Stream (PP)

Total Units: 122

LEVEL IV: 28 UNITS

3 units
- HTHSCI 4NR3 - Nursing Research

12 units
- NURSING 3MH2 - Nursing Care and Practice in Mental Health (PP)
- NURSING 4J07 - Professional Nursing Practice VI (PP)
- NURSING 4P03 - Advanced Nursing Concepts I

13 units
- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4Q03 - Advanced Nursing Concepts II

Requirements (EFFECTIVE AS OF 2023)

Advanced Credit: 54 units; Units Taken at McMaster: 72

LEVEL III: 45 UNITS

Fall Term: 14 units

6 units
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2H03 - Introductory Pharmacology

8 units
- NURSING 2I04 - Introduction to Professional Nursing and Health for Accelerated Stream
- NURSING 2U03 - Introduction to Nursing Practice I for Accelerated Stream

1 course
- WHMIS 1A00 - Introduction to Health and Safety

Winter Term: 15 units

7 units
- HTHSCI 2HH3 - Introductory Microbiology
- HTHSCI 2C03 A/B S - Research Appraisal and Utilization in Evidence Informed Decision Making

8 units
- NURSING 2J04 - Professional Nursing Practice II for Accelerated Stream
- NURSING 2V04 - Nursing Concepts in Health & Illness for Accelerated Stream I

Fall-Winter Terms: 3 units

3 units
- HTHSCI 2PF3 A/B - Introduction to Integrated Pathophysiology for Accelerated Stream

Spring/Summer Term: 13 units

1 unit
- HTHSCI 3PF1 - Integrated Pathophysiology for Accelerated Stream

12 units
- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power
- NURSING 3V04 - Nursing Concepts in Health & Illness for Accelerated Stream II
- NURSING 3ZA3 - Professional Nursing Practice III for Accelerated Stream
- NURSING 3ZB3 - Professional Nursing Practice IV for Accelerated Stream

LEVEL IV: 27 UNITS

Fall Term: 14 units

3 units

- HTHSCI 4NR3 - Nursing Research

11 units

- NURSING 4J07 - Professional Nursing Practice VI
- NURSING 4P03 - Advanced Nursing Concepts I

Winter Term: 13 units

13 units

- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4Q03 - Advanced Nursing Concepts II

TOTAL UNITS: 126

BASIC (A) STREAM (B.SC.N.)

McMaster Site
Mohawk Site
Conestoga Site (2023 last intake)

Requirements (EFFECTIVE AS OF FALL 2025)

Professional Practice (PP) courses are subject to change, depending on availability and pressures within the health care system. As such, these course changes and/or substitute courses will be made at the discretion of the B.Sc.N. program and in accordance with the requirements of nursing accreditation and licensing bodies.

ELECTIVES

Fifteen units of electives are to be selected from disciplines of the student's choice, of which a minimum of six units are to be chosen from courses designated as Level II or above. A maximum of six units of electives may be selected from NURSING and/or HTHSCI elective courses (i.e. those courses that are not required for any of the program streams). For some courses, the amount of duplication of required content will preclude approved use of their elective credit in the B.Sc.N. Program. Mandatory NURSING and/or HTHSCI courses from the Post Diploma R.P.N. (E) Stream or the Accelerated (F) Stream of the B.Sc.N. Program cannot be used toward elective requirements for the Basic (A) Stream.

LEVEL I: 31 UNITS

11 units

- HTHSCI 1H06 A/B - Human Anatomy and Physiology I
- HTHSCI 1LL3 - Human Biochemistry I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health

11 units

- NURSING 1F03 - Introduction to Nursing and Health I for Basic Stream
- NURSING 1G03 - Introduction to Nursing and Health II for Basic Stream
- NURSING 1I02 - Introduction to Nursing Practice for Basic Stream (PP)
- NURSING 1J03 - Professional Nursing Practice I for Basic Stream (PP)

6 units

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

3 units

- Electives

1 course

- WHMIS 1A00 - Introduction to Health and Safety

LEVEL II: 32 UNITS

11 units

- HTHSCI 2H03 - Introductory Pharmacology
- HTHSCI 2HH3 - Introductory Microbiology
- HTHSCI 2LA2 A/B - Introduction to Integrated Pathophysiology for Nursing for Basic Stream
- HTHSCI 2S03 - Introduction to Statistics for Nursing

18 units

- NURSING 2L03 - Professional Nursing Practice II for Basic Stream (PP)
- NURSING 2MM3 - Nursing Concepts in Health and Illness I for Basic Stream
- NURSING 2NN3 - Nursing Concepts in Health and Illness II for Basic Stream
- NURSING 2P03 - Professional Nursing Practice III for Basic Stream (PP)
- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power (PP)
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice

3 units

- Electives

LEVEL III: 30 UNITS

5 units

- HTHSCI 3BB3 - Human Biochemistry II: Nutrition and Metabolism
- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing

16 units

- NURSING 3MH2 - Nursing Care and Practice in Mental Health (PP)
- NURSING 3SS3 - Nursing Concepts in Health and Illness III for Basic Stream
- NURSING 3TT3 - Nursing Concepts in Health and Illness IV for Basic Stream
- NURSING 3X04 - Professional Nursing Practice IV (PP)
- NURSING 3Y04 - Professional Nursing Practice V (PP)

9 units

- Electives

LEVEL IV: 29 UNITS

3 units

- HTHSCI 4NR3 - Nursing Research

23 units

- NURSING 4J07 - Professional Nursing Practice VI (PP)
- NURSING 4K10 - Professional Practice and the New Graduate (PP)
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

3 units

- Electives

TOTAL UNITS: 122

Requirements (EFFECTIVE AS OF 2023)

ELECTIVES

Fifteen units of electives are to be selected from disciplines of the student's choice, of which a minimum of six units are to be chosen from courses designated as Level II or above. A maximum of six units of electives may be selected from NURSING and/or HTHSCI elective courses (i.e. those courses that are not required for any of the program streams). For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program. Mandatory NURSING and/or HTHSCI courses from the Post Diploma R.P.N. (E) Stream or the Accelerated (F) Stream of the B.Sc.N. Program cannot be used toward elective requirements for the Basic (A) Stream.

LEVEL I: 30 UNITS

12 units

- HTHSCI 1H06 A/B - Human Anatomy and Physiology I
- HTHSCI 1LL3 - Human Biochemistry I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health

12 units

- NURSING 1F03 - Introduction to Nursing and Health I for Basic Stream
- NURSING 1G03 - Introduction to Nursing and Health II for Basic Stream
- NURSING 1I02 - Introduction to Nursing Practice for Basic Stream
- NURSING 1J03 - Professional Nursing Practice I for Basic Stream

6 units

McMaster and Mohawk Site:

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

1 course

- WHMIS 1A00 - Introduction to Health and Safety

LEVEL II: 29 UNITS

11 units

- HTHSCI 2H03 - Introductory Pharmacology
- HTHSCI 2HH3 - Introductory Microbiology
- HTHSCI 2LA2 A/B - Introduction to Integrated Pathophysiology for Nursing for Basic Stream
- HTHSCI 2S03 - Introduction to Statistics for Nursing

15 units

- NURSING 2L03 - Professional Nursing Practice II for Basic Stream
- NURSING 2MM3 - Nursing Concepts in Health and Illness I for Basic Stream
- NURSING 2NN3 - Nursing Concepts in Health and Illness II for Basic Stream
- NURSING 2P03 - Professional Nursing Practice III for Basic Stream
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice

3 units

- Electives

LEVEL III: 31 UNITS

5 units

- HTHSCI 3BB3 - Human Biochemistry II: Nutrition and Metabolism
- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing

0-3 units

- HTHSCI 4NR3 - Nursing Research (See *Note* above.)

17 units

- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power
- NURSING 3SS3 - Nursing Concepts in Health and Illness III for Basic Stream
- NURSING 3TT3 - Nursing Concepts in Health and Illness IV for Basic Stream
- NURSING 3X04 - Professional Nursing Practice IV
- NURSING 3Y04 - Professional Nursing Practice V

6-9 units

- Electives

LEVEL IV: 30 UNITS

0-3 units

- HTHSCI 4NR3 - Nursing Research (See *Note* above.)

24 units

- NURSING 4J07 - Professional Nursing Practice VI
- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

3-6 units

- Electives

TOTAL UNITS: 120

Requirements (EFFECTIVE AS OF 2020-2022)

ELECTIVES

Fifteen units of electives are to be selected from disciplines of the student's choice, of which a minimum of six units are to be chosen from courses designated as Level II or above. A maximum of six units of electives may be selected from NURSING and/or HTHSCI elective courses (i.e. those courses that are not required for any of the program streams). For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program. Mandatory NURSING and/or HTHSCI courses from the Post Diploma R.P.N. (E) Stream or the Accelerated (F) Stream of the B.Sc.N. Program cannot be used toward elective requirements for the Basic (A) Stream.

LEVEL I: 30 UNITS

12 units

- HTHSCI 1H06 A/B - Human Anatomy and Physiology I
- HTHSCI 1LL3 - Human Biochemistry I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health

12 units

- NURSING 1F03 - Introduction to Nursing and Health I for Basic Stream
- NURSING 1G03 - Introduction to Nursing and Health II for Basic Stream
- NURSING 1I02 - Introduction to Nursing Practice for Basic Stream
- NURSING 1J03 - Professional Nursing Practice I for Basic Stream

6 units

McMaster and Mohawk Site:

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

1 course

- WHMIS 1A00 - Introduction to Health and Safety

LEVEL II: 29 UNITS

11 units

- HTHSCI 2H03 - Introductory Pharmacology
- HTHSCI 2HH3 - Introductory Microbiology
- HTHSCI 2LA2 A/B - Introduction to Integrated Pathophysiology for Nursing for Basic Stream
- HTHSCI 2S03 - Introduction to Statistics for Nursing

15 units

- NURSING 2L03 - Professional Nursing Practice II for Basic Stream
- NURSING 2MM3 - Nursing Concepts in Health and Illness I for Basic Stream
- NURSING 2NN3 - Nursing Concepts in Health and Illness II for Basic Stream
- NURSING 2P03 - Professional Nursing Practice III for Basic Stream
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice

3 units

- Electives

LEVEL III: 31 UNITS

5 units

- HTHSCI 3BB3 - Human Biochemistry II: Nutrition and Metabolism
- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing

0-3 units

- HTHSCI 4NR3 - Nursing Research (See Note above.)

17 units

- NURSING 3SS3 - Nursing Concepts in Health and Illness III for Basic Stream
- NURSING 3TT3 - Nursing Concepts in Health and Illness IV for Basic Stream
- NURSING 3X04 - Professional Nursing Practice IV
- NURSING 3Y04 - Professional Nursing Practice V

6-9 units

- Electives

LEVEL IV: 30 UNITS

0-3 units

- HTHSCI 4NR3 - Nursing Research (See Note above.)

24 units

- NURSING 4J07 - Professional Nursing Practice VI
- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

3-6 units

- Electives

TOTAL UNITS: 120

POST DIPLOMA R.P.N. (E) STREAM (B.SC.N.)

Mohawk Site
Conestoga Site (2023 last intake)
Advanced Credit: 30 units; Units Taken at McMaster: 92 units
Professional Practice (PP) courses are subject to change, depending on availability and pressures within the health care system. As such, these course changes and/or substitute courses will be made at the discretion of the B.Sc.N. program and in accordance with the requirements of nursing accreditation and licensing bodies.

Note:

1. NURSING 3A04 and NURSING 3RY4 cannot be taken concurrently; these courses must be completed in separate terms.
2. HTHSCI 2S03 must be taken before HTHSCI 2C03.

Requirements (EFFECTIVE AS OF FALL 2025)

LEVEL II: 30 UNITS
20 units
- HTHSCI 1CC6 - Integrated Biological Bases of Nursing Practice I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2C03 - Research Appraisal and Utilization in Evidence Informed Decision Making *(See Note 2 above.)*
- HTHSCI 2C06 - Integrated Biological Bases of Nursing Practice II
- HTHSCI 2S03 - Introduction to Statistics for Nursing

10 units
- NURSING 2A04 - Introduction to Professional RN Practice I for Post Diploma RPN Stream
- NURSING 2AA3 - Professional RN Practice II for Post Diploma RPN Stream
- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power (PP)

1 course
- WHMIS 1A00 - Introduction to Health and Safety

LEVEL III: 33 UNITS
5 units
- HTHSCI 2H03 - Introductory Pharmacology
- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing

19 units
- NURSING 3A04 - Clinical Reasoning in RN Practice for Post Diploma RPN Stream (PP)
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice
- NURSING 3MH2 - Nursing Care and Practice in Mental Health (PP)
- NURSING 3RY4 - Professional Nursing Practice V for Post Diploma RPN Stream (PP)
- NURSING 3SS3 - Nursing Concepts in Health and Illness III for Basic Stream
- NURSING 3TT3 - Nursing Concepts in Health and Illness IV for Basic Stream

9 units
- Electives

LEVEL IV: 29 UNITS
26 units
- HTHSCI 4NR3 - Nursing Research
- NURSING 4J07 - Professional Nursing Practice VI (PP)
- NURSING 4K10 - Professional Practice and the New Graduate (PP)
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

3 units
- Electives

TOTAL UNITS: 122

Requirements (EFFECTIVE AS OF 2023)

ELECTIVES
Twelve units of electives are to be selected from disciplines of the student's choice of which a minimum of six units are to be chosen from courses designated Level II or above. A maximum of six units of electives may be selected from NURSING and/or HTHSCI elective course (i.e. those course that are not required for any of the program streams). For some courses the amount of duplication of required content will preclude use for elective credit in the B.Sc.N. Program. Mandatory NURSING and/or HTHSCI courses from the Basic (A) Stream or the Accelerated (F) Stream of the B.Sc.N. Program cannot be used toward elective requirements for the Post Diploma R.P.N. (E) Stream.

NOTE:
1. NURSING 3A04 and NURSING 3RY4 cannot be taken concurrently; these courses must be completed in separate terms.
2. HTHSCI 2S03 must be taken before HTHSCI 2C03.

REQUIREMENTS
Advanced Credit: 30 units
Level II: 32 Units
22 units
- HTHSCI 1CC6 - Integrated Biological Bases of Nursing Practice I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2C06 - Integrated Biological Bases of Nursing Practice II
- HTHSCI 2S03 - Introduction to Statistics for Nursing
- HTHSCI 2C03 A/B S - Research Appraisal and Utilization in Evidence Informed Decision Making (See *Note 1* above.)

10 units
- NURSING 2A04 - Introduction to Professional RN Practice I for Post Diploma RPN Stream
- NURSING 2AA3 - Professional RN Practice II for Post Diploma RPN Stream
- NURSING 3CN3 - Nursing Practice with the Community: Populations, Partnerships, Politics and Power

1 course
- WHMIS 1A00 - Introduction to Health and Safety

Level III: 28 Units
5 units
- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing
- HTHSCI 4NR3 - Nursing Research

17 units
- NURSING 3A04 - Clinical Reasoning in RN Practice for Post Diploma RPN Stream (See *Note 1* above.)
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice
- NURSING 3RS3 - Nursing Concepts in Health and Illness III for Post Diploma RPN Stream
- NURSING 3RT3 - Nursing Concepts in Health and Illness IV for Post Diploma RPN Stream
- NURSING 3RY4 - Professional Nursing Practice V for Post Diploma RPN Stream (See *Note 1* above.)

6 units
- Electives

Level IV: 30 Units
24 units
- NURSING 4J07 - Professional Nursing Practice VI
- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

6 units
- Electives

TOTAL UNITS: 120

Requirements (EFFECTIVE AS OF 2020-2022)

ELECTIVES

Twelve units of electives are to be selected from disciplines of the student's choice of which a minimum of six units are to be chosen from courses designated Level II or above. A maximum of six units of electives may be selected from NURSING and/or HTHSCI elective course (i.e. those course that are not required for any of the program streams). For some courses the amount of duplication of required content will preclude use for elective credit in the B.Sc.N. Program. Mandatory NURSING and/or HTHSCI courses from the Basic (A) Stream or the Accelerated (F) Stream of the B.Sc.N. Program cannot be used toward elective requirements for the Post Diploma R.P.N. (E) Stream.

NOTE

1. NURSING 3A04 and NURSING 3RY4 cannot be taken concurrently; these courses must be completed in separate terms.
2. HTHSCI 2S03 must be taken before HTHSCI 2C03.

REQUIREMENTS

Advanced Credit: 30 units

Level II: 32 Units

22 units

- HTHSCI 1CC6 - Integrated Biological Bases of Nursing Practice I
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2C06 - Integrated Biological Bases of Nursing Practice II
- HTHSCI 2S03 - Introduction to Statistics for Nursing
- HTHSCI 2C03 A/B S - Research Appraisal and Utilization in Evidence Informed Decision Making (See *Note 1* above.)

10 units

- NURSING 2A04 - Introduction to Professional RN Practice I for Post Diploma RPN Stream
- NURSING 2AA3 - Professional RN Practice II for Post Diploma RPN Stream

1 course

- WHMIS 1A00 - Introduction to Health and Safety

Level III: 28 Units

5 units

- HTHSCI 3PA2 A/B - Integrated Pathophysiology for Nursing
- HTHSCI 4NR3 - Nursing Research

17 units

- NURSING 3A04 - Clinical Reasoning in RN Practice for Post Diploma RPN Stream (See *Note 1* above.)
- NURSING 3RS3 - Nursing Concepts in Health and Illness III for Post Diploma RPN Stream
- NURSING 3RT3 - Nursing Concepts in Health and Illness IV for Post Diploma RPN Stream
- NURSING 3RY4 - Professional Nursing Practice V for Post Diploma RPN Stream (See *Note 1* above.)
- NURSING 3IH3 - Introduction to Indigenous Health Policy and Practice

6 units

- Electives

Level IV: 30 Units

24 units

- NURSING 4J07 - Professional Nursing Practice VI
- NURSING 4K10 - Professional Practice and the New Graduate
- NURSING 4P03 - Advanced Nursing Concepts I
- NURSING 4Q03 - Advanced Nursing Concepts II

6 units

- Electives

Total Units: 120

Certificate(s) of Professional Learning

NURSING CONCEPTS IN CONTINENCE CARE, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office

This program explores the subject of continence and incontinence care from a nursing perspective. All elements of patient care, including emerging evidence to understand the factors contributing to incontinence and strategies to enhance patients' quality of life will be addressed. The role of the nurse in patient and staff education, as well clinical application in a focused professional practice context will be integrated.

For more information, please visit https://nursing.mcmaster.ca/.

Midwifery Education Program

Health Sciences Centre (HSC), Room 4H24, ext. 26654
http://www.fhs.mcmaster.ca/midwifery/
midwifery@mcmaster.ca

ASSISTANT DEAN

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Anne Malott/B.Sc.N. *(Windsor)*, M.S.N *(Case Western Reserve)*, Ph.D. *(Western)*, R.M.

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PROGRAM MANAGER

Saadia Israr

Program Overview

Midwives are primary health care providers for clients during pregnancy, labour and the postpartum period; conduct deliveries and provide care for newborn babies. Midwives have strong interpersonal skills and are competent in areas of health education, counselling and interprofessional collaboration. Midwives' expertise in the care of normal pregnancy and childbirth arises from their understanding of childbearing as a social, cultural and biological process and from their ability to competently exercise clinical skills and decision-making. Midwifery is potentially one of the most important components of reproductive health care in Ontario. Midwifery education provides the base for sound professional practice. The Midwifery Education Program (MEP) is an integral part of the evolution of the profession of midwifery in Ontario and is a leader in midwifery education in Canada. The MEP helps create future leaders and teachers. It assures practice and teaching as a continuum so that learning environments become available across Ontario.

The MEP at McMaster University is a collaborative venture shared with Toronto Metropolitan University and leads to a Bachelor of Health Sciences (B.H.Sc.) in Midwifery, and prepares graduates for licensure by the College of Midwives of Ontario.

Admission Procedures and Requirements

Enrolment in the MEP is limited and highly competitive, and admission is by selection and reserved for candidates who meet all requirements and who satisfy the academic regulations of the university. Possession of the minimum requirements does not guarantee an offer of admission. It is recommended that applicants have completed at least one year of university prior to applying. The application deadline is January 15 each year for the following September intake. All supporting documents must be submitted by February 1 of each year. Supporting documents received after February 1 will not be considered. Please note that all required courses must be completed, with final grades available on any and all official transcripts at the time of application (excluding current Secondary School students). *All documents submitted with the application become property of the university.*

- Identity and Admission Survey

All applicants must complete the mandatory survey as part of the application to the MEP and submit it, along with the other requirements, by the February 1 deadline. The purpose of this survey is to gather information to establish baseline data on 1) the diversity of the applicant pool, 2) candidates who are invited to the Multiple Mini Interviews (MMI), 3) candidates who participate in the facilitated admission pathways, 4) candidates who receive an offer of admission to the program and 5) where candidates would choose to be placed during clinical placements in the province. The collected data will help the program to monitor progress over time with respect to the program's commitment to create a more equitable, diverse, and inclusive program through the admission process.

The survey is comprised of three sections:

i. demographic, social and economic questions,
ii. the two facilitated admission processes, and
iii. clinical placement area preferences.

The survey responses will not be used to determine an applicant's admission to the MEP. If admitted, responses to section 3 of the survey are used to determine students' geographical placement area.

It is recognized that applicants apply to the program with varying educational backgrounds. Applicants can fulfill the prerequisites required through the following educational pathways:

Applicants Directly from Ontario Secondary Schools

The following are the minimum grade 12 U and M requirements under the Ontario Secondary School Curriculum for applicants directly from an Ontario Secondary School:

i. English 12 U (85% minimum)
ii. Biology 12 U (85% minimum)
iii. Chemistry 12 U (85% minimum)
iv. Overall average of 85% in 12U or M courses

Completion of additional 12 U or M courses to total six credits.

Students must obtain a minimum grade of 85% in each of the **three** (3) required courses listed in points i, ii, iii above AND a minimum overall average of 85% on grade 12 U or M courses including the required courses.

Current Ontario Secondary School Students may apply if one or more of the three (3) required courses are in progress at the time of application; however, the grade 11 prerequisite(s) must be completed at the time of application so that a preliminary assessment of the subject area(s) can be made. Admission is based on in progress secondary school grades for current secondary students **only** if the grade 11 prerequisite in that subject area is at least 85%.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from out-of-province, with qualifications equivalent to Ontario Secondary School (e.g. Advanced Placement Students, American Style Curriculum Students, International Baccalaureate Students, General Certificate of Education Students, etc.) should refer to the Future McMaster website for general requirement and required course information.

Applicants with Prior College Diploma Studies

Applicants from a Pre-Health Sciences Pathway to Advanced Diplomas and Degrees

Applicants who have successfully completed a Pre-Health Sciences Pathway certificate or are registered in the program with a minimum average of 85% will be considered for admission. Applicants who are currently registered and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the pre-health program need the following minimum requirements:

i.Program equivalent of Biology - 85% minimum
ii.Program equivalent of Chemistry - 85% minimum
iii.Program equivalent of English - 85% minimum
iv.Overall average 85%

Applicants from a Registered Practical Nursing (RPN) Program

Applicants who have a diploma in practical nursing from an Ontario College or equivalent with a minimum overall average of 85% or higher will be considered for admission. Applicants who are currently registered in a practical nursing program and will receive their certificate before August in the intake year for which they applied may receive a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Applicants from the RPN program need the following minimum requirements:

i.Program equivalent of Biology - 85% minimum
ii.Program equivalent of Chemistry - 85% minimum
iii.Program equivalent of English - 85% minimum
iv.Overall average 85%

Applicant from other College Programs

Any other college applicants need the following minimum requirements.

- College courses in the required subject areas of:

i. Biology - two semester or 6 units
ii. Science - two semester or 6 units of Biology, Biochemistry, Chemistry, Kinesiology, or Physics (a total of 12 units of Biology will be acceptable)
iii. English - two semesters or 6 units
iv.Overall average of 85%.

- Minimum of 85% in each of the required courses.

The offer of admission will be withdrawn if the applicant does not complete the minimum requirements by August 1 of the intake year for which they applied or does not meet the required prerequisite or admission criteria.

Overall average from most recent 42 units of college coursework must be a minimum of 85%.

No admissions will be based on college standing. For applicants with prior college/diploma studies who completed their college education within the last two years of applying to Midwifery, admission will be based on secondary

school eligibility. If college education was completed more than 2 years ago at the time of applying to Midwifery, please refer to the Mature Applicants section for eligibility and admission requirements.

Applicants from Ontario Secondary Schools (within two years of obtaining OSSD)

The following are the minimum grade 12 U and M requirements under the Ontario Secondary School Curriculum for applicants from an Ontario Secondary School who have obtained their OSSD in the previous calendar year and have never attended University:

i. English 12 U (75% minimum)
ii. Biology 12 U (75% minimum)
iii. Chemistry 12 U (75% minimum)
iv. Overall average of 75% in 12U or M courses

Completion of additional grade 12 U or M courses to total six credits.
Applicants must have obtained a minimum grade of 75% in each of the **three** (3) required courses listed in points 1, 2 and 3 above AND a minimum overall average of 75% on grade 12 U or M courses including the required courses. All required courses must be completed at the time of application.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from out-of-province, with qualifications equivalent to Ontario Secondary School (e.g. Advanced Placement Students, American Style Curriculum Students, International Baccalaureate Students, General Certificate of Education Students, etc.) should refer to the Future McMaster website for general requirement and required course information.

Applicants with Prior / Current University Studies

The following are the minimum course and grade requirements for applicants who are currently attending or have attended university in the past:

Prerequisite Requirements

- Grade 12 U courses from Ontario high school, equivalent out-of-province high school or CEGEP curricula, or university courses in the required subject areas:

Biology - 3 units

- o oScience (Biology, Biochemistry, Chemistry, Kinesiology, or Physics) - an additional 3 units (a total of 6 units of Biology will be acceptable)

English 3 units

- Minimum of 75% in each of the three required courses
- Overall average from most recent 42 units of undergraduate coursework must be a minimum of 75%

All prerequisites must be complete at the time of application. If an applicant has obtained less than 18 units of university credit and has been out of high school or college for more than two years at the time of application, it is required that the applicant complete at least 18 units of university to be eligible for consideration.

Current McMaster University Students

Applicants who are current McMaster University students and who are not scheduled to graduate in the spring convocation following the Midwifery application deadline of January 15 may request an Internal Application Form from the Midwifery Program Office by emailing midwifery@mcmaster.ca. No OUAC application is required, and any required transcripts or documents should be forwarded to the MEP office.

International Students

Applicants must be Canadian Citizens or HOLD Permanent Resident/ Protected Person status in Canada prior to applying to the Midwifery program.

Mature Applicants

A mature student is someone who has been out of full-time secondary school or college for the past two years, and who has never attended university.
The MEP does not offer mature admission directly to the program. However, students interested in the MEP may be admitted as mature students to another program in order to complete university pre-requisite courses for later consideration for admission to the MEP. Enrolment in this program is limited. Possession of the minimum admission requirements does not guarantee admission.
In order to apply for admission to the MEP, mature applicants must have successfully completed a minimum of 18 units of university level course work with a minimum cumulative average of 75% prior to the application deadline. Mature applicants must have completed the pre-requisites (listed above per applicant type) at the time of application.

Prior Midwifery Education or Experience

For applicants with prior midwifery education or experience, the College of Midwives of Ontario offers a bridging program for internationally educated midwives to meet registration requirements in Ontario. More information about eligibility and applications can be found at https://cmo.on.ca/orientation-and-assessment-program/

Facilitated Black Admission Process (FBAP)

We offer a facilitated admissions stream for applicants who self-identify as Black referred to as the Facilitated Black Admission Process (FBAP). Applicants wishing to apply through this admission stream must opt-in to this process when they complete the Identity and Admissions Survey. To be considered, the applicant must first apply though the Ontario Universities Application Centre (OUAC) by the posted application deadline and then complete the Identity and Admissions Survey by February 1. All applications must meet McMaster University and program-specific eligibility criteria for consideration.
To support Black applicants who opt-in to the Facilitated Black Admissions Process (FBAP), the McMaster Midwifery Education Program offers the following additional admission support:

1. FBAP applicants who are invited to the Multiple Mini Interviews (MMI) are given the opportunity to attend an online information session where MEP representatives answer questions about the profession and provide details about the program, as well as next steps in the admission process.
2. For FBAP applicants who meet minimum eligibility criteria, we offer a virtual personal panel interview. The MEP FBAP Interview allows applicants an opportunity to have an individual interview conducted by members of the Equity Admissions Review (EAR) team. The EAR team consists of educators, senior students, clients, and midwives, all of whom are racialized.
3. The last component of the FBAP application is the completion of the MMI, which will be completed at the same time as all other applicants.

Indigenous Applicants

In accordance with the Self-Identification policy of the Faculty of Health Sciences, Indigenous (First Nations, Inuit and Métis) applicants who wish to apply to a program that has a Facilitated Indigenous Admissions Process (FIAP) must complete the supplementary Self-identification Application. Information on the policy, application requirements and the online application can be found at: https://ihll.mcmaster.ca/students/future-students/facilitated-admissions-self-identification/#tab-content-applicationadmissions/self-identification.
One self-identification application is used for all Faculty of Health Sciences programs that have a Facilitated Indigenous Admissions Process (FIAP). This application should only be completed once even if an applicant applied to multiple programs. Applicants identify the program(s) they applied to on the Self-identification Application. The applicant is responsible for ensuring the Self-identification Application is submitted by the application deadline(s) for

the program(s) in addition to completing any other application requirements. Applicants applying to multiple Faculty of Health Sciences programs at the same time must complete the Self-identification Application by the application with the earliest application deadline.

Indigenous applicants who wish to apply to the MEP through the FIAP are required to complete the Self-Identification Application and apply to the MEP by January 15 of the year in which they are applying. All appropriate transcripts from secondary and post-secondary education must be submitted to the Office of the Registrar by February 1.

Applicants must meet the same minimum academic criteria for admission as set out for the general pool of candidates.

To support Indigenous applicants who opt-in to the FIAP, the McMaster MEP offers the following additional admission support:

1. FIAP applicants are given the opportunity to attend an online information session during which time the MEP representatives answer questions about the profession and provide details about the program, as well as next steps in the admission process.
2. For FIAP applicants who meet minimum eligibilty criteria, we offer a virtual personal panel interview conducted by an Indigenous interview panel that includes Indigenous Healthcare providers and senior students.
3. The last component of the FIAP application is the completion of the Multiple Mini Interviews, which will be completed at the same time as all other applicants.

Transfer Credit

Students with previous university education may be eligible for transfer credits for non-clinical courses in Levels I and II. Transfer credits will be determined on an individual basis, after the admitted students have accepted their Offer of Admission.

Selection Procedure

The MEP admits a select number of applicants each Fall, so the admission process is very competitive. The admission requirements stated for eligibility are minimum requirements. Preference will be given to applicants with the best qualifications. The average standing required for admission in recent years has been in the high 90% to mid 80% range. The selection process is comprised of two phases:

Phase 1: Assessment of Academic Eligibility / Achievement and Supplementary Application Review

- Review of all applications for completeness and to determine academic eligibility.
- Based on a combination of academic achievement and supplementary application data (i.e., Casper assessment results), top-ranking applicants will be invited to the interview in Phase 2.
- Applicants must be successful in phase one to be considered in Phase 2.

Phase 2: Multiple Mini Interview (MMI)

- The MMI consists of a series of questions used to assess non-cognitive qualities including cultural sensitivity, maturity, teamwork, empathy, reliability, and communication skills. Applicants are assessed based on their verbal and written responses to interview questions. Each applicant will complete up to 10 timed interview questions in a sequential order.
- Offers of admission will be made to the top-ranking applicants based on the assessment of their MMI scores.
- Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

If an unsuccessful applicant or an applicant that refuses their offer of admission wishes to reapply to the MEP, a new application, including transcripts must be submitted the following year.

Application for Deferred Registration

McMaster will normally only grant deferrals on offers of admission when there are special extenuating circumstances. The McMaster MEP will evaluate all requests for deferral on their own merits. A request for deferral (to the subsequent Fall term) will be considered under the following circumstances:

- the student has accepted their undergraduate offer of admission to the university; and,
- all conditions outlined in the Offer of Admission letter have been met; and,
- the student is not intending to return to secondary school or attend another postsecondary institution during the deferral period.

For information on how to formally request a deferral, please see https://registrar.mcmaster.ca/events/admission-deferrals/

Unsuccessful Applicants

If an unsuccessful applicant, or an applicant who refuses their offer of admission, wishes to reapply to the MEP, a new application, including transcripts and supplementary materials must be submitted.

Application Deadline

Submission of completed application forms to the OUAC must be received by the University no later than January 15 of the year in which registration is expected. All certified transcripts from secondary and post-secondary education previously attended by an external applicant must be forwarded to the Office of the Registrar and received by February 1. Applications received after January 15 will not be considered.

Immunization

The *Ontario Public Hospitals Act* requires that all persons working in a hospital setting meet certain criteria regarding surveillance for infectious diseases. In order for the requirement of the legislation to be met, students are required to complete the immunization screening process by July 15th in the year of admission and each subsequent academic year. Failure to maintain immunizations will result in suspension of clinical training. Information regarding immunization requirements and how to provide proof of immunization will be sent to successful applicants prior to registration.

Police Records Check

An offer of admission is contingent upon provision of a Police Records Check, which must be completed by July 31st of the year of admission. All registered students are required to have a satisfactory Police Records Check completed by July 31st annually. Expenses for the Police Records Check are the responsibility of the student.

The Police Records Check includes a Vulnerable Sector Screening and check of the Royal Canadian Mounted Police (RCMP), National Canadian Police Information Centre (CPIC) database for the following:

- All records of Criminal Code (Canada) convictions
- All pardoned sexual offences
- All record of convictions under the Narcotic Control Act
- All records of convictions under the Food and Drug Act
- Any undertakings to enter into a Surety to Keep the Peace
- Any Restraining Orders issued under the Criminal Code (Canada) or the Family Act
- All outstanding warrants and charges

Financial Information

In 2023-2024 the tuition fees for a student in Level I of the MEP were $8,261.19 for Ontario students and $9,381.19 for Out of Province students for an eight-month academic year. Supplementary fees are estimated at $523.64 per year, but are subject to change.

Additional costs include books, supplies, and other learning resources estimated at $1,500.00 - $2,000.00 over the course of the entire program.
Students must have access to a vehicle for all placement courses.
Students should expect to relocate for clinical placements.
Students should expect to cover their own travel and accommodation costs during the program. The program strongly suggests that students join the Association of Ontario Midwives as a student member.

Academic Regulations

Student Academic Responsibility
You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.
Access to Courses
All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. All students are encouraged to register as soon as Mosaic is available to them.
Student Communication Responsibility
It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

In addition to meeting the General Academic Regulations of the University, students enrolled in the Midwifery Education Program will be subject to the following program regulations.
The MEP reserves the right, at any point during the term, to remove a student from a clinical placement or laboratory setting if the student exhibits unsafe clinical practice or behaviour that places clients or others at risk and/or violates the *Midwifery Act of Ontario*. Such removal will result in the student receiving a grade of F and may result in dismissal from the program.

Continuation in the Program

All courses (clinical and non-clinical) with the subject abbreviation MIDWIF and HTHSCI (as outlined in the Curriculum Plan) are required for the degree. Students are reviewed at the end of each term. To continue in Good Standing in the program, students must achieve a Cumulative Grade Point Average (CGPA) of at least 6.0 in all graded courses and achieve a Pass/Satisfactory performance in all clinical courses, including a minimum of B- in the tutorial and exams portions of clinical courses.

Good Standing

A student is considered to be in Good Standing when all of the following criteria are met:

- Level I
  - students must successfully achieve a Cumulative Grade Point Average (cGPA) of at least 6.0;
  - achieve a minimum grade of B- in MIDWIF 1D03 and 1G03, and HTHSCI 1C06 A/B (or 1C03 & 1CC3)
  - achieve a minimum grade of C- in each of HTHSCI 1J03 and MIDWIF 1F03, with the exception that a minimum grade of D is acceptable in one of those courses
  - achieve a minimum grade of C- in HTHSCI 1D06 A/B (1D03 & 1DD3) these courses do not have an acceptable grade of D as an exception)
  - receive a passing grade (minimum D-) in any required midwifery, health science, or indigenous studies graded course, other than those specifically stated above
- Level II
  - Students must successfully achieve a cumulative Grade Point Average (cGPA) of at least 6.0
  - achieve a minimum grade of B- in MIDWIF 2G06
  - achieve a minimum grade of C- in each of HTHSCI 2M03 and MIDWIF 2F03, with the exception that a minimum grade of D is acceptable in one of those courses
  - achieve a Pass/Satisfactory performance, including a minimum grade of a B- in the tutorial and exams, in MIDWIF 2H15/2M15
  - receive a passing grade (minimum D-) in any required midwifery, health science, or indigenous studies graded course, other than those specifically stated above
- Level III
  - Students must successfully achieve a cumulative Grade Point Average (cGPA) of at least 6.0
  - achieve a minimum grade of B- in MIDWIF 3F03 and 3J06/3N15
  - achieve a Pass/Satisfactory performance, including a minimum of a B- in the tutorial and exams, in all clinical courses MIDWIF 3I03 & 3L03 (or MIDWIF 3L01 & 3M02), 3K06 & 3A09 (or MIDWIF 3M09), and 3H15
- Level IV
  - Students must successfully achieve a cumulative Grade Point Average (cGPA) of at least 6.0
  - achieve a Pass/Satisfactory performance, including a minimum of a B- in the tutorial and exams, in MIDWIF 4A15 and 4B15

Probation

A student will be placed on probation if any of the criteria required for Good Standing, as outlined above, are not met:
You must have a Grade Point Average (GPA) of at least 6.0 to continue in the program. If your GPA is from 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once.
If your GPA is 3.5 to 5.4, you must transfer to another program for which you qualify, or you may enroll in the Bachelor of Heath Science Program as a transition student for one reviewing period.
If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a transition student. You may be on academic probation only once.
If your GPA is less than 3.0 you may not continue at the University.
A student previously on Academic Probation who fails to achieve good standing (minimum 3.5) at a subsequent review, cannot continue at the university unless granted reinstatement. Please refer to the *General Academic Regulations* section in the undergraduate calendar.

Graduation Requirements

Students who have successfully completed Level III of the program may request permission from the B.H.Sc. (Midwifery) Program Office to graduate with a three-level B.H.Sc. degree. Please refer to the *General Academic Regulations* section in this Calendar for additional information related to graduation.

Required to Withdraw

A student will be required to **withdraw** from the program if any of the following criteria is met. The student:

1. obtains a cumulative Grade Point Average (cGPA) of less than 6.0 at the end of a probation period;
2. fails two of the following courses MIDWIF 1D03; 1G03; 1F03; 2F03, 2G06; 3J06/3N15; 3F03; HTHSCI 1C06 (or 1C03 & 1CC3); 1D06 (or 1D03 & 1DD3); 1J03; 2M03; MIDWIF 2H15/2M15; 3I03 & 3L03 (or MIDWIF 3L01 & 3M02); 3K06 & 3A09 (or MIDWIF 3M09); 3H15; 4A15; 4B15;
3. fails the second attempt at a course or receives a grade in the second attempt below C- for any of HTHSCI 1C06 (or 1C03 & 1CC3), 1D06 (or 1D03 & 1DD3), 1J03, 2M03, MIDWIF 1F03 (or HTHSCI 3C04), 2F03 or below B- in MIDWIF 1D03; 2G06; 3F03; 3J06/3N15;
4. fails to complete program requirements for graduation within the maximum allowable time (five years) (not inclusive of approved leaves of absence).

Deans' Honour List, Graduation with Distinction, Provost's Honour Roll

Students will be evaluated for standing on the Deans' Honour List, Graduation with Distinction and the Provost's Honour Roll only upon completion of the program. Students will be named to the Deans' Honour List and will Graduate with Distinction if they receive no failing, provisional or unsatisfactory grades in any courses throughout the program and achieve a GPA of 9.5, on graded courses taken throughout the program.

For the Provost's Honour Roll, students will be assessed if they have a GPA of 12.0 and have not received a failing, provisional or unsatisfactory grade in any course throughout the program.

Graduation Requirements

A student is **eligible** for graduation when all of the following criteria are met. The student must:

1. complete all required courses, including electives, and be in Good Standing (see above); and,
2. complete all courses for the degree within five years (not inclusive of approved leaves of absence).

The practice of midwifery is regulated by the College of Midwives under the *Midwifery Act*, 1991 and the *Regulated Health Professions Act*, 1991.

The MEP monitors and documents students' clinical experience in order that students meet minimum practice requirements to be eligible for registration to practice. Graduation from the MEP does not guarantee registration with the College of Midwives of Ontario. All applicants to the College must meet additional registration requirements. New graduates are required to work in an established practice for their first year of registration.

Regulatory requirements are subject to change from time to time.

Bachelor of Health Sciences

MIDWIFERY PROGRAM (B.H.SC.)

The four-year program spans nine terms and includes courses from basic sciences, social sciences, health sciences, Indigenous studies and electives, in addition to clinical courses. A variety of course formats include both in-person and online learning. Teaching methods include lecture format, small group tutorials, self-directed activities and practical learning experiences in both laboratory and clinical practice settings.

Intensives

An Intensives course is 4-7 days in duration and consists of workshop-style presentations focusing on clinical skills. Attendance (100%) is mandatory.

Clinical Courses

Clinical courses consist of a practical and theoretical components and concurrent problem-based weekly tutorials. Students are assigned to a midwifery practice as well as to interprofessional placements including nursing, neonatal intensive care nursery, and obstetrical practices. Throughout the program, students will be placed in more than one midwifery practice within the McMaster MEP catchment area and will gain clinical experience in a hospital setting and with an obstetrician. **Students should expect to relocate for clinical placements. Travel and living expenses are the responsibility of the student.**

As described above, the MEP reserves the right, at any point during the term, to remove a student from a clinical placement or laboratory setting if the student exhibits unsafe clinical practice or behaviour that places clients or others at risk and/or violates the *Midwifery Act of Ontario*. Such removal will result in the student receiving a grade of F and may result in dismissal from the program.

Requirements for Students who Enter the Midwifery Program in 2023 or Later

135 units total (Levels I to IV)

NOTE

An asterisk (*) following a course code indicates that transfer credit may be available.

LEVEL I: 30 UNITS

6 units

- HTHSCI 1D03 - Human Anatomy and Physiology I * (Term 1)
- HTHSCI 1DD3 - Human Anatomy and Physiology II * (Term 2)

6 units

- HTHSCI 1C03 - Social Justice and Healthcare I (Term 1)
- HTHSCI 1CC3 - Social Justice and Healthcare II (Term 2)

3 units

- INDIGST 3H03 - Indigenous Medicine I: Philosophy *
- INDIGST 3HH3 - Indigenous Medicine II: Practical *

3 units

- MIDWIF 1F03 - Introduction to Research Methods and Critical Appraisal * (Term 1)

6 units

- MIDWIF 1D03 - Midwifery The Profession I (Term 1)
- MIDWIF 1G03 - Midwifery The Profession II (Term 2)

3 units

3 units

- One Humanities or Social Sciences elective from the Faculties of Health Sciences, Humanities, or Social Sciences*

LEVEL II: 30 UNITS

3 units

- HTHSCI 2M03 - Reproductive Physiology (Term 1)

15 units

- MIDWIF 2M15 - Fundamentals in Midwifery 1 (Term 2 or Term 3)

3 units

- MIDWIF 2F03 - Pharmacotherapy (Term 1)

6 units

- MIDWIF 2G06 - Clinical Skills for Midwifery Practice (Term 1)

3 units

- One Humanities or Social Sciences elective from the Faculties of Health Sciences, Humanities, or Social Sciences

LEVEL III: 45 UNITS

15 units

- MIDWIF 3N15 - Fundamentals in Midwifery 2 (Term 3 Level II or Term 1 Level III)

3 units

- MIDWIF 3L01 - Advanced Clinical Skills I
- MIDWIF 3M02 - Advanced Clinical Skills II

9 units

- MIDWIF 3M09 - Fundamentals in Midwifery 3 (Term 1 or Term 2)

3 units

- MIDWIF 3F03 - Midwifery Issues (Term 1 or Term 2)

15 units

- MIDWIF 3H15 - Complex Care I (Spring/Summer) (Term 3)

LEVEL IV: 30 UNITS

15 units

- MIDWIF 4A15 - Complex Care II (Term 1)

15 units

- MIDWIF 4B15 - Midwifery Clerkship (Term 2)

Requirements (for students who entered in 2023 or prior)

Please note - The requirements outlined below are for students who entered the MEP before 2023. However, any student returning from a leave or withdrawal in 2023-24 and onwards will be asked to enter the new curriculum stream detailed above.

135 units total (Levels I to IV)

NOTE

An asterisk (*) following a course code indicates that transfer credit may be available.

LEVEL I: 30 UNITS

6 units

6 units

- HTHSCI 1C06 A/B - Social Justice and Healthcare

3 units

- INDIGST 3H03 - Indigenous Medicine I: Philosophy *
- INDIGST 3HH3 - Indigenous Medicine II: Practical *

3 units

- MIDWIF 1F03 - Introduction to Research Methods and Critical Appraisal * (Term 1)

6 units

- MIDWIF 1D03 - Midwifery The Profession I
- MIDWIF 1G03 - Midwifery The Profession II

3 units

3 units

- One Humanities or Social Sciences elective from the Faculties of Health Sciences, Humanities, or Social Sciences*

LEVEL II: 30 UNITS

3 units

- HTHSCI 2M03 - Reproductive Physiology (Term 1)

15 units

- MIDWIF 2H15 - Normal Childbearing (Term 2)

3 units

- MIDWIF 2F03 - Pharmacotherapy (Term 1)

6 units

- MIDWIF 2G06 - Clinical Skills for Midwifery Practice (Term 1)

3 units

- One Humanities or Social Sciences elective from the Faculties of Health Sciences, Humanities, or Social Sciences*

LEVEL III: 45 UNITS

3 units

- MIDWIF 3I03 - Advanced Clinical Skills I (Term 1)

6 units

- MIDWIF 3J06 - Preparation for Primary Maternity Care (Term 1 or Term 2)

6 units

- MIDWIF 3K06 - Interprofessional Practice II (Term 1 or Term 2)

9 units

- MIDWIF 3A09 - Interprofessional Practice I (Term 1 or Term 2)

3 units

- MIDWIF 3F03 - Midwifery Issues (Term 1 or Term 2)

3 units

- MIDWIF 3L03 - Advanced Clinical Skills II (Term 2)

15 units

- MIDWIF 3H15 - Complex Care I (Spring/Summer) (Term 3)

LEVEL IV: 30 UNITS

15 units

- MIDWIF 4A15 - Complex Care II (Term 1)

15 units

- MIDWIF 4B15 - Midwifery Clerkship (Term 2)

B.H.Sc. Physician Assistant Program

Health Sciences Centre (HSC), Room 4H31A
paprogram@mcmaster.ca

ASSISTANT DEAN, Physician Assistant Education Program

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Siobhan Baigent, Chair, Medical Communications, BHSc BHSc(PA) CCPA

PROGRAM MANAGER

Lavinia Carreira

Bachelor of Health Sciences

PHYSICIAN ASSISTANT (B.H.SC.)

https://physicianassistant.mcmaster.ca/

Mission Statement

The mission of the McMaster University Physician Assistant Education Program is to train competent, innovative, and caring individuals in medicine to work in a collaborative model of practice to enhance and extend equitable healthcare delivery in Canada.

Program Overview

McMaster was among one of the first institutions in Canada to launch a Physician Assistant Education Program in 2008. The PA Education program will lead to the Bachelor of Health Sciences (Physician Assistant) degree. The program is taught using inquiry and problem-based learning, which enhances each student's ability to think critically, solve problems, demonstrate initiative and independence in practice, and promote lifelong learning.

Travel within the Program

Students are responsible for arranging their own travel to and from learning settings external to the University (regardless of site). Students who enroll in the PA Education Program are expected to travel to learning settings in the Hamilton and surrounding area, including but not limited to Halton, Peel, Brant, Haldimand-Norfolk, Niagara, Kitchener-Waterloo, Toronto, and other Ontario clinical sites.

Curriculum Plan

The twenty-four month program begins in September. The first year focuses on the study of the clinical sciences underpinning health care delivery. In the second year, students enter into clinical placements.

YEAR I: CLINICAL SCIENCES

The 48-week clinical sciences curriculum is modeled on the McMaster Medical School COMPASS Curriculum and is designed to meet the profession's "Entrustable Professional Activities" (EPAs) and required competencies (Canadian Association of Physician Assistants), and the EQual Health Education accreditation requirements through Accreditation Canada. The curriculum is delivered in small group problem-based learning modules with a focus on the physician assistant's role in health care and the promotion of inter-professional education and training.

The clinical sciences curriculum consists of three Medical Foundations composed of the following components:

1. Clinical Sciences (Tutorials and Large Group Sessions)
2. Clinical Skills (Interviewing, Examination and Reasoning, Anatomy, Simulations, Standardized Patient Encounters)
3. Professional Competencies
4. Medical Communications
5. Early Clinical Exposure placements(ECE)

Medical Foundation 1 (MF1)

- MF1 includes a foundational review (biological sciences), respiratory, cardiovascular, and renal physiology and disease processes (including immunology & neoplasia).

Medical Foundation 2 (MF2)

- MF2 includes the hematological, gastrointestinal, endocrine, and reproductive physiology and disease processes (including immunology & neoplasia).

Medical Foundation 3 (MF3)

- MF3 includes neurologic, psychiatric, and musculoskeletal physiology and disease processes; the final unit covers concept integration through chronic and complex presentations.

YEAR II: CLERKSHIP

In the second year of the program students will undertake 48 weeks of supervised clinical placements. Core experiences will take place in family medicine, medicine, surgery, emergency medicine, pediatrics, geriatrics, and psychiatry. Placements will take place in Hamilton, in the distributed MacCARE campuses, and across Ontario, depending on site capacity. Students are responsible for arranging travel accommodations for clinical rotations. Elective placements will round out the balance of the clinical year and will allow students to pursue additional career interests. Students are responsible for arranging travel accommodations for clinical rotations.

Certification

Graduates will qualify to take the Physician Assistant Certification Council of Canada (PACCC) National examination.

Admission Requirements

Enrolment in the PA Education Program is limited. Possession of the minimum admission requirements does not guarantee an offer of admission. Applicants must achieve a minimum GPA average of 3.0 (on the OMSAS 4.0 GPA scale) by February 1, and complete a minimum of 2 years undergraduate coursework by June 30 - this criteria must be met to start the program in September of the same year. To satisfy the minimum requirements, academic credentials obtained from a Canadian University must be from an institution that is a full member of the Association of Universities and Colleges of Canada (AUCC) or the Council of Ontario Universities (COU). A minimum of 10 full courses or 20 half courses (two years) is required. Courses that employ small group, self-directed or inquiry learning are excellent preparation for the PA Education program, however, there are no specific course or background requirements. There is no requirement for applicants to have carried a full course load. Applicants are expected to have achieved an overall simple average of at least 3.0 on the OMSAS 4.0 scale for consideration, but higher grades may be required to be competitive with other applicants.

Upon acceptance, successful applicants will be required to provide detailed medical information, including a record of completion of required immunizations, evidence of Basic Life Support Provider (formally BLS for Healthcare Providers) certification through the Heart & Stroke Foundation and a satisfactory Police Records Check (at the applicant's expense) upon entering the program and annually thereafter.

Admission Procedures

Application (including the appropriate fee) is to be made through the:

Ontario Universities' Application Centre (OUAC)
170 Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca

An OUAC application is required by **January 15** for admission into the September class of the same year. A supplementary application is required, and access to the supplementary application will be sent by email at the end of February. Please refer to the program's web site for full application details and information regarding the supplementary application form. Upon receipt of the application, supplementary application and certified transcripts, **selected** applicants will be invited to an interview.

Indigenous Applicants

Indigenous participation in the PAEP is important. To ensure equitable admissions we have a facilitated admissions process for First Nations, Inuit and Métis applicants. In accordance with the new McMaster University Indigenous Ancestry Verification policy and the Facilitated Indigenous Application Process (FIAP) of the Faculty of Health Sciences, Indigenous (First Nations, Inuit and Métis) applicants who wish to apply through this stream must complete FIAP, including the new McMaster Indigenous Ancestry Verification process available in 2026 for applicants. Information on the policy, application requirements, and the online FIAP application can be found on the IHLL Website.

Indigenous Applicants must meet the following requirements:

- Indigenous applicants who are endorsed for consideration under the FIAP and who satisfy all PAEP admission requirements, with a minimum GPA of 3.0/4.0 on the OMSAS 4.0 scale will be automatically invited for an interview.
- PA Applicants who wish to be considered under the Indigenous application process must submit the FIAP application by February 1. In addition to the FIAP, applicants must also complete a program application form and the PAEP supplementary application.
- One self-identification application is used for all Faculty of Health Sciences programs that have a facilitated Indigenous admissions stream. The FIAP application must be submitted by the earliest deadline date for the programs which you have applied to.

Canadian Armed Forces Applicants

McMaster supports the training of Canadian Armed Forces (CAF) members interested in career progression as a Physician Assistant. CAF applicants must meet the following minimum entry requirements:

- Minimum 2 years of undergraduate university (A minimum of 10 full courses or 20 half courses at an undergraduate/University level are required)

- Minimum cumulative undergraduate GPA 3.0 on the OMSAS 4.0 scale

If both requirements are met, the CAF applicant will be invited to submit a supplementary application and to participate in the multiple-mini-interview process. Please note that successful CAF applicants are subject to final approval from the Canadian Armed Forces prior to commencing the program.

Offers of Admission

Deadlines for acceptance of an offer are strictly enforced. Failure to meet the conditions and/or submit required documentation by the specified deadline outlined in the admission package will result in cancellation of the offer of admission. Applicants should ensure that they accept their offer of admission as directed well before the specified deadline.

Unsuccessful Applicants

Applications are not held over from one year to another. An unsuccessful applicant may reapply to the Physician Assistant Education Program by submitting a new application, including supporting documentation.

The Admissions Committee will Consider:

- University transcripts and GPA
- Supplementary application
- Multiple Mini Interview (MMI) scores

Application for Deferred Registration

Deferred registrations will not normally be granted in the PA Education Program. Deferred registration may be granted only under exceptional circumstances to those candidates who have been admitted and have accepted the offer. Registration may be deferred for one year only. The request for deferral, outlining the reasons for the request, must be submitted within two weeks of the offer of admission. **Deferral is not guaranteed.**

Student Communication Responsibility

It is the student's responsibility to:

- Maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- Use the university provided e-mail address.
- Regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @medportal.ca and @mcmaster.ca alias.

Registration in the Physician Assistant Education Program (PAEP) implies acceptance on the part of the student of the objectives of that program and the methods by which progress toward the achievement of those objectives is evaluated. Since the academic regulations are continually reviewed, the University reserves the right to change the regulations.

Advanced Standing/Transfer

The structure of the PA Education Program requires that all students complete the entire program starting with Medical Foundation 1. There is no provision for advanced standing or transfer into the program.

Full-Time Status

The structure of the program requires that all students be registered in the program on a full-time basis and attendance in all components of the program is mandatory.

Voluntary Withdrawal from the Program

Students must follow the withdrawal procedures for McMaster University.

Readmission after Voluntary Withdrawal

Former Physician Assistant students who voluntarily withdrew in good standing from the B.H.Sc (PA) Program must apply for readmission by January 15. Students previously admitted through McMaster University must also apply for readmission through the Office of the Registrar. Readmission requests are carefully reviewed by the Admissions Committee and consideration will be given to evidence regarding the student's academic performance in the program, a letter outlining the decision to return, and activities since last registered in the program. Readmission is not automatic or guaranteed. Decisions are normally communicated between May and June for September entry.

Essential Skills and Abilities Required for a PA Education Program

Graduates must be able to diagnose and manage health problems and provide comprehensive, compassionate care to their patients. For this reason, students in the PA program must possess the cognitive, communication, sensory, motor, and social skills necessary to interview, examine, and counsel patients, and competently complete certain technical procedures in a reasonable time while ensuring patient safety.

PA Programs have embedded expectations of both knowledge- and skills-based competencies. Prospective candidates should be aware that cognitive abilities, physical examination proficiencies, management skills, communication ability, and professional behaviours are all evaluated in timed simulations of patient encounters.

Non-Academic Requirements

To ensure the safety of all students and patients, the Physician Assistant Education Program requires that all students provide detailed medical information and a satisfactory Police Records Check (at the applicant's expense) upon entering the program and annually thereafter. More detailed information will be provided upon acceptance into the program. For information on health screening please visit McMaster University > Health Screening Information > Health Screening Information. For information on police clearance (Vulnerable Sector Screen VSC) please visit https://fhs.mcmaster.ca/pcbe/police_records_check.html.

Additional requirements include:

- Basic Life Support Provider (formally BLS for Healthcare Providers) certification through the Heart & Stroke Foundation
- Online Health and Safety modules available through Avenue to Learn
- Mask Fit Testing

Students must provide proof that ALL requirements have been met before practicing in a lab or professional practice setting. Students who fail to provide this proof will:

- Not be allowed to enter a lab or professional practice setting, or
- Be removed from a lab or professional practice setting until requirements are met.
- Be reviewed under the Faculty of Health Sciences Professionalism Policy for failing to meet a requirement in a professional program.

Immunization

The Ontario Public Hospitals Act requires all students placed in a hospital setting to meet certain criteria related to surveillance for infectious diseases. Detailed medical information, including a record of completion of required immunizations, will be required upon acceptance and annually thereafter. Failure to produce this information will result in a student being precluded from commencing professional practice course(s) or a suspension from professional practice course(s) until such time that they are able to produce the information and have fulfilled the requirements, which may result in the student having to take the course(s) in a different term. Information on specific medical

information that is required will be sent to students prior to commencing their studies in the program and each year thereafter prior to the start of the academic year.

Police Records Check

Students in the PA Education Program work with vulnerable populations. All students are therefore required to have a satisfactory Police Record Check completed annually. The Police Record Check must include Vulnerable Sector Check (VSC). Expenses for the Police Record Check are the responsibility of the student. Ensure you request two original copies from your Police Services as your placement may also request an original VSC or follow the direction from the FHS Professionalism Office to submit your VSC with a self-addressed stamped envelope for return of the original copy. Registered students who have been convicted of an offense under the Criminal Code (Canada) for which they have not been pardoned may be denied the opportunity to enter professional practice placement.

CPR Certification

Upon acceptance, successful applicants will be required to provide evidence of Basic Life Support Provider (formally BLS for Healthcare Providers) certification through the Heart & Stroke Foundation annually. We do require BLS from Heart & Stroke Foundation to ensure students can obtain ACLS certification. The cost of a course is the responsibility of the student. Courses are readily available in most communities. Certification obtained through an online provider will not be accepted. Certificate must be obtained in Canada.

Canadian Physician Assistant Certification

Program graduates will qualify to take the Physician Assistant Certification Council of Canada (PACCC) National examination. Program graduates must be a member of the Canadian Association of Physician Assistants (CAPA) to challenge the exam.

Financial Information

In 2024-25 the tuition fee for a student in Year I of the PA Education Program was approximately $12,000 for a 12-month academic term, plus supplementary fees estimated at $1,600.00 per year. Additional costs include books, diagnostic equipment and other learning resources estimated at $2,500.00. Students are also responsible for their transportation costs related to clinical study.

There is a bursary program which has been developed by the University. Bursaries may be awarded to students who are Canadian citizens based on demonstrated financial need. Bursaries are intended to offset provincial financial assistance and cannot supplement the full cost of education. For further information, please contact the Education program web site or the Student Financial Aid and Scholarships Office at McMaster University.

Faculty of Humanities

Chester New Hall, Room 112
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humanities@mcmaster.ca

DEAN OF HUMANITIES
P. Swett/A.B., M.A., Ph.D.

ACTING ASSOCIATE DEAN OF HUMANITIES
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J. Osterman/B.A., B.Admin., M.Ed.

ACADEMIC ADVISORS
J. Richardson/B.A.
A. Skrtic/B.A.
D. Burns

CAREER AND EXPERIENTIAL PROGRAMS
C. Foley/B.A.
S. McDonald/B.A., M.A

At McMaster, Humanities means leadership.

Look at any list of the attributes of effective leadership, and what do you find?

- Strong personal and ethical values;
- The ability to influence others by making reasoned, well thought out arguments;
- Emotional intelligence, achieved both by knowing oneself, and by being able to see the world from the perspective of others;
- Social intelligence, the ability to collaborate, to engage others in conversation, to be sensitive to social situations and to work with those culturally different from ourselves;
- Communication, the ability to effectively convey complex ideas in clear and inspiring ways;
- Creativity, an openness to new ideas and a willingness to question everything, not for the sake of asking questions, but to make this a better world.

These are the skills that build leaders in our communities, in our neighbourhoods, in our classrooms, in our social agencies, in our arts organizations, and in businesses, from corporations to start-ups. Employers in all sectors are finding that these soft skills are hard.

That's where Humanities comes in. In our disciplines, we focus on values, on developing persuasive and rational arguments, on communicating complex and challenging ideas, on collaboration, on creativity, and on critical and constructive thinking. Our students go on to successful leadership roles as lawyers, doctors, teachers, professors, policy analysts, journalists, museum curators, artists, musicians, translators, speech language pathologists, and business executives, to name just a few.

How you get there is up to you. We offer a broad range of programs, many of which can be taken in combination. They include: iARTS (Integrated Arts), Music, Global Peace and Social Justice, Greek and Roman Studies, History, Communication Studies, Media Arts, English and Cultural Studies, French, Cognitive Science of Language, Linguistics, Philosophy, and Justice, Political Philosophy and Law. You can combine most programs with those in Social Sciences, Mathematics with English, French, History or Philosophy, or Biology and Philosophy. We offer courses in a variety of languages and in gender studies, many of which can lead to a Minor. Students may also take a Specialized Minor in Commerce; an Interdisciplinary Minor in Africa and Black Diaspora Studies, Archaeology, Community Engagement, Social Justice and Inclusive Communities, or Sustainability; or a Concurrent Certificate in Applied Ethics and Policy (CAEP), Applied Linguistics, Cinema Studies, Creative Writing and Narrative Arts (CWNA), Critical Curatorial Studies (CCCS), Critical Heritage Studies, Essential French, Professional French, International Engagement, Leadership Equity and Social Change, or Language of Medicine and Health.

We look forward to having you in our classrooms, our workshops, our performance spaces and our laboratories. We will work with you and help you work with others to build the skills you need to be the agents of change that our world so desperately needs.

Types of Degree Programs

Upon successful completion of Humanities I, a student may be admitted to a program of study leading toward a Bachelor of Arts degree. Completion of Music I (on pause) may lead to a Bachelor of Music (Honours) or Bachelor of Arts degree. Completion of Integrated Arts I leads to a Bachelor of Fine Arts

(Honours) degree.

Single Honours Program

Honours Bachelor of Arts programs consist of a total of 120 units of work typically completed over four years of full-time study. Honours programs provide a concentration in the work of a single discipline (e.g. History). The Honours Bachelor of Music (B. Mus. Honours - on pause) consists of 123 units total, with three years of full-time Music study beyond Music 1. The Honours Bachelor of Fine Arts (B.F.A. Honours) is completed in 120 total units.

Combined Honours Program

Subject to possible timetable restrictions, and provided that the student meets the requirements for entry into each of the relevant Honours programs, a student may combine work in any two disciplines within the Humanities for completion of a Combined Honours Bachelor of Arts degree (e.g. English and Global Peace & Social Justice). These combinations are available within the Faculty, in combination with programs in the Faculty of Social Sciences (e.g. History and Political Science), and with select offerings in the Arts and Science Program, or select combinations with Math or Biology. Students will complete 120 units, including approximately 36 units of work beyond Level I in each component of the program (normally 12 units per level in each subject). The Honours B.A. in Justice, Political Philosophy and Law is not available in combination with another subject.

B.A. Program

Bachelor of Arts programs consist of a total of 90 units, typically completed over three years of full-time study, and concentrated in the work of a single discipline.

The content and the requirements of Single Honours, Combined Honours and other B.A. programs are found after the Academic Regulations below.

There are a number of Humanities courses without prerequisites which may be taken as electives. Individual course descriptions are listed by department in the Course Listings section of this Calendar.

Not only are students from other Faculties able to take individual courses which have no prerequisites, but they are also able to transfer into any of the degree programs offered by the Faculty of Humanities. For the majority of programs in the Faculty, admission may be gained after the successful completion of any Level I program at the university, providing this includes the necessary program requisites as outlined in the admission statement for each Humanities program as described under Programs for the B.A., B.A. (Honours) and B.Mus. (Honours) Degrees.

The Humanities Concurrent Certificate: Skills for Life

The Humanities Concurrent Certificate: Skills for Life

The Faculty of Humanities cares deeply about the academic and post-academic success of its students. The courses are designed to provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The Humanities Skills certificate is designed to complement a student's disciplinary degree.

Certificate Requirements

Notes

1. All BA, Honours BA, and combined Honours BA students in the Faculty of Humanities who complete Humanities I will be required to complete a mandatory, concurrent skills certificate.
2. The following students will be exempt from completing the skills certificate:

i. Students who enter Music I or Integrated Arts I
ii. Students who transfer into the Faculty of Humanities after Level I
iii. Single Honours BA students in the Faculty of Humanities who complete a Specialized Minor in Commerce
iv. Students in some Combined Honours B.A. programs may be exempt from completing the certificate. Contact the Humanities Academic Advising Office for more information.

3. Students who are exempt from the requirement to complete this skills certificate may nevertheless elect to do so by completing the above-mentioned courses. This concurrent skills certificate will be entered in the student's academic transcript upon graduation.

Requirements

18 units total

9 units

- HUMAN 1DL3 - Digital Literacy for the Humanities
- HUMAN 1HL3 - Humanities for Life: The Value of a Humanities Degree
- HUMAN 1VV3 - Voice and Vision: Words to Change the World

3 units

- HUMAN 2CP3 - Humanities Career Planning and Development

3 units from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship*
- HUMAN 3IP1 A/B S - Part-time Internship*

*HUMAN 3IF1 and *HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 units from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3IF1 A/B S - Full-time Internship* (if not previously taken)*
- HUMAN 3IP1 A/B S - Part-time Internship* (if not previously taken)*
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and *HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

Humanities Internship Program

Humanities internships are paid, part-time (typically 5-25 hours per week) or full-time (typically 26-40 hours per week) work placements of 4, 8, 12 or 16 consecutive months. There are two ways to participate in the Humanities Internship Program: 1) Humanities Cultivated Internships or 2) Student Initiated Internships.

Once a placement has been secured, students will enrol in either HUMAN 3IP1: Part-Time internship or HUMAN 3IF1: Full-Time Internship. For multi-term internships (8, 12 or 16 months in duration), students will also enrol in HUMAN 3IP0 or HUMAN 3IP0 for each term prior to the final 4 months of the work placement. There is a $200.00 administrative fee for each 4-month work term. The fee will be processed via your student account and is associated with

enrolment in HUMAN 3IF0, HUMAN 3IF1, HUMAN 3IP0, or HUMAN 3IP1 as it applies to the internship position.
Upon successful completion of an internship, students receive 1-unit of academic credit and a transcript notation.

Humanities Cultivated Internships

Humanities Cultivated Internships are opportunities cultivated by the Faculty for undergraduate students. These opportunities are posted on McMaster's online job posting system (OSCARplus).
The details and application deadlines for these roles are determined by the employer. Some postings may require students to apply directly with the employer, in addition to applying via OSCARplus.

Student-Initiated Internships

Students can secure an employment opportunity on their own and still participate in the Humanities Internship Program. After securing a position, students should complete the application form, which asks for student information, employer information, a description of the position, and permission for staff to contact the employer.
The application form must be submitted to hmcareer@mcmaster.ca prior to the dates outlined on https://humcareers.humanities.mcmaster.ca/student-resources/internships/

Eligibility for Humanities Internship Program

To participate in the Humanities Internship Program, students must meet the following criteria:

- Registered either part-time or full-time in an undergraduate degree program within the Faculty of Humanities
- In good academic and financial standing with McMaster University
- Currently in Level II or above
- Eligible to work in Canada for the full duration of the internship work term. Students are responsible for ensuring that they are authorized to work in Canada. International students should contact International and Exchange Student Experience (IESE).
- Returning to McMaster University to complete full-time study after completion of an internship work term **(Full-Time Internships only)**

Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities

The Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities students is administered by the DeGroote School of Business. A maximum of 30 students will be admitted each year to this Specialized Minor.

Notes

1. For admission, Humanities students (Level 1) must complete an application for admission to the Minor by using the Service Request function in the Student Centre in Mosaic during the Program/Plan Selection process in April.
2. Students must also be admitted to a Single Honours B.A. in one of the following programs: Cognitive Science of Language, Communication Studies, English and Cultural Studies, French, Greek and Roman Studies, History, iARTS (Integrated Arts), Justice, Political Philosophy and Law, Linguistics, Media Arts, or Philosophy.
3. Students seeking the Specialized Minor in Commerce for Humanities must have completed ECON 1B03, and one of MATH 1MM3 or (1B03), ECON 1BB3, COMMERCE 1AA3, 1BA3, 1DA3 OR 1MA3.
4. Students must have a Grade Point Average of at least 6.0 to be considered for entry into the Minor.
5. Students planning to apply to the accelerated MBA program at McMaster are strongly encouraged to consult with MBA Admissions at the Ron Joyce Centre regarding admission requirements. In addition to meeting all other admission criteria students must complete, with a minimum grade of B-, the following courses:
   - all three of ECON 1B03, 1BB3, and MATH 1MM3 (or 1M03);
   - all level 1 and 2 Commerce courses listed below, with the exception of COMMERCE 2DA3;
   - COMMERCE 3MC3

Requirements
33 units total
24 units
- COMMERCE 1AA3 - Introductory Financial Accounting
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1DA3 - Business Data Analytics
- COMMERCE 1MA3 - Introduction to Marketing
- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- COMMERCE 2DA3 - Decision Making with Analytics
- COMMERCE 2FA3 - Introduction to Finance
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 2KA3 - Information Systems in Management
- COMMERCE 2MA3
- COMMERCE 2QA3
- COMMERCE 2OC3 - Operations Management
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3S03 - Management Skills Development
- ECON 1B03 - Introductory Microeconomics

3 units
from
- HUMAN 3CM3
- HUMAN 3LM3
- HUMAN 3EL3 - Emotionally Intelligent Leadership

6 units
- Level III or IV Commerce courses

Minor

A Minor is an option available to a student enrolled in a four-level Honours program. Normally, you must complete a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the minor. At least 18 units must be completed at McMaster. Students are responsible for ensuring that they take courses that meet these requirements **(using elective units only)**. Those who have the necessary requirements may apply for recognition of a Minor when they graduate. If recognition for a Minor is granted, it will be recorded on the student's transcript. Minors cannot be revoked once approved. **Students may return for a second degree in the subject in which they have obtained a Minor**, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section in this Calendar.

Concurrent Certificates

Concurrent certificates are an option available to any student in an undergraduate degree program, and may be completed as part of a student's elective credit. Some concurrent certificates will require a student be admitted to this option, while others may involve completion of course credit and declaring certificate completion at the time of graduation. Students should consult the relevant certificate's guidelines for admission and completion, and/or the department offering the concurrent certificate for additional information.
Concurrent certificate programs offered by the Faculty of Humanities include:

- **Concurrent Certificate for Applied Ethics and Policy**

(CAEP) *(offered by the Department of Philosophy)*
- **Concurrent Certificate in Applied Linguistics (ALC)** *(offered by the Department of Linguistics and Languages)*
- **Concurrent Certificate in Cinema Studies** *(offered by the School of Arts)*
- **Concurrent Certificate in Creative Writing and Narrative Arts (CWNA)** *(offered by the Department of English and Cultural Studies)*
- **Concurrent Certificate in Critical Curatorial Studies (CCCS)** *(offered by the School of the Arts)*
- **Concurrent Certificate in Critical Heritage Studies** *(offered by the Department of History)*
- **Concurrent Certificate in Essential French** *(offered by the Department of French)*
- **Concurrent Certificate in International Engagement** *(offered by the Faculty of Humanities)*
- **Concurrent Certificate in the Language of Medicine and Health** *(offered by the Department of Greek and Roman Studies)*
- **Concurrent Certificate in Leadership, Equity & Social Change** *(offered by the Faculty of Humanities)*
- **Concurrent Certificate in Professional French** *(offered by the Department of French)*
- **The Humanities Concurrent Certificate: Skills for Life** *(offered by the Faculty of Humanities)*

Second Language Proficiency

Students embarking on Humanities programs should be aware that graduate schools may require, for admission, proficiency in at least one, and frequently two, languages other than English. In this Faculty, proficiency in at least one language other than English is regarded as an essential tool for students interested in Linguistics. Generally, proficiency in more than one language is a hallmark of most highly-qualified Humanities' graduates seeking the widest range of post-graduation academic and employment opportunities.

Part-Time Study

Students wishing to enter any program offered by the Faculty of Humanities and pursue a program on a part-time basis should consult the appropriate Departmental Counsellor(s) before making their plans.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the General Academic Regulations of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:
- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in Humanities programs, in addition to meeting the General Academic Regulations of the University, shall be subject to the following Faculty Regulations and Policies.

Application for Level II Programs/Plans

For students applying for Honours Justice, Political Philosophy, and Law, the mandatory supplementary application is due prior to the end of Program/Plan Selection in April and is available on the program website. Programs in Media Arts require Program/Plan Selection in April, a mandatory supplementary application and an interview. Supplementary applications, available on the program website, are due prior to the end of April and interviews will be scheduled by the Department.

Step 1: Attend the Humanities Majors Fair (March)

The Faculty hosts a Majors Fair for Level I students to provide information regarding program and plan options for Level II, the range and nature of subjects studied in particular discipline areas, as well as possible career and postgraduate options.

Step 2: Selecting a Level II Program (prior to the end of Program/Plan Selection in April)

Student seeking admission to a Level II program/plan for the following Fall and Winter terms must complete an application by using their MacID to log-on to Mosaic.
- Click the "Student Center" tab.
- Click the "My Academics" link.
- Click "Program/Plan Application" link.

Please note the following *IMPORTANT* **information:**
- Students must rank order their program choices **carefully**, especially if they want to be considered for admission to a limited enrolment program such as Media Arts or Justice, Political Philosophy & Law.
- Students who are admitted to their FIRST choice program, will NOT be

evaluated for any other program selections.
- Students who are NOT admitted to their first choice, will be evaluated for their second choice, third choice, and so on.
- Students may apply to a maximum of **four programs**.
- For students applying for Honours Justice, Political Philosophy, and Law, the mandatory supplementary application is due prior to the end of Program/Plan Selection in April and is available on the program website.
- For students applying for Media Arts, the mandatory supplementary application is due prior to the end of Program/Plan Selection in April and is available on the program website. Interviews will be scheduled by the Department.

Step 3: View your program (May/June)

In late May or early June, students must check the Student Centre in Mosaic to see their program for the Fall and Winter terms.

Minimum Requirements for Entering and Continuing in a Program Beyond Level I

Honours B.A. Programs, B.F.A (Honours) Program, and B.Mus. (Honours) Program:

You must have a Grade Point Average (GPA) of at least 5.0 to continue in an Honours program. If your GPA is 4.5 to 4.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 4.4, you must transfer to another program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

B.A. Programs

You must have a Grade Point Average (GPA) of at least 3.5 to continue in, or graduate from, a three-level B.A. program. If your GPA is 3.0 to 3.4, you may remain in the program, but will be placed on academic probation. You may be on academic probation only once. If your GPA is less than 3.0, you may not continue at the University.

Deferred Examinations and Deferred Term Work

Students who have been granted more than one deferred examination or term-work privilege may be required by their Faculty/Program office to **reduce their course load** during the term in which the deferred examinations are being written. The decision on a reduced load will be made and communicated with the decision on the application for deferred examinations.

Transfer to the Faculty of Humanities

Students from other Faculties are able to transfer to degree programs offered by the Faculty of Humanities provided that they have obtained a Grade Point Average of at least 3.5 and have completed the necessary requirements for admission to a program.

Reinstatement to the Faculty of Humanities

A student who may not continue at the University may apply for reinstatement; however, **reinstatement is not automatic or guaranteed.** Application for reinstatement must be made to the Office of the Registrar using the *Reinstatement Request Form* by the deadline for the session. See the Sessional Dates section of this Calendar.
The form should explain the reasons for the student's inadequate performance, and should include relevant documentary evidence, for example a letter from a physician outlining any medical condition that might have affected the student's academic performance or final grades. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and after admission to McMaster, as well as the nature of the reasons cited in the application letter and the accompanying documentation. Courses taken at another institution may be used to support a request for reinstatement and may not necessarily receive transfer credit.
If students are reinstated at the University, their Grade Point Average will be re-set to 0.0 on zero units, although students may (at Faculty discretion) retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for Graduation with Distinction or other recognition based on the Grade Point Average.
If, at any review after reinstatement, the student's Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Course Selection and Course Changes

Students are responsible for ensuring that their course selection meets the requirements of the degree program in which they are enrolled, that prerequisites have been met, and that, where necessary, permission to take courses has been obtained. They should review their personal advisement report each time they cancel or add courses, and contact an Academic Advisor if they have questions, **particularly if the advisement report shows unused courses**. Students should also be aware that changes to their course load may affect their fees and their eligibility for scholarships and financial aid such as OSAP.

Overload

Fall/Winter Session: Normally students may not enrol in more than 30 units during the Fall/Winter Session (33 units for students in Music I.) **A student with outstanding deferred examinations or incomplete term-work will not be permitted to overload in the following term**. Students may take an overload up to six units under the following circumstances:
1. if a student has a Sessional Average of at least 7.0 in the immediately preceding review period; or
2. if the student is enrolled in the final Level of their program.

Spring/Summer Session: Students wishing to enrol in more than 12 units during the Spring/Summer Session or more than six units in either term of that Session, may do so only with the permission of the Assistant Dean of Humanities.

Letter of Permission

Students in good academic standing, who wish to attend another university to take courses for credit toward a McMaster degree, must first request a Letter of Permission in the Student Centre in Mosaic. A Letter of Permission is automatically cancelled if a student is placed on academic probation, program probation, or required to withdraw from the University. Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the University's minimum residence requirement, will not be included in the calculation of the averages at McMaster, and therefore cannot be used to raise standing. The transcript designation will read T, indicating transfer credit has been granted, when a C- or better is attained. It is the student's responsibility to ensure that an official transcript from the host university is sent to the Academic Advising Office to receive credit for work taken. Students who wish to take a required course must have the approval of the department and advising office.

Summer Immersion Programs in French

- Students must obtain approval from the Academic Advising Office prior to participating in any language immersion program. Failure to obtain prior approval may result in transfer credit not being accepted.
- The government-sponsored Explore summer language program offers university students the opportunity to take French courses at a large number of accredited institutions. Students wishing to attend another university in order to participate in a language immersion program must: (a) petition the Academic Advising Office, and (b) submit detailed course descriptions for assessment.
- Students enrolled in a program in French may take a maximum of six units of credit in this manner as elective work only. Students not enrolled in a program in French may take up to 12 units of credit.

Humanities Study Abroad

Humanities Study Abroad During Level III of Honours Programs

There are two ways to undertake international studies during Level III of an Honours program: (i) a Formal Exchange Program or (ii) Independent Study Abroad through a Letter of Permission.

(I) Formal Exchange Program During Level III of Honours Programs

Formal Exchange Programs are those where McMaster University has an agreement with another institution involving a temporary exchange of students. Exchange students pay tuition fees and supplementary fees to McMaster. No tuition is paid to the other institution. See the General Academic Regulations section of this Calendar and the sections on Eligibility and Application below.

ELIGIBILITY FOR THE MCMASTER EXCHANGE PROGRAM

- Students enrolled in any Honours or Combined Honours program in the Faculty of Humanities may apply to replace all or part of the work of their third year with an acceptable program of study taken at a university approved by the Faculty of Humanities.
- To be eligible to take part in this program, students must have completed at least 60 units of work with a Grade Point Average of at least 7.0. Individual programs may have additional requirements. All requirements must be satisfied by the end of the Fall/Winter session (September-April) preceding the commencement of study elsewhere. Students taking part in this program do not have the option of graduating with a three-year B.A. degree on the basis of work completed in this program, but must return to McMaster University to complete their final 30 units of work.
- Students may receive up to 30 units of credit for a full year of study at another institution. The awarding of transfer credit for work completed elsewhere may be confirmed only after the Academic Advising Office has received transcripts and reviewed students' academic achievements following their return and after they have officially enrolled for Level IV.

APPLICATION FOR THE MCMASTER EXCHANGE PROGRAM

- Students interested in applying for this program should consult the Academic Advising Office approximately one year before they anticipate studying abroad (i.e. during the Fall term of the year in which they enter Level II.) Applications are submitted through International Student Services and are normally due in January of Level II.

(II) Independent Study Abroad

Qualified students may undertake studies at a university abroad through a Letter of Permission. Students enrol at and pay tuition fees to the other institution. See the *General Academic Regulations* section of this Calendar and the sections on Eligibility and Application below.

ELIGIBILITY FOR STUDY ABROAD THROUGH LETTER OF PERMISSION

- Students in good standing in the Faculty of Humanities may apply for a Letter of Permission to take coursework abroad towards their degree. The coursework must be approved in advance by the faculty office. Students must apply directly to, and be accepted by, the other school.
- The awarding of transfer credit for work completed elsewhere may be confirmed only after the Academic Advising Office has received transcripts and reviewed students' academic achievements following their return.

APPLICATION FOR STUDY ABROAD THROUGH A LETTER OF PERMISSION

- Students should consult with an academic advisor on the coursework to be taken abroad prior to applying. A Letter of Permission must be given by McMaster to be permitted to take coursework elsewhere for transfer credit. Students apply directly to the other school to be accepted, and must be aware of the other school's dates and deadlines.

Level I Programs

HUMANITIES ACADEMIC ADVISING OFFICE
Chester New Hall, Room 107, ext. 27532
ASSISTANT DEAN (STUDIES)
J. Osterman/B.A., B.Admin., M.Ed.
ACADEMIC ADVISORS
J. Richardson/ B.A.
A. Skrtic/B.A.
D. Burns
CAREER AND EXPERIENTIAL PROGRAMS
C. Foley/B.A.
S. McDonald/B.A., M.A

Bachelor of Arts (Honours)

HUMANITIES I

Humanities 1

Students admitted to Humanities 1 must complete 30 units as follows:

PROGRAM NOTES

1. A full-course load for Humanities 1 is 30 units. (The final digit in course numbers indicates the unit weight of a course. A six-unit A/B course is taught from September to April and a three-unit course is normally a half-year course which may be taught either from September to December or January to April).
2. Admission to a Level II program normally requires completion of three to six units of the relevant subject in Level I. In order to be considered for admission to a Level II program, students should consult the admission statements for Level II programs when selecting their Level I courses.
3. Humanities 1 students are permitted to take up to 12 units of work in any single subject.
4. Students with a Grade 12 U course in Greek or Latin will register for six units of Level II Greek or Latin in lieu of the corresponding 1Z03 and 1ZZ3 courses.
5. Humanities 1 students may take no more than 12 units of introductory language courses.
6. Students uncertain as to whether language course prerequisites best reflect their linguistic ability are encouraged to consult the appropriate department for placement tests.
7. Students wishing to take Music courses other than may need to make arrangements with the School of the Arts for qualifying tests.
8. The Faculty of Humanities has introducing a mandatory concurrent skills

certificate for all Humanities degree students. The Faculty cares deeply about the academic and post-academic success of its students. All Humanities I students will be required to take HUMAN 1DL3, HUMAN 1HL3, and HUMAN 1VV3. These courses are designed to provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. These courses comprise half of a mandatory concurrent skills certificate for all Humanities degree students. Students will complete the other half of the certificate in Levels II-IV.

COURSE LIST 1

- CMST 1A03 - Introduction to Communication
- ENGLISH 1CS3 - Studying Culture: A Critical Introduction
- ENGLISH 1F03 - The Written World
- ENGLISH 1G03 - Making and Unmaking Literary Traditions
- ENGLISH 1H03 - Words in Place
- FRENCH 1AA3 - Introduction to French Studies: Intermediate I
- FRENCH 1AB3 - Introduction to French Studies: Intermediate II
- GENDRST 1A03 - Gender, Race, Culture, Power
- GKROMST 1A03 - Introduction to Greek and Roman Archaeology
- GKROMST 1B03 - An Introduction to Ancient Myth and Literature
- GKROMST 1M03 - History of Greece and Rome
- GREEK 1Z03 - Beginner's Intensive Ancient Greek I
- GREEK 1ZZ3 - Beginner's Intensive Ancient Greek II
- HISTORY 1CC3 - Ten Empires that Shaped our World, 500 BCE to Present
- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 1EE3 - The Historical Roots of Contemporary Issues
- HISTORY 1MA3 - The Powers of Modern East Asia: Constitutional Politics and Historical Changes
- HISTORY 1M03 - History of Greece and Rome
- HISTORY 1P03 - A History of Magic
- HISTORY 1PP3 - Pop Goes the Past!
- HISTORY 1Q03 - History of Medicine
- IARTS 1BD3 - 2D Practices in Art
- IARTS 1CR3 - Acting: Body and Voice
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment
- IARTS 1SS3 - 3D Practices in Art
- IARTS 1T03 - Story and Design in Theatre and Film
- LATIN 1Z03 - Beginner's Intensive Latin I
- LATIN 1ZZ3 - Beginner's Intensive Latin II
- LINGUIST 1A03 - Introduction to Linguistics: Speaking, Signing and Hearing
- LINGUIST 1AA3 - Introduction to Linguistics: Words, Sentences and Meaning
- MEDIAART 1A03 - Media Arts
- MUSIC 1A03 - Introduction to the History of Western Music I
- MUSIC 1AA3 - Introduction to the History of Western Music II
- MUSIC 1CR3 - Foundations of Music I
- MUSIC 1E06 A/B - Applied Music *
- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band *
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir *
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble *
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra *
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble *
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PHILOS 1A03 - Philosophical Texts
- PHILOS 1B03 - Philosophy, Law and Society
- PHILOS 1E03 - Philosophical Questions
- PHILOS 1F03 - Meaning in Life

* See Program Note 7 above regarding Level I MUSIC courses.

COURSE LIST 2

(Humanities courses available to Level I students. These courses do not provide entry into a Level II program)

- ART 1TI3 - Making Art and Understanding Technology & Images
- ART 1UI3 - Making Art and Understanding Images
- CHINESE 1Z06 A/B - Mandarin Chinese for Beginners
- FARSI 1Z03 - Introductory Farsi I
- FARSI 1ZZ3 - Introductory Farsi II
- FRENCH 1CT3 - Foundations of Translation (Taught in English and French)
- FRENCH 1ZA3 - Intensive French Beginner I
- FRENCH 1ZB3 - Intensive French Beginner II
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GERMAN 1B03 - Intermediate German I
- GERMAN 1BB3 - Intermediate German II
- GERMAN 1Z06 A/B S - Beginner's Intensive German
- ITALIAN 1A03 - Intermediate Italian I
- ITALIAN 1AA3 - Intermediate Italian II
- ITALIAN 1Z06 A/B S - Beginner's Intensive Italian
- JAPANESE 1Z06 A/B S - Beginner's Intensive Japanese
- KOREAN 1Z03 - Introductory Korean I
- KOREAN 1ZZ3 - Introductory Korean II
- LINGUIST 1Z03 - Structure of Modern English I
- LINGUIST 1ZZ3 - Structure of Modern English II
- RUSSIAN 1Z03 - Intensive Beginner's Russian I
- RUSSIAN 1ZZ3 - Intensive Beginner's Russian II
- SPANISH 1A03 - Intermediate Spanish I
- SPANISH 1AA3 - Intermediate Spanish II
- SPANISH 1Z06 A/B - Beginner's Intensive Spanish

REQUIREMENTS

12 units

from

- *Course List 1* (**When selecting courses, please consult the admission statements for Level II programs.**)

9 units

- HUMAN 1DL3 - Digital Literacy for the Humanities
- HUMAN 1HL3 - Humanities for Life: The Value of a Humanities Degree
- HUMAN 1VV3 - Voice and Vision: Words to Change the World

9 units

- Electives, which may include courses from *Course Lists 1* and *2*

Bachelor of Fine Arts (Honours)

IARTS (INTEGRATED ARTS) I

Admission

Students intending to study in the iArts B.F.A at McMaster, must meet the general entrance requirements to the Faculty of Humanities and qualify through the Creative Submission selection process, All applicants are required to submit an Electronic Creative Submission through SlideRoom by February 1, 2025. A creative submission package is a compilation of creative work and/or practice that an applicant has done either in school, at home, or possibly in the community. A Creative Submission package is similar to a portfolio or audition reel but can feature work from a range of disciplines. Enrollment in this program is limited.

Notes

1. All iARTS students will receive exposure to a range of arts disciplines throughout their four years of study. Before choosing courses, students should become familiar with prerequisites that will determine course selection in the subsequent year(s).

Requirements

iArts BFA Level I (30 units)

6 UNITS

- IARTS 1RP3 - Project Production 1
- IARTS 1RR3 - Project Development 1

6 UNITS

- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment

9 UNITS

- IARTS 1BD3 - 2D Practices in Art
- IARTS 1CR3 - Acting: Body and Voice
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1SS3 - 3D Practices in Art
- IARTS 1T03 - Story and Design in Theatre and Film

9 UNITS

- Electives

Bachelor of Music (Honours)

MUSIC I

The School of the Arts has decided to pause admissions to the Honours Bachelor of Music (B.Mus.) program, which has a direct-entry from Music 1, while redesigning the program. The Faculty will continue to support current students in the B.Mus. Students entering Humanities 1 in September 2024 and September 2025 will have the opportunity to take music courses in Level 1 to be admitted into a Bachelor of Arts in Music (B.A.) or the Combined Honours in Music and Another Subject (B.A.) in Level 2.

Notes

Completion of a Music degree requires considerable daytime attendance.

Program Notes

1. Students interested in entering Honours Music (Music Cognition) must have completed Grade 12 Biology, or enroll in BIOLOGY 1P03 concurrently with PSYCH 1X03 or PSYCH 1XX3.
2. Applicants to Music 1 must book an audition with the School of the Arts to take place usually in February and March.
3. During the music audition students will complete a theory test. Those with a sufficient background will be notified that the requirement for MUSIC 1CR3 may be waived.

Course List 1

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

Requirements

Students admitted to Music 1 must complete 33 units of work as follows:

0-3 UNITS

- MUSIC 1CR3 - Foundations of Music I

(see Program Note 3 above)

18 UNITS

- MUSIC 1A03 - Introduction to the History of Western Music I
- MUSIC 1E06 A/B - Applied Music

3 UNITS

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

9-12 UNITS

Electives, excluding *Course List 1 (Students intending to enter the Honours Music (Music Cognition) program must take PSYCH 1X03 and PSYCH 1XX3.)*

School of the Arts

https://sota.mcmaster.ca/

Faculty as of January 15, 2025

DIRECTOR

Stephanie Springgay

PROFESSORS

Michael Schutz*/(Music)* B.Mus., B.Sc. *(Pennsylvania),* M.Mus. *(Northwestern),* Ph.D. *(Virginia)*

Stephanie Springgay*/(iArts - Integrated Arts)* B.F.A., B.Ed. *(Queen's),* M.A. *(UBC),* Ph.D. *(UBC)*

ASSOCIATE PROFESSORS

Carmela Alfaro-Laganse*/(iArts - Integrated Arts)* B.F.A. *(Manitoba)*, M.F.A. *(Ohio)*

Peter Cockett*/(iArts - Integrated Arts)* B.A. *(London)*, M.A., Ph.D. *(Toronto)*

Elizabeth Marquis*/(iArts - Integrated Arts and Arts & Science)* B.A. *(McMaster)*, M.A. *(New York)*, Ph.D. *(Toronto)*

Briana Palmer*/(iArts - Integrated Arts)* B.F.A. *(Alberta College)*, M.F.A. *(Alberta)*

Angela Sheng*/(iArts - Integrated Arts)* B.A., *(Toronto)*, Licence *(Paris)*, Ph.D. *(Pennsylvania)*

Joseph Sokalski*/(iArts - Integrated Arts)* B.E. *(Alberta)*, M.A., Ph.D. *(Toronto)*

ASSISTANT PROFESSORS

Adrien Crossman*/(iArts - Integrated Arts)* B.F.A. *(OCADU)*, M.F.A. *(Windsor)*

Andrew Mitchell*/(Music)* B.Mus. *(Saskatchewan)*, M.A., Ph.D. *(Western)*

Christine Swintak*/(iArts - Integrated Arts)* B.F.A *(NSCAD)*, M.F.A. *(Concordia)*

Syrus Ware*/(*iArts - Integrated Arts*)* B.A. *(Toronto)*, M.A. *(OISE/UT)*, Ph.D. *(York)*

LECTURER

Joseph Resendes*/(Music)* B.F.A., M.A. *(York)*

ASSOCIATE MEMBERS

David Ogborn*/(Communication Studies and Media Arts)* B.A., B.Sc. *(Mary),* B.Mus. *(Manitoba),* M.Mus., Mus.Doc. *(Toronto)*

The School of the Arts offers programs in:

- Art History *(Last intake to Art History was 2023-2024)*
- iArts
- Music
- Theatre & Film Studies *(Last intake to Theatre & Film Studies was 2023-2024)*

In addition, the following concurrent certificates are available:

- Concurrent Certificate in Critical Curatorial Studies (CCCS)
- Concurrent Certificate in Cinema Studies

Existing students may still declare minors in Art History and Theatre & Film Studies.

Arts & Science Combinations with School of the Arts programs:

- Honours Arts & Science and iArts B.A. (B.Arts.Sc.; See *Arts & Science Program)*
- Honours Arts & Science and Music (B.Arts.Sc.; See *Arts & Science Program)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN ART HISTORY AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in one of ARTHIST 1A03, ARTHIST 1AA3, IARTS 1HA3, IARTS 1PA3 or IARTS 1PB3. Students must complete both ARTHIST 1A03 and 1AA3 or three additional units in one of IARTS 1HA3, IARTS 1PA3, IARTS 1PB3 by the end of Level II.

This program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in Integrated Arts (iArts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory and research, grounded in social justice.*

Notes

1. Before choosing Level II and III courses, students should become familiar with the prerequisites for Level III and IV courses.
2. Students intending to pursue graduate work in Art History should note that most universities offering such programs require undergraduate work in at least one foreign language for admission. Students are encouraged to include the study of foreign languages as early as possible in their program.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program

15 UNITS

from

- Level II Art History
- ART 2AA3 - Introduction to the Practice of Art Therapy
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

0-3 UNITS

If not completed in Level I

- ARTHIST 1A03
- ARTHIST 1AA3
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment

15 UNITS

from

- Level III Art History
- ART 3EA3
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3FI3 - Fashion and Identity
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada

3 UNITS

from

- Level IV Art History
- HISTORY 4FM3 - Female Makers and their Histories
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4D03 - Theatre, Society and Early Cinema
- IARTS 4DM3 - Arts and Diasporic Migration

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

18-21 UNITS

- Electives to total 120 units

COMBINED HONOURS IN IARTS (INTEGRATED ARTS) AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level 1 program and a Grade Point Average of at least 5.0 including a grade of at least C in of either IARTS 1PA3 or IARTS 1PB3, and completion of one of the following courses by Level 2: IARTS 1HA3, IARTS 1CR3, IARTS 1T03, IARTS 1BD3, IARTS 1SS3.

Notes

1. All iARTS students will receive exposure to a range of arts disciplines throughout their four years of study.
2. Before choosing courses, students should become familiar with prerequisites that will determine course selection in the subsequent year(s).
3. Students may apply in Level III to enroll in 6 units of Level IV iARTS Capstone Project, but it is not a requirement of the B.A.
4. Completion of one of the following courses is required by end of Level 2: IARTS 1BD3, IARTS 1CR3, IARTS 1HA3, IARTS 1SS3, IARTS 1T03.
5. The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

iARTS Course Lists

IARTS INVESTIGATIONS COURSE LIST A

- IARTS 2AD3 - Acting as Devising I
- IARTS 2AS3 - Performance, Art and Visual Culture in East and South Asia
- IARTS 2BB3 - Designing for Devised Performance
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2CD3 - Contemporary Approaches to Drawing Practices
- IARTS 2DE3 - Devised Performance Processes
- IARTS 2DP3 - Digital Practices
- IARTS 2EP3 - 3D and Expanded Practices
- IARTS 2ER3 - Environmentally Responsible Art
- IARTS 2FA3 - Film Analysis
- IARTS 2ME3 - Performance, Art, and Visual Culture in the Middle East
- IARTS 2MM3 - Movies and Me
- IARTS 2OP3 - Organizing Performance Space
- IARTS 2PM3 - Contemporary Approaches to Print Media
- IARTS 2PP3 - Contemporary Approaches to Painting Practices
- IARTS 2SP3 - Contemporary Approaches to Sculpture Practices
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

IARTS INVESTIGATIONS COURSE LIST B

- IARTS 3AA3 - Modernist Theatre and Drama in Europe
- IARTS 3AD3 - Acting as Devising II
- IARTS 3BA3 - Book Arts and Zines
- IARTS 3CE3 - Concentrated Study Ceramics
- IARTS 3CH3 - Cinema History from WWII
- IARTS 3CW3 - Colours of the World
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3EC3 - Early Cinema History
- IARTS 3FI3 - Fashion and Identity
- IARTS 3F03 - Concentrated Study Foundry
- IARTS 3IA3 - Indigenous Art and Visual Culture in Canada
- IARTS 3ID3 - Integrated Media and Materiality: Installation and Performance
- IARTS 3IM3 - Transdisciplinary and Hybrid Studio Practices
- IARTS 3IN3 - Concentrated Study Intaglio
- IARTS 3LI3 - Concentrated Study Lithography
- IARTS 3MP6 - Devised Theatre Production
- IARTS 3ND3 - New Direction in Painting and Drawing
- IARTS 3OE3 - Field Work: On-Site Explorations
- IARTS 3QA3 - Documentary, Politics and Social Change
- IARTS 3SD3 - Scripting Devised Performance
- IARTS 3SP6 A/B - Stage Design in Action
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- IARTS 3SR3 - Intercultural Arts Along the Silk Road
- IARTS 3TB3 - Devised Theatre Production: Research and Development
- IARTS 3VS3 - Visual Storytelling

IARTS INVESTIGATIONS COURSE LIST C

- IARTS 4AD3 - Acting as Devising III
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4AP3 - Contemporary Art Practices of Intervention, Performance, and Conceptual Art
- IARTS 4CE3 - Concentrated Study Ceramics
- IARTS 4D03 - Theatre, Society and Early Cinema
- IARTS 4DM3 - Arts and Diasporic Migration
- IARTS 4F03 - Concentrated Study Foundry
- IARTS 4IN3 - Concentrated Study Intaglio
- IARTS 4LI3 - Concentrated Study Lithography
- IARTS 4QT3 - Queer and Trans Art in the 20th and 21st Centuries
- IARTS 4SD3 - Scripting Devised Performance
- IARTS 4Z03 - The Textile Arts: History and Practice

Requirements

Students who entered Combined Honours in iArts (Integrated Arts) and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total

30 UNITS

- from the Level I program completed prior to admission into the program (see *note 5)*

0 - 3 UNITS IF NOT COMPLETED IN LEVEL 1 (SEE NOTE 4)

- IARTS 1BD3 - 2D Practices in Art
- IARTS 1CR3 - Acting: Body and Voice
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1SS3 - 3D Practices in Art
- IARTS 1T03 - Story and Design in Theatre and Film

3 UNITS

from

- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines

9 UNITS

from

- iARTS Investigations *Course List A*, or may include any of the following:
- GKROMST 2B03 - Greek Art
- GKROMST 2C03 - Roman Art
- HISTORY 2DF3 - From the Guillotine to the Eiffel Tower, France 1789-1889
- INDIGST 2U03 - Elements of Indigenous Design
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- PHILOS 2H03 - Aesthetics

3 UNITS

- IARTS 3PE3 - Perspectives E: Key Issues of Equity, Diversity, and Inclusion in the Arts

12 UNITS

from

- iARTS Investigations *Course List B*, or may include any of the following:
- GKROMST 3Q03 - Greek Sanctuaries
- GKROMST 3S03 - Pompeii, Herculaneum, and Ostia
- FRENCH 3V03
- HISTORY 3DF3 - Art and Politics in Second Empire France
- HISTORY 3TR3 - Trees and their Histories
- HISTORY 4FM3 - Female Makers and their Histories
- HISTORY 4LP3 - The Cultural History of Paris, 1789-1914
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- INDIGST 4IW3 - Twenty-First Century Indigenous Writing and Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3VA3 - Video Art and Digital Cinema

3 UNITS

- IARTS 4PF3 - Perspectives F: Special Topics in Artist Research

6 UNITS

from

- iARTS Investigations *Course List C*, or may include the following:
- IARTS 4C06 A/B - Thesis Project

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject

6-9 UNITS (SEE NOTE 5)

- Electives

COMBINED HONOURS IN MUSIC AND ANOTHER SUBJECT (B.A.)

Students who entered Combined Honours in Music and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

Notes

Completion of a Music degree requires considerable daytime attendance.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in 6 units of Level I Music courses.

Program Notes

1. Courses used for admission to the program may not be used to fulfill degree requirements upon entry to the program. Courses may only be used once to meet degree requirements.
2. A limit of 48 units of Level 1 courses may be used to complete an Honours Bachelor of Arts degree
3. The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course List 1

- MUSIC 2CU3 - Music and Culture
- MUSIC 2MA3 - Introduction to Musical Analysis
- MUSIC 2MC3 - Psychology of Music
- MUSIC 3AM3 - Music and the Arts
- MUSIC 3PM3 - Music and Politics
- MUSIC 4SM3 - Music, Sound and Movies
- MUSIC 4UM3 - Music and the Underrepresented

Course List 2

- MUSIC 1E06 A/B - Applied Music
- MUSIC 1EE6 A/B - Applied Music
- MUSIC 1G03
- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GF3 A/B
- MUSIC 1GJ3 A/B
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2CR3 - Foundations of Music II
- MUSIC 2DW3 - Music Creation in Digital Audio Workstations I
- MUSIC 2E06 A/B - Applied Music
- MUSIC 2EE6 A/B - Applied Music
- MUSIC 2G03
- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GF3 A/B
- MUSIC 2GJ3 A/B
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2IM3 - Introduction to Music Composition
- MUSIC 3DW3 - Music Creation in Digital Audio Workstations II
- MUSIC 3E03 - Applied Music
- MUSIC 3EE3 - Applied Music
- MUSIC 3EE6 A/B - Applied Music
- MUSIC 3G03
- MUSIC 3GA3 A/B
- MUSIC 3GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 3GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 3GF3 A/B

- MUSIC 3GJ3 A/B
- MUSIC 3GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 3GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 3GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3J03 - Orchestration and Arranging
- MUSIC 3O03 - Conducting
- MUSIC 4E03 - Applied Music
- MUSIC 4E06 A/B - Applied Music
- MUSIC 4EE3 - Applied Music
- MUSIC 4EE6 A/B - Applied Music
- MUSIC 4FG3 - Composition for Film, Games and Media
- MUSIC 4G03
- MUSIC 4GA3 A/B
- MUSIC 4GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 4GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 4GF3 A/B
- MUSIC 4GJ3 A/B
- MUSIC 4GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 4GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 4GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

Requirements

120 units total (Levels I to IV), of which 48 units may be Level 1

30 UNITS

- Level 1 program completed prior to admission into the program (see note 3)

12 UNITS

from

- Level I Music courses (see notes 1 and 2)
- Level II Music courses
- Level III Music courses
- Level IV Music courses
- HTHSCI 3MU3 - Music, Health, & the Community

6 UNITS

from

- *Course List 1*

6 UNITS

from

- *Course List 2*

12 UNITS

from

- Level III Music Courses
- Level IV Music Courses

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship
- HUMAN 3IP1 A/B S - Part-time Internship

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship
- HUMAN 3IP1 A/B S - Part-time Internship
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- Electives

COMBINED HONOURS IN THEATRE & FILM STUDIES AND ANOTHER SUBJECT (B.A.)

Programs in Theatre & Film Studies

Theatre & Film Studies is a liberal arts program that integrates critical analysis with experiential learning. We study performance in a range of media, cultures, and historical periods. Students learn to critically engage with the processes of conception, design, production, and reception of theatre, film, performance art, video art, and with the performativity of our everyday lives. Our experiential learning courses use current devised theatre practices to engage students with performance through studio work and public productions. All our courses encourage students to adopt inventive and critical perspectives on creative processes and foster collaborative understandings of artistic creation.

NOTE

Students registered in Honours Theatre & Film Studies are encouraged to complete elective courses in related art forms.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in THTRFLM 1T03 or IARTS 1T03.

The Combined Honours in Theatre & Film Studies and Another Subject (B.A.) program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in Integrated Arts (iArts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory and research, grounded in social justice.*

Course List 1

- THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
- THTRFLM 3DD3
- THTRFLM 3FF3 - Early Cinema History

- THTRFLM 3L03 - Cinema History from WWII
- THTRFLM 3M03
- THTRFLM 3P03 - Gender and Visual Culture
- THTRFLM 3QA3 - Documentary, Politics, and Social Change
- THTRFLM 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- THTRFLM 3U03

Course List 2

- IARTS 3AD3 - Acting as Devising II
- THTRFLM 3N03
- THTRFLM 3OP6 A/B - Stage Design in Action
- THTRFLM 3PC3
- THTRFLM 3PR3
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S03
- THTRFLM 3S06 - Devised Theatre Production
- THTRFLM 3SD3 - Scripting Devised Performance
- THTRFLM 3VS3 - Visual Storytelling
- THTRFLM 3WW3
- THTRFLM 3XX3

Course List 3

- ART 3EA3
- ARTHIST 2A03
- ARTHIST 2R03
- ARTHIST 2T03
- ARTHIST 3Q03 - Colours of the World
- CLASSICS 2E03
- CLASSICS 2YY3
- CMST 2G03 - Performance and Performativity
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 2CR3 - Shakespeare: Comedies, Problem Plays, and Romances
- ENGLISH 2HT3 - Shakespeare: Histories and Tragedies
- ENGLISH 3CC3
- GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
- GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- GERMAN 2S03
- GKROMST 2E03 - The Ancient World in Film
- GKROMST 2YY3 - Greek Tragedy
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- ITALIAN 3X03 - Italy Today Through Film (Taught in English)
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2TT3 - Broadway and the Popular Song
- RUSSIAN 2G03 - Masterpieces of Russian Literature in Film and TV Series (Taught in English)
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 2J03
- THTRFLM 2JJ3
- THTRFLM 2Z03

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program

6 UNITS

- THTRFLM 2CC3 - Performance, Art, and Visual Culture in Canada
- THTRFLM 2CP3
- THTRFLM 2FA3 - Film Analysis

6 UNITS

from

- IARTS 2OP3 - Organizing Performance Space
- THTRFLM 2AA3 - Acting as Devising I
- THTRFLM 2BB3 - Designing for Devised Performance
- THTRFLM 2DP3 - Devised Performance Processes

18 UNITS

- Level III or IV Theatre & Film courses, including nine units from *Course List 1*; nine units from *Course List 2*

6 UNITS

from, of which at least three units must be THTRFLM 4C03 or 4D03

- IARTS 4AD3 - Acting as Devising III
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4AP3 - Contemporary Art Practices of Intervention, Performance, and Conceptual Art
- IARTS 4SD3 - Scripting Devised Performance
- THTRFLM 4A06 A/B - Theatre and Society: A Performance Project
- THTRFLM 4C03 - Performance and Society
- THTRFLM 4D03 - Theatre, Society and Early Cinema
- THTRFLM 4E03

36 UNITS

- courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

18 UNITS

- electives to total 120 units

HONOURS ART HISTORY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in one of ARTHIST 1A03, ARTHIST 1AA3, IARTS 1HA3, IARTS 1PA3 or IARTS 1PB3. Students must complete both ARTHIST 1A03 or ARTHIST 1AA3 or three additional units in one of IARTS 1HA3, IARTS 1PA3 or IARTS 1PB3 by the end of Level II.

This program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in Integrated Arts (iArts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory and research, grounded in social justice.*

Notes

1. Before choosing Level II and III courses, students should become familiar with the prerequisites for Level III and IV courses.
2. Students intending to pursue graduate work in Art History should note that most universities offering such programs require undergraduate work in at least one foreign language for admission. Students are encouraged to include the study of foreign languages as early as possible in their program.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program

18 UNITS

from

- Level II Art History
- ART 2AA3 - Introduction to the Practice of Art Therapy
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

0-3 UNITS

If not completed in Level I

- ARTHIST 1A03
- ARTHIST 1AA3
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment

21 UNITS

from

- Level III Art History
- ART 3EA3
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3FI3 - Fashion and Identity
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada

6 UNITS

from

- Level IV Art History
- HISTORY 4FM3 - Female Makers and their Histories
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4D03 - Theatre, Society and Early Cinema
- IARTS 4DM3 - Arts and Diasporic Migration

42-45 UNITS

- Electives

HONOURS ART HISTORY WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

HONOURS IARTS (INTEGRATED ARTS) (B.A.)

Admission

Completion of any Level 1 program and a Grade Point Average of at least 5.0 including a grade of at least C in either IARTS 1PA3 or IARTS 1PB3, and completion of one of the following courses with a grade of at least C by Level 2: IARTS 1HA3, IARTS 1CR3, IARTS 1T03, IARTS 1BD3, IARTS 1SS3.

Notes

1. All iARTS students will receive exposure to a range of arts disciplines throughout their four years of study.
2. Before choosing courses, students should become familiar with prerequisites that will determine course selection in the subsequent year(s).
3. Students may apply in Level III to enroll in 6 units of Level IV iARTS Capstone Project, but it is not a requirement of the BA.
4. Completion of one of the following courses is required by end of Level 2: IARTS 1BD3, IARTS 1CR3, IARTS 1HA3, IARTS 1SS3, IARTS 1T03
5. The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

iARTS Course Lists

IARTS INVESTIGATIONS COURSE LIST A

- IARTS 2AD3 - Acting as Devising I
- IARTS 2AS3 - Performance, Art and Visual Culture in East and South Asia
- IARTS 2BB3 - Designing for Devised Performance
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2CD3 - Contemporary Approaches to Drawing Practices
- IARTS 2DE3 - Devised Performance Processes
- IARTS 2DP3 - Digital Practices
- IARTS 2EP3 - 3D and Expanded Practices
- IARTS 2ER3 - Environmentally Responsible Art
- IARTS 2FA3 - Film Analysis
- IARTS 2ME3 - Performance, Art, and Visual Culture in the Middle East
- IARTS 2MM3 - Movies and Me
- IARTS 2OP3 - Organizing Performance Space
- IARTS 2PM3 - Contemporary Approaches to Print Media
- IARTS 2PP3 - Contemporary Approaches to Painting Practices
- IARTS 2SP3 - Contemporary Approaches to Sculpture Practices
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

IARTS INVESTIGATIONS COURSE LIST B

- IARTS 3AA3 - Modernist Theatre and Drama in Europe
- IARTS 3AD3 - Acting as Devising II
- IARTS 3BA3 - Book Arts and Zines
- IARTS 3CE3 - Concentrated Study Ceramics
- IARTS 3CH3 - Cinema History from WWII
- IARTS 3CW3 - Colours of the World
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3EC3 - Early Cinema History
- IARTS 3FI3 - Fashion and Identity
- IARTS 3F03 - Concentrated Study Foundry
- IARTS 3IA3 - Indigenous Art and Visual Culture in Canada
- IARTS 3ID3 - Integrated Media and Materiality: Installation and Performance
- IARTS 3IM3 - Transdisciplinary and Hybrid Studio Practices
- IARTS 3IN3 - Concentrated Study Intaglio
- IARTS 3LI3 - Concentrated Study Lithography
- IARTS 3MP6 - Devised Theatre Production
- IARTS 3ND3 - New Direction in Painting and Drawing
- IARTS 3OE3 - Field Work: On-Site Explorations
- IARTS 3QA3 - Documentary, Politics and Social Change
- IARTS 3SD3 - Scripting Devised Performance
- IARTS 3SP6 A/B - Stage Design in Action
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled

Performance in Canada
- IARTS 3SR3 - Intercultural Arts Along the Silk Road
- IARTS 3TB3 - Devised Theatre Production: Research and Development
- IARTS 3VS3 - Visual Storytelling

IARTS INVESTIGATIONS COURSE LIST C
- IARTS 4AD3 - Acting as Devising III
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4AP3 - Contemporary Art Practices of Intervention, Performance, and Conceptual Art
- IARTS 4CE3 - Concentrated Study Ceramics
- IARTS 4D03 - Theatre, Society and Early Cinema
- IARTS 4DM3 - Arts and Diasporic Migration
- IARTS 4F03 - Concentrated Study Foundry
- IARTS 4IN3 - Concentrated Study Intaglio
- IARTS 4LI3 - Concentrated Study Lithography
- IARTS 4QT3 - Queer and Trans Art in the 20th and 21st Centuries
- IARTS 4SD3 - Scripting Devised Performance
- IARTS 4Z03 - The Textile Arts: History and Practice

Requirements

Students who entered Honours iArts (Integrated Arts) (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total

30 UNITS
- from the Level I program completed prior to admission into the program (see *note 5)*

0-3 UNITS IF NOT COMPLETED IN LEVEL 1 (SEE NOTE 4)
- IARTS 1BD3 - 2D Practices in Art
- IARTS 1CR3 - Acting: Body and Voice
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1SS3 - 3D Practices in Art
- IARTS 1T03 - Story and Design in Theatre and Film

3 UNITS

from
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines

12 UNITS

from
- iARTS Investigations *Course List A*

6 UNITS

from
- iARTS Investigations Course List A, or may include any of the following:
- GKROMST 2B03 - Greek Art
- GKROMST 2C03 - Roman Art
- HISTORY 2DF3 - From the Guillotine to the Eiffel Tower, France 1789-1889
- INDIGST 2U03 - Elements of Indigenous Design
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- PHILOS 2H03 - Aesthetics

3 UNITS
- IARTS 3PE3 - Perspectives E: Key Issues of Equity, Diversity, and Inclusion in the Arts

18 UNITS

from
- iARTS Investigations Course List B, or may include any of the following:
- GKROMST 3Q03 - Greek Sanctuaries
- GKROMST 3S03 - Pompeii, Herculaneum, and Ostia
- FRENCH 3V03
- HISTORY 3DF3 - Art and Politics in Second Empire France
- HISTORY 3TR3 - Trees and their Histories
- HISTORY 4LP3 - The Cultural History of Paris, 1789-1914
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- INDIGST 4IW3 - Twenty-First Century Indigenous Writing and Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3VA3 - Video Art and Digital Cinema

3 UNITS
- IARTS 4PF3 - Perspectives F: Special Topics in Artist Research

6 UNITS

from
- iARTS Investigations *Course List C*, or may include the following:
- IARTS 4C06 A/B - Thesis Project

3 UNITS
- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from
- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from
- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27-30 UNITS (SEE NOTE 5)
- Electives

HONOURS IARTS (INTEGRATED ARTS) WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

HONOURS THEATRE & FILM STUDIES (B.A.)

Programs in Theatre & Film Studies

Theatre & Film Studies is a liberal arts program that integrates critical analysis with experiential learning. We study performance in a range of media, cultures, and historical periods. Students learn to critically engage with the processes of conception, design, production, and reception of theatre, film, performance art, video art, and with the performativity of our everyday lives. Our experiential learning courses use current devised theatre practices to engage students with performance through studio work and public productions. All our courses encourage students to adopt inventive and critical perspectives on creative processes and foster collaborative understandings of artistic creation.

NOTE

Students registered in Honours Theatre & Film Studies are encouraged to complete elective courses in related art forms.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in THTRFLM 1T03 or IARTS 1T03.

The Honours Theatre & Film Studies (B.A.) program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in Integrated Arts (iArts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory, and research, grounded in social justice.*

Course List 1

- THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
- THTRFLM 3DD3
- THTRFLM 3FF3 - Early Cinema History
- THTRFLM 3L03 - Cinema History from WWII
- THTRFLM 3M03
- THTRFLM 3P03 - Gender and Visual Culture
- THTRFLM 3QA3 - Documentary, Politics, and Social Change
- THTRFLM 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- THTRFLM 3U03

Course List 2

- IARTS 3AD3 - Acting as Devising II
- THTRFLM 3N03
- THTRFLM 3OP6 A/B - Stage Design in Action
- THTRFLM 3PC3
- THTRFLM 3PR3
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S03
- THTRFLM 3S06 - Devised Theatre Production
- THTRFLM 3SD3 - Scripting Devised Performance
- THTRFLM 3VS3 - Visual Storytelling
- THTRFLM 3WW3
- THTRFLM 3XX3

Course List 3

- ART 3EA3
- ARTHIST 2A03
- ARTHIST 2R03
- ARTHIST 2T03
- ARTHIST 3Q03 - Colours of the World
- CLASSICS 2E03
- CLASSICS 2YY3
- CMST 2G03 - Performance and Performativity
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 2CR3 - Shakespeare: Comedies, Problem Plays, and Romances
- ENGLISH 2HT3 - Shakespeare: Histories and Tragedies
- ENGLISH 3CC3
- GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
- GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- GERMAN 2S03
- GKROMST 2E03 - The Ancient World in Film
- GKROMST 2YY3 - Greek Tragedy
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- ITALIAN 3X03 - Italy Today Through Film (Taught in English)
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2TT3 - Broadway and the Popular Song
- RUSSIAN 2G03 - Masterpieces of Russian Literature in Film and TV Series (Taught in English)
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 2J03
- THTRFLM 2JJ3
- THTRFLM 2Z03

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program

6 UNITS

- THTRFLM 2CC3 - Performance, Art, and Visual Culture in Canada
- THTRFLM 2CP3
- THTRFLM 2FA3 - Film Analysis

6 UNITS

from

- IARTS 2OP3 - Organizing Performance Space
- THTRFLM 2AA3 - Acting as Devising I
- THTRFLM 2BB3 - Designing for Devised Performance
- THTRFLM 2DP3 - Devised Performance Processes

3 UNITS

from

- Level II Theatre & Film courses or from *Course List 3*

27 UNITS

- Level III or IV Theatre & Film, including twelve units from *Course List 1;* twelve units from *Course List 2,* and can also include three units from *Course List 3*

6 UNITS

from, of which at least 3 units must be THTRFLM 4C03 or 4D03

- IARTS 4AD3 - Acting as Devising III
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4AP3 - Contemporary Art Practices of Intervention, Performance, and Conceptual Art
- IARTS 4SD3 - Scripting Devised Performance
- THTRFLM 4A06 A/B - Theatre and Society: A Performance Project
- THTRFLM 4C03 - Performance and Society
- THTRFLM 4D03 - Theatre, Society and Early Cinema
- THTRFLM 4E03

42 UNITS

- Electives

HONOURS THEATRE & FILM STUDIES WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

ART HISTORY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 including a grade of at least C- in one of ARTHIST 1A03, ARTHIST 1AA3, IARTS 1HA3, IARTS 1PA3 or IARTS 1PB3. Students must complete both ARTHIST 1A03 and 1AA3 or three additional units in one of IARTS 1HA3, IARTS 1PA3 or IARTS 1PB3 by the end of Level II.

This program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in Integrated Arts (iArts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory and research, grounded in social justice.*

Notes

Before choosing Level II courses, students should become familiar with the prerequisites for Level III courses.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program

15 UNITS

from

- Level II Art History
- ART 2AA3 - Introduction to the Practice of Art Therapy
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

0-3 UNITS

If not completed in Level I

- ARTHIST 1A03
- ARTHIST 1AA3
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment

15 UNITS

from

- Level III Art History
- ART 3EA3
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3FI3 - Fashion and Identity
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada

27-30 UNITS

- Electives

MUSIC (B.A.)

Students who entered Music (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

Notes

1. Completion of a Music degree requires considerable daytime attendance.
2. Courses used for admission to the program may not be used to fulfill degree requirements upon entry to the program. Courses may only be used once to meet degree requirements.
3. A limit of 48 units of Level 1 courses may be used to complete a Bachelor of Arts degree.
4. The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Humanities Concurrent Certificate: Skills for Life comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Admission

Completion of a level I program with a Grade Point Average of at least 3.5, including a grade of at least C- in 6 units of Level I Music courses.

Course List A

- MUSIC 1A03 - Introduction to the History of Western Music I
- MUSIC 1AA3 - Introduction to the History of Western Music II
- MUSIC 1CR3 - Foundations of Music I
- MUSIC 1MH3
- MUSIC 2A03
- MUSIC 2B03
- MUSIC 2CA3
- MUSIC 2CB3
- MUSIC 2CU3 - Music and Culture
- MUSIC 2DW3 - Music Creation in Digital Audio Workstations I
- MUSIC 2E06 A/B - Applied Music
- MUSIC 2EE6 A/B - Applied Music
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2IM3 - Introduction to Music Composition
- MUSIC 2MA3 - Introduction to Musical Analysis

- MUSIC 2MH3
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSIC 2MU3 - Introduction to Music Therapy Research
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- MUSIC 3E03 - Applied Music
- MUSIC 3E06 A/B - Applied Music
- MUSIC 3EE3 - Applied Music
- MUSIC 3EE6 A/B - Applied Music
- MUSIC 4E03 - Applied Music
- MUSIC 4E06 A/B - Applied Music
- MUSIC 4EE3 - Applied Music
- MUSIC 4EE6 A/B - Applied Music

Course List B

- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GF3 A/B
- MUSIC 2GJ3 A/B
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3GA3 A/B
- MUSIC 3GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 3GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 3GF3 A/B
- MUSIC 3GJ3 A/B
- MUSIC 3GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 3GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 3GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 4GA3 A/B
- MUSIC 4GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 4GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 4GF3 A/B
- MUSIC 4GJ3 A/B
- MUSIC 4GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 4GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 4GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

Course List C

- MUSIC 2MC3 - Psychology of Music
- MUSIC 2MH3
- MUSIC 2SI3 - Singing
- MUSIC 2WW3 - Woodwinds
- MUSIC 3AA3
- MUSIC 3AM3 - Music and the Arts
- MUSIC 3CP3 - Constructing Counterpoint
- MUSIC 3DW3 - Music Creation in Digital Audio Workstations II
- MUSIC 3J03 - Orchestration and Arranging
- MUSIC 3JJ3
- MUSIC 3K03 - Brass Methods
- MUSIC 3KK3
- MUSIC 3M03 A/B
- MUSIC 3O03 - Conducting
- MUSIC 3PM3 - Music and Politics
- MUSIC 3SI3 - Vocal Pedagogy
- MUSIC 3V03
- MUSIC 3WW3 - Woodwind Pedagogy
- MUSIC 4C03 - Advanced Studies in Harmony and Counterpoint
- MUSIC 4FG3 - Composition for Film, Games and Media
- MUSIC 4H03
- MUSIC 4K03
- MUSIC 4M03 A/B
- MUSIC 4N03 - Choral Methods
- MUSIC 4OC3
- MUSIC 4OI3
- MUSIC 4SM3 - Music, Sound and Movies
- MUSIC 4UM3 - Music and the Underrepresented
- MUSIC 4V03
- MUSIC 4Y03
- MUSIC 4Z03
- MUSIC 4ZZ3

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

- Completion of a level I program prior to admission into the program (see *note 4)*

3 UNITS

from

- MUSIC 1MH3
- MUSIC 2B03
- MUSIC 2MH3
- MUSIC 1A03 - Introduction to the History of Western Music I (see *notes 2* and *3)*
- MUSIC 1AA3 - Introduction to the History of Western Music II (see *notes 2* and *3)*
- MUSIC 2CU3 - Music and Culture

6 UNITS

from

- Course List A (see *notes 2* and *3)*

12 UNITS

from

- Course List A
- Course List B

6 UNITS

from

- Course List C

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship
- HUMAN 3IP1 A/B S - Part-time Internship

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship
- HUMAN 3IP1 A/B S - Part-time Internship
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

24 UNITS

- Electives

THEATRE & FILM STUDIES (B.A.)

Programs in Theatre & Film Studies

Theatre & Film Studies is a liberal arts program that integrates critical analysis with experiential learning. We study performance in a range of media, cultures, and historical periods. Students learn to critically engage with the processes of conception, design, production, and reception of theatre, film, performance art, video art, and with the performativity of our everyday lives. Our experiential learning courses use current devised theatre practices to engage students with performance through studio work and public productions. All our courses encourage students to adopt inventive and critical perspectives on creative processes and foster collaborative understandings of artistic creation.

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 including a grade of at least C- in THTRFLM 1T03 or IARTS 1T03.

The Theatre & Film Studies (B.A.) program is no longer admitting students. Final admission to the Level II program was effective Fall 2023.

The School of the Arts *now offers Honours BFA and Honours BA degrees in iArts (Integrated Arts). These programs provide interdisciplinary skills in art, performance, histories of the arts, theory and research, grounded in social justice*

Course List 1

- THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
- THTRFLM 3DD3
- THTRFLM 3FF3 - Early Cinema History
- THTRFLM 3L03 - Cinema History from WWII
- THTRFLM 3M03
- THTRFLM 3P03 - Gender and Visual Culture
- THTRFLM 3QA3 - Documentary, Politics, and Social Change
- THTRFLM 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- THTRFLM 3U03

Course List 2

- IARTS 3AD3 - Acting as Devising II
- THTRFLM 3N03
- THTRFLM 3OP6 A/B - Stage Design in Action
- THTRFLM 3PC3
- THTRFLM 3PR3
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S03
- THTRFLM 3S06 - Devised Theatre Production
- THTRFLM 3SD3 - Scripting Devised Performance
- THTRFLM 3VS3 - Visual Storytelling
- THTRFLM 3WW3
- THTRFLM 3XX3

Course List 3

- ART 3EA3
- ARTHIST 2A03
- ARTHIST 2R03
- ARTHIST 2T03
- ARTHIST 3Q03 - Colours of the World
- CLASSICS 2E03
- CLASSICS 2YY3
- CMST 2G03 - Performance and Performativity
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 2CR3 - Shakespeare: Comedies, Problem Plays, and Romances
- ENGLISH 2HT3 - Shakespeare: Histories and Tragedies
- ENGLISH 3CC3
- GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
- GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- GERMAN 2S03
- GKROMST 2E03 - The Ancient World in Film
- GKROMST 2YY3 - Greek Tragedy
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- ITALIAN 3X03 - Italy Today Through Film (Taught in English)
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2TT3 - Broadway and the Popular Song
- RUSSIAN 2G03 - Masterpieces of Russian Literature in Film and TV Series (Taught in English)
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 2J03
- THTRFLM 2JJ3
- THTRFLM 2Z03

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program

6 UNITS

- THTRFLM 2CC3 - Performance, Art, and Visual Culture in Canada

- THTRFLM 2CP3
- THTRFLM 2FA3 - Film Analysis

6 UNITS

from

- IARTS 2OP3 - Organizing Performance Space
- THTRFLM 2AA3 - Acting as Devising I
- THTRFLM 2BB3 - Designing for Devised Performance
- THTRFLM 2DP3 - Devised Performance Processes

3 UNITS

from

- Level II Theatre & Film courses or from *Course List 3*

12 UNITS

- Level III or IV Theatre & Film courses, including three units from *Course List 1*; three units from *Course List 2*

33 UNITS

- Electives

Bachelor of Fine Arts (Honours)

HONOURS IARTS (INTEGRATED ARTS) (B.F.A.)

Admission

Completion of IARTS Level 1 and a Grade Point average of at least 5.0, with an average of at least 5.0 in IARTS 1RR3 and 1RP3, successful completion of IARTS 1PA3 and 1PB3, and successful completion of nine units from the following: IARTS 1HA3, IARTS 1CR3, IARTS 1T03, IARTS 1BD3, IARTS 1SS3. *120 units total*

iARTS Course Lists

IARTS INVESTIGATIONS COURSE LIST A

- IARTS 2AD3 - Acting as Devising I
- IARTS 2AS3 - Performance, Art and Visual Culture in East and South Asia
- IARTS 2BB3 - Designing for Devised Performance
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2CD3 - Contemporary Approaches to Drawing Practices
- IARTS 2DE3 - Devised Performance Processes
- IARTS 2DP3 - Digital Practices
- IARTS 2EP3 - 3D and Expanded Practices
- IARTS 2ER3 - Environmentally Responsible Art
- IARTS 2FA3 - Film Analysis
- IARTS 2ME3 - Performance, Art, and Visual Culture in the Middle East
- IARTS 2MM3 - Movies and Me
- IARTS 2OP3 - Organizing Performance Space
- IARTS 2PM3 - Contemporary Approaches to Print Media
- IARTS 2PP3 - Contemporary Approaches to Painting Practices
- IARTS 2SP3 - Contemporary Approaches to Sculpture Practices
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts

IARTS INVESTIGATIONS COURSE LIST B

- IARTS 3AA3 - Modernist Theatre and Drama in Europe
- IARTS 3AD3 - Acting as Devising II
- IARTS 3BA3 - Book Arts and Zines
- IARTS 3CE3 - Concentrated Study Ceramics
- IARTS 3CH3 - Cinema History from WWII
- IARTS 3CW3 - Colours of the World
- IARTS 3DA3 - Arts and Spaces for Dwelling and Activities
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3EC3 - Early Cinema History
- IARTS 3FI3 - Fashion and Identity
- IARTS 3F03 - Concentrated Study Foundry
- IARTS 3IA3 - Indigenous Art and Visual Culture in Canada
- IARTS 3ID3 - Integrated Media and Materiality: Installation and Performance
- IARTS 3IM3 - Transdisciplinary and Hybrid Studio Practices
- IARTS 3IN3 - Concentrated Study Intaglio
- IARTS 3LI3 - Concentrated Study Lithography
- IARTS 3MP6 - Devised Theatre Production
- IARTS 3ND3 - New Direction in Painting and Drawing
- IARTS 3OE3 - Field Work: On-Site Explorations
- IARTS 3QA3 - Documentary, Politics and Social Change
- IARTS 3SD3 - Scripting Devised Performance
- IARTS 3SP6 A/B - Stage Design in Action
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- IARTS 3SR3 - Intercultural Arts Along the Silk Road
- IARTS 3TB3 - Devised Theatre Production: Research and Development
- IARTS 3VS3 - Visual Storytelling

IARTS INVESTIGATIONS COURSE LIST C

- IARTS 4AD3 - Acting as Devising III
- IARTS 4AE3 - Art, Climate, Justice and the Environment
- IARTS 4AP3 - Contemporary Art Practices of Intervention, Performance, and Conceptual Art
- IARTS 4CE3 - Concentrated Study Ceramics
- IARTS 4D03 - Theatre, Society and Early Cinema
- IARTS 4DM3 - Arts and Diasporic Migration
- IARTS 4F03 - Concentrated Study Foundry
- IARTS 4IN3 - Concentrated Study Intaglio
- IARTS 4LI3 - Concentrated Study Lithography
- IARTS 4QT3 - Queer and Trans Art in the 20th and 21st Centuries
- IARTS 4SD3 - Scripting Devised Performance
- IARTS 4Z03 - The Textile Arts: History and Practice

Requirements

120 units total

30 UNITS

- from the Level I program completed prior to admission into the program

6 UNITS

- IARTS 2RR3 - Project Development 2
- IARTS 2RP3 - Project Production 2

6 UNITS

- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines

9 UNITS

from

- iARTS Investigations *Course List A*

3 UNITS

from

- iARTS Investigations C*ourse List A*, or may include any of the following:
- GKROMST 2B03 - Greek Art
- GKROMST 2C03 - Roman Art
- HISTORY 2DF3 - From the Guillotine to the Eiffel Tower, France 1789-1889
- INDIGST 2U03 - Elements of Indigenous Design
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- PHILOS 2H03 - Aesthetics

6 UNITS

- IARTS 3RC6 A/B - Collaborative Project Development and Production

3 UNITS

- IARTS 3PE3 - Perspectives E: Key Issues of Equity, Diversity, and Inclusion in the Arts

15 UNITS

from

- iARTS Investigations *Course Lists B*

9 UNITS

from

- iARTS Investigations *Course Lists B* and *C*, or may include any of the following:
- GKROMST 3Q03 - Greek Sanctuaries
- GKROMST 3S03 - Pompeii, Herculaneum, and Ostia
- HISTORY 3DF3 - Art and Politics in Second Empire France
- HISTORY 3TR3 - Trees and their Histories
- HISTORY 4LP3 - The Cultural History of Paris, 1789-1914
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- INDIGST 4IW3 - Twenty-First Century Indigenous Writing and Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3VA3 - Video Art and Digital Cinema

12 UNITS

- IARTS 4C12 A/B - Project Capstone Thesis

21 UNITS

- Electives

Bachelor of Music (Honours)

HONOURS MUSIC (B.MUS.)

As the Music I program paused admissions in September 2024, Honours Music (B.Mus.) has paused its Level II program admission as of September 2025. Students who entered Honours Music (B.Mus.) prior to September 2024 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

Admission

Completion of Music I and a Grade Point Average of at least 5.0.

Program Notes

- Completion of a Music degree requires considerable daytime attendance.
- The courses appearing in *Course List 1* are specifically intended to prepare students to attend a Faculty of Education for a career in school music teaching. Students interested in Music Education are advised to consult the Music Counsellor during their first year for advice on fulfilling the entrance requirements of Faculties of Education.
- Students who intend to pursue graduate studies in music history or theory should select a significant number of the courses in *Course List 2*.
- Students in the Honours B.Mus. program can only use a total of 12 units from *Course List 5* as credit toward their degrees.
- Students who begin in the Music (B.A.) program wishing to transfer to the Honours Music (B. Mus.), Honours Music Cognition (B. Mus.) or Combined Honours Music (B.A.) programs should note that a successful audition and completion of Music I with a GPA of at least 5.0 are first required.

Course List 1

- HTHSCI 3MU3 - Music, Health, & the Community
- MUSIC 2CG3
- MUSIC 2MC3 - Psychology of Music
- MUSIC 2SI3 - Singing
- MUSIC 2WW3 - Woodwinds
- MUSIC 3AA3
- MUSIC 3CG3
- MUSIC 3J03 - Orchestration and Arranging
- MUSIC 3K03 - Brass Methods
- MUSIC 3L03
- MUSIC 3M03 A/B
- MUSIC 3N03
- MUSIC 3O03 - Conducting
- MUSIC 3P03 - Percussion Methods
- MUSIC 3SI3 - Vocal Pedagogy

MUSIC 3V03

- MUSIC 3WW3 - Woodwind Pedagogy
- MUSIC 4N03 - Choral Methods
- MUSIC 4OC3

Course List 2

- MUSIC 3CM3
- MUSIC 3CT3
- MUSIC 3CP3 - Constructing Counterpoint
- MUSIC 3YY3
- MUSIC 4C03 - Advanced Studies in Harmony and Counterpoint

Course List 3

- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSIC 2MU3 - Introduction to Music Therapy Research
- MUSIC 2T03
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- MUSIC 2Z03
- MUSIC 3MT3
- MUSIC 3Z03
- MUSIC 4S03
- MUSIC 4U03

Course List 4

- MUSIC 3SS3 - Special Studies in Small Ensemble Performance I
- MUSIC 4E03 - Applied Music
- MUSIC 4E06 A/B - Applied Music
- MUSIC 4SS3 - Special Studies in Small Ensemble Performance II

Course List 5

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony

Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 3GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 3GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 3GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 3GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 4GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 4GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 4GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 4GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 4GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

Requirements

123 units total (Levels I to IV), of which 51 units may be Level I

33 UNITS
- Music 1

21 UNITS

from
- MUSIC 1AA3 - Introduction to the History of Western Music II
- MUSIC 2CU3 - Music and Culture
- MUSIC 2E06 A/B - Applied Music

3 UNITS

6 UNITS
- MUSIC 3E06 A/B - Applied Music

21 UNITS

from
- *Course List 1*
- *Course List 2*
- *Course List 3*
- *Course List 4*

6 UNITS

from
- *Course List 1*
- *Course List 2*
- *Course List 3*
- *Course List 4*
- *Course List 5*

3 UNITS

from
- *Course List 5*

30 UNITS
- Electives, excluding *Course List 5*

HONOURS MUSIC (B.MUS.) (MUSIC COGNITION)

As the Music I program paused admissions in September 2024, Honours Music (B.Mus.) (Music Cognition) has paused its Level II program admission as of September 2025. Students who entered Honours Music (B.Mus.) (Music Cognition) prior to September 2024 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

Admission

Enrolment in this program is limited. Admission requires, as a minimum, completion of Music I, a Grade Point Average of at least 5.0, and an average of at least 5.0 in PSYCH 1X03 (or 1F03) and PSYCH 1XX3 (or 1FF3).

Program Notes

- Completion of a Music degree requires considerable daytime attendance.
- Students interested in this program must have completed Grade 12 Biology U, or enroll in BIOLOGY 1P03 in the first term of Level I, concurrently with PSYCH 1X03.
- More advanced training in statistics is recommended for students in this program (especially if students plan to conduct independent research in the future), but is not required. Students wanting more advanced statistics training should take PNB 2XE3 and PNB 3XE3. For permission to take these courses, please see the Academic Advisor in the Department of Psychology, Neuroscience & Behaviour.
- The courses appearing in *Course List 1* are specifically intended to prepare students to attend a Faculty of Education and for a career in school and music teaching. Students interested in Music Education are advised to consult the Music Counsellor during Level I for advice on fulfilling the entrance requirements of Faculties of Education.
- Students who intend to pursue graduate studies in music history or theory or who wish to use the music degree as preparation for post-graduate studies in other professions should select a significant number of the courses in *Course List 2*.
- Students in the Honours B.Mus. (Music Cognition) program can only use a total of 12 units from *Course List 5* as credit toward their degrees.
- Although it is listed as an option, students are encouraged to complete MUSICCOG 4D06 A/B - Thesis in Music Cognition.
- PSYCH 2E03 is recommended as preparation for MUSICCOG 4MP3.
- Students who begin in the Music (B.A.) program wishing to transfer to the Honours Music (B. Mus.), Honours Music Cognition (B. Mus.) or Combined Honours Music (B.A.) program should note that a successful audition and completion of Music I with a GPA of at least 5.0 are first required.

Course List 1

- HTHSCI 3MU3 - Music, Health, & the Community
- MUSIC 2CG3
- MUSIC 2SI3 - Singing
- MUSIC 2WW3 - Woodwinds
- MUSIC 3AA3
- MUSIC 3CG3
- MUSIC 3J03 - Orchestration and Arranging
- MUSIC 3K03 - Brass Methods
- MUSIC 3L03
- MUSIC 3M03 A/B
- MUSIC 3N03
- MUSIC 3O03 - Conducting
- MUSIC 3P03 - Percussion Methods
- MUSIC 3SI3 - Vocal Pedagogy

- MUSIC 3V03
- MUSIC 3WW3 - Woodwind Pedagogy
- MUSIC 4N03 - Choral Methods

MUSIC 4OC3

Course List 2

- MUSIC 3CM3
- MUSIC 3CP3 - Constructing Counterpoint
- MUSIC 3CT3
- MUSIC 3H03
- MUSIC 3YY3
- MUSIC 4C03 - Advanced Studies in Harmony and Counterpoint

Course List 3

- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2A03
- MUSIC 2D03 A/B
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSIC 2MU3 - Introduction to Music Therapy Research
- MUSIC 2T03
- MUSIC 2TT3 - Broadway and the Popular Song
- MUSIC 2U03
- MUSIC 2Z03
- MUSIC 3MT3

Course List 4

- MUSIC 3SS3 - Special Studies in Small Ensemble Performance I
- MUSIC 4E03 - Applied Music
- MUSIC 4E06 A/B - Applied Music
- MUSIC 4SS3 - Special Studies in Small Ensemble Performance II

Course List 5

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 3GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 3GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 3GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 3GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 4GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 4GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 4GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 4GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 4GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

Course List 6

- Any Level II, III or IV PSYCH or PNB course
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- MUSICCOG 4QQ3 A/B S - Experimental Laboratory in Music Cognition II

Requirements

123 units total (Levels I to IV), of which 51 units may be Level I

33 UNITS

- Music 1

21 UNITS

- MUSIC 1AA3 - Introduction to the History of Western Music II
- MUSIC 2CU3 - Music and Culture
- MUSIC 2E06 A/B - Applied Music

9 UNITS

from

- MUSICCOG 2MP3 - Introduction to Music Cognition
- MUSICCOG 3MP3
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

from

- PNB 2XA3 - Human Perception & Cognition
- PSYCH 2H03 - Human Learning and Cognition

6 UNITS

- MUSIC 3E06 A/B - Applied Music

18 UNITS

from

- *Course List 1*
- *Course List 2*
- *Course List 3*
- *Course List 4*

3 UNITS

from

- *Course List 5*

3 UNITS

from

- PSYCH 2AA3 - Child Development
- PSYCH 2E03 - Sensory Processes
- PSYCH 2H03 - Human Learning and Cognition
- PSYCH 2NF3 - Clinical Neuropsychology

6 UNITS

- MUSICCOG 4D06 A/B - Thesis in Music Cognition or
- 6 units from *Course List 6*

18 UNITS

- Electives, including no more than 6 units from *Course List 5*

Diploma(s)

DIPLOMA IN MUSIC PERFORMANCE

The Diploma is intended to recognize a concentration and achievement in the area of music performance. **Students should contact the Academic Counsellor for Music in the School of the Arts for direction on completing the requirements.**

Notes

- Lesson fees: Lesson fees are charged over and above tuition for MUSIC 2EE6 A/B, MUSIC 3EE6 A/B, MUSIC 3SS3, MUSIC 4EE9 A/B, and MUSIC 4SS3.
- MUSIC 4E09 A/B and MUSIC 4EE9 A/B must be taken over and above the total number of units required for a McMaster degree. Because these courses may not be used for credit towards any McMaster degree, students pursuing the Diploma must plan their work to accommodate nine extra units.
- Registration in MUSIC 4E09 A/B and MUSIC 4EE9 A/B requires permission of the School of the Arts. An overall Grade Point Average of at least 8.0 will be required for admission to these courses.

Admission

Students should meet with the Academic Counsellor for Music in the School of the Arts as early as possible in their degree program, but no later than the April before MUSIC 4E09 A/B or MUSIC 4EE9 A/B has begun. However, the application for MUSIC 4E09 A/B or MUSIC 4EE9 A/B will be considered the formal application to be admitted to the diploma program, even though some of the requirements will have been completed in earlier years.

Requirements

The Diploma will require completion of **24 units** as follows:

12 UNITS

- MUSIC 2E06 A/B - Applied Music or
- MUSIC 2EE6 A/B - Applied Music
- MUSIC 3E06 A/B - Applied Music or
- MUSIC 3EE6 A/B - Applied Music

3 UNITS

from

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GF3 A/B
- MUSIC 1GJ3 A/B
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3SS3 - Special Studies in Small Ensemble Performance I
- MUSIC 4SS3 - Special Studies in Small Ensemble Performance II

9 UNITS

- MUSIC 4E09 A/B - Solo Performance, Diploma or
- MUSIC 4EE9 A/B - Solo Performance, Diploma

Note

The Diploma will be awarded at the fall convocation of the Centre for Continuing Education following the completion of all requirements.

Minor(s):

MINOR IN ART HISTORY

The Art History program is no longer admitting students. Students considering completion of a minor in Art History should be aware that final intake to the program was effective 2023/2024, and program courses are limited following this time.

Requirements

24 units of Art History, of which no more than 6 units may be level I, and which may also include the
following courses:

- ART 3EA3
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment
- IARTS 1T03 - Story and Design in Theatre and Film
- IARTS 2CC3 - Performance, Art, and Visual Culture in Canada
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines
- IARTS 2US3 - Understanding Spatial Dynamics and Time in the Arts
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- IARTS 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada

MINOR IN IARTS (INTEGRATED ARTS)

Note

When choosing Level I courses students should consider the prerequisites for upper year courses.

Requirements

- 24 units of IARTS, of which no more than six units may be from Level I

MINOR IN MUSIC

Requirements

24 units of Music or Music Cognition subject to the prerequisites and qualifying tests specified in this Calendar. No more than nine units of the minor may be from Level I and no more than twelve units of the minor may be from

- MUSIC 1GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 1GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 1GF3 A/B
- MUSIC 1GJ3 A/B
- MUSIC 1GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 1GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 1GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 2GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 2GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 2GF3 A/B
- MUSIC 2GJ3 A/B
- MUSIC 2GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble

- MUSIC 2GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 2GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 3GA3 A/B
- MUSIC 3GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 3GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 3GF3 A/B
- MUSIC 3GJ3 A/B
- MUSIC 3GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 3GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 3GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble
- MUSIC 4GA3 A/B
- MUSIC 4GB3 A/B - Ensemble Performance: McMaster Concert Band
- MUSIC 4GC3 A/B - Ensemble Performance: McMaster University Choir
- MUSIC 4GF3 A/B
- MUSIC 4GJ3 A/B
- MUSIC 4GP3 A/B - Ensemble Performance: McMaster Percussion Ensemble
- MUSIC 4GR3 A/B - Ensemble Performance: McMaster Symphony Orchestra
- MUSIC 4GW3 A/B - Ensemble Performance: McMaster Cantemus Vocal Ensemble

MINOR IN THEATRE & FILM STUDIES

The Theatre & Film Studies program is no longer admitting students. Students considering completion of a minor in Theatre & Film Studies should be aware that final intake to the program was effective 2023/2024, and program courses are limited following this time.

Requirements

- 24 units in Theatre & Film, including no more than 6 units of level 1; may include up to 9 units from the following:
- ART 2AA3 - Introduction to the Practice of Art Therapy
- ART 3EA3
- ARTHIST 2A03
- ARTHIST 2R03
- ARTHIST 2T03
- ARTHIST 3Q03 - Colours of the World
- CLASSICS 2E03
- CLASSICS 2YY3
- CMST 2G03 - Performance and Performativity
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 2CR3 - Shakespeare: Comedies, Problem Plays, and Romances
- ENGLISH 2HT3 - Shakespeare: Histories and Tragedies
- ENGLISH 3CC3
- GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
- GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- GERMAN 2S03
- GKROMST 2E03 - The Ancient World in Film
- GKROMST 2YY3 - Greek Tragedy
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment
- IARTS 1T03 - Story and Design in Theatre and Film
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IARTS 2PD3 - Perspectives D: Arts Across Disciplines
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- INDIGST 3EE3 - Indigenous Film
- INDIGST 3G03 - Indigenous Creative Arts and Drama: Selected Topics
- ITALIAN 3X03 - Italy Today Through Film (Taught in English)
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3C03 - Interactive and Spatial Audio
- MMEDIA 2G03
- MMEDIA 3C03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2TT3 - Broadway and the Popular Song
- RUSSIAN 2G03 - Masterpieces of Russian Literature in Film and TV Series (Taught in English)
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)

Department of Communication Studies and Media Arts

https://csma.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Paula Gardner

PROFESSORS

Christina Baade/ B.Mus. *(Northwestern)*, M.Mus., Ph.D. *(Wisconsin-Madison)*

Sara Bannerman/B.Mus. *(Queen's)*, M.A., Ph.D. *(Carleton)*/Canada Research Chair in Communication Policy and Governance

Paula Gardner/B.A. *(SUNY)*, M.A. *(NSSR)*, Ph.D. *(UMass)*/Asper Chair in Communications

Robert S. Hamilton/M.F.A. *(S.A.I.C.)*, M.F.A. *(Jan van Eyck Acadamie)*

David Ogborn/B.A., B.Sc. *(Mary)*, B.Mus. *(Manitoba)*, M.Mus., Mus.Doc. *(Toronto)*

Liss Platt/B.F.A. *(Connecticut)*, M.F.A. *(California-San Diego)*

ASSOCIATE PROFESSORS

Alpha Abebe/B.A. *(Toronto)*, M.A. *(York)*, Ph.D. *(Oxford)*

Terence Flynn/B.A. *(Carleton)*, M.Sc., Ph.D. *(Syracuse)*

Faiza Hirji/B.A. *(Simon Fraser)*, M.A., Ph.D. *(Carleton)*

Andrew Mactavish/B.A. *(Mount Saint Vincent)*, M.A. *(Dalhousie)*, Ph.D. *(Alberta)*

Dilyana Mincheva/B.A., M.A. *(Sofia-Bulgaria)*, Ph.D. *(Trent)*

Selina Mudavanhu/B.A., M.A. *(Zimbabwe)*, Ph.D. *(Cape Town)*

Chris Myhr/B.A *(Simon Fraser)*, B.F.A. *(Lethbridge)*, M.F.A. *(NSCAD)*

David Ogborn/B.A., B.Sc. *(Mary)*, B.Mus. *(Manitoba)*, M.Mus., Mus.Doc. *(Toronto)*

Christine Quail/B.A., M.A. *(Pennsylvania)*, Ph.D. *(Oregon)*

Philip Savage/B.A. *(Carleton)*, M.A. *(Simon Fraser)*, Ph.D. *(York)*

Alexandre Sévigny/B.A. *(York)*, M.A., Ph.D. *(Toronto)*

Andrea Zeffiro/B.A., M.A. *(Western)*, Ph.D. *(Concordia)*

ASSISTANT PROFESSORS

Lyndsey Beutin/B.A. *(Duke)*, M.A., Ph.D. *(Pennsylvania)*

Derek Woods/B.A., M.A. *(UBC)*, Ph.D. *(Rice)*

For the Honours Arts & Science and Communication Studies program (B.Arts. Sc.), see *Arts & Science Program.*

For the Honours Arts & Science and Media Arts program (B.Arts.Sc.), see *Arts & Science Program.*

Bachelor of Arts (Honours)

COMBINED HONOURS IN COMMUNICATION STUDIES AND ANOTHER SUBJECT (B.A.)

If combining with Media Arts, refer to the Combined Honours in Communication Studies and Media Arts (B.A.)

Communication Studies is an academic discipline that encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in CMST 1A03.

Notes

- Students are required to take CMST 2RA3, 2TM6 and MEDIAART 1A03 by the end of Level II.
- Students are required to take CMST 3HC3 by the end of Level III.
- Students wishing to take more than the required three units of Level IV Communication Studies courses must first obtain permission from the undergraduate advisor for the Communication Studies program.
- Students transferring into the program at Level IV should not expect to complete all of the degree requirements in one year.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours in Communication Studies and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 5)*

12 UNITS

(must be completed by the end of Level II) (See *Note 1* above)

- CMST 2RA3 - Application in Communication Theory and Methods
- CMST 2TM6 - Foundations in Communication Theory and Methods
- MEDIAART 1A03 - Media Arts (or MMEDIA 1A03)

3 UNITS

(must be completed by the end of Level III) (See *Note 2* above)

- CMST 3HC3 - History of Communication

15 UNITS

from the following courses (of which 9 units must be from Level III):

- **Level II Communication Studies**
- **Level III Communication Studies**
- ARTHIST 2A03
- GENDRST 3BB3 - Gender and Visual Culture
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 3EE3 - Indigenous Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 3P03 - Pragmatics
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 2G03
- MMEDIA 3BB3
- MMEDIA 3MU3
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3E03 - Philosophy of Language
- PHILOS 3M03
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 3M03
- THTRFLM 3N03
- WOMENST 3BB3

3 UNITS

from

- Levels II Communication Studies
- Levels III Communication Studies
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3K03 - Game Studies
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 2G03
- MMEDIA 3B03
- MMEDIA 3BB3
- MMEDIA 3K03
- MMEDIA 3MU3

3 UNITS

- Level IV Communication Studies

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- electives to total 120 units

COMBINED HONOURS IN COMMUNICATION STUDIES AND MEDIA ARTS (B.A.)

https://csma.humanities.mcmaster.ca/

The Combined Honours in Communication Studies and Media Arts allows students to explore two complementary fields during their undergraduate studies.

Communication Studies is an academic discipline that encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

Media Arts is a production-oriented program uniting new media with traditional arts and humanities subjects. Through experiential learning, students in the program will engage with the creative, theoretical and critical aspects of digital media production and develop both the practical and conceptual skills necessary to pursue careers in Media Arts.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) and CMST 1A03, and a supplemental application (see Note 2, below). It requires, as a minimum, completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) and a grade of at least C in CMST 1A03. (See *Notes* below.)

Notes

- **Applicants must have completed any Level I program including the course MEDIAART 1A03 (or MMEDIA 1A03**, if taken previously) and **CMST 1A03** by April of the year in which application is made. Decisions regarding admission into the Combined Honours in Communication Studies and Media Arts program are made in May when final grades for the previous Fall and Winter terms are known.
- **Application for this program must be made during the program/plan selection process at the end of the Winter term.** Please see *Application to Level II Programs* under Academic Regulations in this section of the Calendar for information with regard to the application procedure. Serious applicants are advised to rank the Combined Honours in Communication Studies and Media Arts program as their first program of choice for Level II. Starting in 2026-27, students must submit a portfolio of creative media arts project work and attend an interview with the application committee. Admissions decisions will be based on a combined assessment of the media arts portfolio, interview and the student's Level I GPA and grade in MEDIAART 1A03. The supplemental application will be available on the program website from March 15 to April 30 at https://csma.humanities.mcmaster.ca/undergraduate-programs/media-arts-program/.
- Students entering the Combined Honours in Communication Studies and Media Arts program should be aware that, due to course sequencing and prerequisites, it takes a minimum of **THREE** years beyond Level I to complete program requirements.
- Students are required to take CMST 2RA3, 2TM6 and MEDIAART 2B06, 2DF3 and 2G03 by the end of Level II.
- Students are required to take CMST 3HC3, MEDIAART 3D03 and MEDIAART 3Z03 by the end of Level III.
- Students wishing to take more than the required three units of Level IV Communication Studies courses must first obtain permission from the department's undergraduate counselor.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours in Communication Studies and Media Arts (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (including CMST 1A03 and MEDIAART 1A03) (see *note 7)*

21 UNITS

(must be completed by the end of Level II) (See *Note 4* above)

- CMST 2RA3 - Application in Communication Theory and Methods
- CMST 2TM6 - Foundations in Communication Theory and Methods
- MEDIAART 2B06 - Time-Based Media
- MEDIAART 2DF3 - Design Fundamentals
- MEDIAART 2G03 - Digital Audio

9 UNITS

(must be completed by the end of Level III) (See *Note 5* above)

- CMST 3HC3 - History of Communication
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3Z03 - Production and Critique

6 UNITS

- Level III Media Arts

3 UNITS

from

- MEDIAART 3B03 - Digital Cultures

- MEDIAART 3BB3 - New Media Art Practices

3 UNITS

- Level IV Communication Studies

6 UNITS

- MEDIAART 4ST6 A/B - Senior Thesis Research and Production

18 UNITS

from the following courses (of which 9 units must be from Level III):

- **Level II Communication Studies**
- **Level III Communication Studies**
- ARTHIST 2A03
- GENDRST 3BB3 - Gender and Visual Culture
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 3EE3 - Indigenous Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 3P03 - Pragmatics
- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3K03 - Game Studies
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television
- INSPIRE 2II3 - Introduction to Interdisciplinary Inquiry
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3E03 - Philosophy of Language
- PHILOS 3M03
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 3M03
- THTRFLM 3N03
- WOMENST 3BB3

6 UNITS

- **Level III Media Arts or any of the following:**
- CMST 3B03 - Practical Aspects of Media Production
- CMST 3DJ3 - Digital Justice
- CMST 3Z03 - Mobile Practices, Technologies and Art
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- THTRFLM 2BB3 - Designing for Devised Performance
- THTRFLM 3PR3
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S06 - Devised Theatre Production

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

9 UNITS

electives, excluding the following courses, to total 120 units

- ART 3IP3
- ART 3PB3
- MEDIAART 3AN3 - Animation
- MEDIAART 3C03 - Interactive and Spatial Audio
- MEDIAART 3DS3 - Documentary Strategies
- MEDIAART 3EE3 - Graphic Design
- MEDIAART 3EW3 - Environmental and Wildlife Photography
- MEDIAART 3H03
- MEDIAART 3I03 - Narrative Strategies
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3Q03
- MEDIAART 3S03 - Sound and Image
- MEDIAART 3VA3 - Video Art and Digital Cinema
- MEDIAART 4F03 - Topics in Media Arts Production

COMBINED HONOURS IN MEDIA ARTS AND ANOTHER SUBJECT (B.A.)

If combining with Communication Studies, refer to the Combined Honours in Communication Studies and Media Arts (B.A.)

Media Arts

https://csma.humanities.mcmaster.ca/

Offered as a Single or Combined Honours program, Media Arts is a production-oriented program uniting new media with traditional arts and humanities subjects. Through experiential learning, students in the program will engage with the creative, theoretical and critical aspects of digital media production and develop both the practical and conceptual skills necessary to pursue careers in Media Arts.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously), and a supplemental application (see Note 2, below). It requires, as a minimum, completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously). (See *Notes* below.)

Notes

- **Applicants must have completed any Level I program including the course MEDIAART 1A03 (or MMEDIA 1A03**, if taken previously**)** by April of the year in which application is made. Decisions regarding admission into the Media Arts program are made in May when final grades for the previous Fall and Winter terms are known.
- **Application for this program must be made during the program/plan selection process at the end of the Winter term.** Please see *Application to Level II Programs* under Academic Regulations in this section of the Calendar for information with regard to the application procedure. Serious applicants are advised to rank the Media Arts program as their first program of choice for Level II. Starting in 2026-27, students must submit a portfolio of creative media arts project work and attend an interview with the application committee. Admissions decisions will be based on a combined assessment of the media arts portfolio, interview and the student's Level I GPA and grade in MEDIAART 1A03. The supplemental application will be available on the program website from March 15 to April 30 at https://csma.humanities.mcmaster.ca/undergraduate-programs/media-arts-program/.
- Students entering Media Arts should be aware that, due to course sequencing and prerequisites, it takes a minimum of **THREE** years beyond Level I to complete program requirements.
- Students must register for the following required Media Arts courses in the following sequence:

Level II:

• MEDIAART 2A06

• MEDIAART 2B06 - Time-Based Media (must be completed by the end of level II)

• MEDIAART 2DF3 - Design Fundamentals (must be completed by the end of level II)

• MEDIAART 2G03 - Digital Audio (must be completed by the end of level II)

Level III:

• MEDIAART 3D03 - Interface, Code, Data (must be completed by the end of level III)

• MEDIAART 3Z03 - Production and Critique (must be completed by the end of level III)

• 12 additional units of Level III Media Arts

Level IV:

• MEDIAART 4ST6 A/B - Senior Thesis Research and Production

- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course List 1

- ART 3IP3
- ART 3PB3
- MEDIAART 3AN3 - Animation
- MEDIAART 3C03 - Interactive and Spatial Audio
- MEDIAART 3DS3 - Documentary Strategies
- MEDIAART 3EE3 - Graphic Design
- MEDIAART 3EW3 - Environmental and Wildlife Photography
- MEDIAART 3H03
- MEDIAART 3I03 - Narrative Strategies
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3Q03
- MEDIAART 3S03 - Sound and Image
- MEDIAART 3VA3 - Video Art and Digital Cinema
- MEDIAART 4F03 - Topics in Media Arts Production
- MMEDIA 3AN3
- MMEDIA 3C03
- MMEDIA 3EE3
- MMEDIA 3H03
- MMEDIA 3I03
- MMEDIA 3L03
- MMEDIA 3P03
- MMEDIA 3PC3
- MMEDIA 3Q03
- MMEDIA 3S03
- MMEDIA 3VA3
- MMEDIA 4F03

Course List 2

- CMST 3B03 - Practical Aspects of Media Production
- CMST 3DJ3 - Digital Justice
- CMST 3Z03 - Mobile Practices, Technologies and Art
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 3EE3 - Indigenous Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3K03 - Game Studies
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 3A03
- MMEDIA 3B03
- MMEDIA 3BB3
- MMEDIA 3K03
- MMEDIA 3MU3
- THTRFLM 2BB3
- THTRFLM 3PR3
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S06 - Devised Theatre Production

Requirements

Students who entered Combined Honours in Media Arts and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 5)*

24 UNITS

- MEDIAART 2A06
- MEDIAART 2B06 - Time-Based Media
- MEDIAART 2DF3 - Design Fundamentals
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3X03 A/B
- MEDIAART 3Z03 - Production and Critique
- MEDIAART 4ST6 A/B - Senior Thesis Research and Production

3 UNITS

from

- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices

12 UNITS

from

- *Co*urse *Lists 1 and 2*

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

6 UNITS

- electives, excluding Media Arts *Course List 1,* to total 120 units

HONOURS COMMUNICATION STUDIES (B.A.)

Communication Studies is an academic discipline that encompasses many fields of inquiry. Graduates of this program will have an advanced knowledge of the nature, function and evolution of communication, and will develop both practical and theoretical skills necessary to pursue careers in the field of communications.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in CMST 1A03.

Notes

- Students are required to take CMST 2RA3, 2TM6 and MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) by the end of Level II.
- Students are required to take CMST 3HC3 by the end of Level III.
- Students wishing to take more than the required six units of Level IV Communication Studies courses must first obtain permission from the undergraduate advisor for the Communication Studies program.
- Students transferring into the program at Level IV should not expect to complete all of the degree requirements in one year.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Honours Communication Studies (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 5)*

12 UNITS

(must be completed by the end of Level II) *(See Note 1 above)*

- CMST 2RA3 - Application in Communication Theory and Methods
- CMST 2TM6 - Foundations in Communication Theory and Methods
- MEDIAART 1A03 - Media Arts (or MMEDIA 1A03)

3 UNITS

(must be completed by the end of Level III) (See *Note 2* above)

- CMST 3HC3 - History of Communication

30 UNITS

from the following courses, of which 12 units must be Level III

- **Level II Communication Studies**
- **Level III Communication Studies**
- ARTHIST 2A03
- GENDRST 3BB3 - Gender and Visual Culture
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 3EE3 - Indigenous Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 3P03 - Pragmatics
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 2G03
- MMEDIA 3BB3
- MMEDIA 3MU3
- MUSIC 2A03
- MUSIC 2F03 - Music for Film and Television

- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3E03 - Philosophy of Language
- PHILOS 3M03
- RUSSIAN 2H03 - Soviet Propaganda in Films and Other Mass Media (Taught in English)
- THTRFLM 3M03
- THTRFLM 3N03
- WOMENST 3BB3

3 UNITS

from

- CMST 3Z03 - Mobile Practices, Technologies and Art
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3K03 - Game Studies
- MEDIAART 3L03 - Game Design
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 2G03
- MMEDIA 3A03
- MMEDIA 3B03
- MMEDIA 3BB3
- MMEDIA 3K03
- MMEDIA 3MU3

6 UNITS

- Level IV Communication Studies

3 UNITS

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27 UNITS

- Electives

HONOURS COMMUNICATION STUDIES WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

HONOURS MEDIA ARTS (B.A.)

Media Arts

https://csma.humanities.mcmaster.ca/

Offered as a Single or Combined Honours program, Media Arts is a production-oriented program uniting new media with traditional arts and humanities subjects. Through experiential learning, students in the program will engage with the creative, theoretical and critical aspects of digital media production and develop both the practical and conceptual skills necessary to pursue careers in Media Arts.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) and a supplemental application (see Note 2, below). It requires, as a minimum, completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) . (See *Notes* below.)

Notes

- **Applicants must have completed any Level I program including the course MEDIAART 1A03 (or MMEDIA 1A03, if taken previously) by April of the year in which application is made.** Decisions regarding admission into the Media Arts program are made in May when final grades for the previous Fall and Winter terms are known.
- **Application for this program must be made during the program/plan selection process at the end of the Winter term.** Please see *Application to Level II Programs* under Academic Regulations in this section of the Calendar for information with regard to the application procedure. Serious applicants are advised to rank the Media Arts program as their first program of choice for Level II. Starting in 2026-27, students must submit a portfolio of creative media arts project work and attend an interview with the application committee. Admissions decisions will be based on a combined assessment of the media arts portfolio, interview and the student›s Level I GPA and grade in MEDIAART 1A03. The supplemental application will be available on the program website from March 15 to April 30 at https://csma.humanities.mcmaster.ca/undergraduate-programs/media-arts-program/.
- Students entering Media Arts should be aware that, due to course sequencing and prerequisites, it takes a minimum of **THREE** years beyond Level I to complete program requirements.
- Students must register for the following required Media Arts courses in the following sequence:

Level II:

- MEDIAART 2A06
- MEDIAART 2B06 - Time-Based Media (must be completed by the end of level II)

• MEDIAART 2DF3 - Design Fundamentals (must be completed by the end of level II)
• MEDIAART 2G03 - Digital Audio (must be completed by the end of level II)
Level III:
• MEDIAART 3D03 - Interface, Code, Data (must be completed by the end of level III)
• MEDIAART 3Z03 - Production and Critique (must be completed by the end of level III)
• 12 additional units of Level III Media Arts
Level IV:
• MEDIAART 4ST6 A/B - Senior Thesis Research and Production
  • The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course List 1

- ART 3IP3
- ART 3PB3
- MEDIAART 3AN3 - Animation
- MEDIAART 3C03 - Interactive and Spatial Audio
- MEDIAART 3DS3 - Documentary Strategies
- MEDIAART 3EE3 - Graphic Design
- MEDIAART 3EW3 - Environmental and Wildlife Photography
- MEDIAART 3H03
- MEDIAART 3I03 - Narrative Strategies
- MEDIAART 3PC3 - Photographic Collage and Composite Images
- MEDIAART 3Q03
- MEDIAART 3S03 - Sound and Image
- MEDIAART 3VA3 - Video Art and Digital Cinema
- MEDIAART 4F03 - Topics in Media Arts Production
- MMEDIA 3AN3
- MMEDIA 3C03
- MMEDIA 3EE3
- MMEDIA 3H03
- MMEDIA 3I03
- MMEDIA 3L03
- MMEDIA 3P03
- MMEDIA 3PC3
- MMEDIA 3Q03
- MMEDIA 3S03
- MMEDIA 3VA3
- MMEDIA 4F03

Course List 2

- CMST 3B03 - Practical Aspects of Media Production
- CMST 3Z03 - Mobile Practices, Technologies and Art
- CMST 3DJ3 - Digital Justice
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 3EE3 - Indigenous Film
- INDIGST 4LF3 - Diné & Dene Literature & Film
- MEDIAART 3K03 - Game Studies
- MEDIAART 3MU3 - Musics, Technologies and Audio Cultures
- MMEDIA 3A03
- MMEDIA 3K03
- MMEDIA 3MU3
- THTRFLM 2BB3 - Designing for Devised Performance
- THTRFLM 3PR3
- MEDIAART 3L03 - Game Design
- THTRFLM 3PS3 - Devised Theatre Production: Research and Development
- THTRFLM 3S06 - Devised Theatre Production

Requirements

Students who entered Honours Media Arts (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.
120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 5)*

30 UNITS

- MEDIAART 2B06 - Time-Based Media
- MEDIAART 2DF3 - Design Fundamentals
- MEDIAART 2G03 - Digital Audio
- MEDIAART 3B03 - Digital Cultures
- MEDIAART 3BB3 - New Media Art Practices
- MEDIAART 3D03 - Interface, Code, Data
- MEDIAART 3X03 A/B
- MEDIAART 3Z03 - Production and Critique
- MEDIAART 4ST6 A/B - Senior Thesis Research and Production

9 UNITS

- CMST 1A03 - Introduction to Communication
- CMST 2BB3 - Culture and Communication
- CMST 3II3 - Intellectual Property

18 UNITS

from

- *Course Lists 1 & 2*

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)

- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

24 UNITS

- electives, excluding Media Arts *Course List 1*

HONOURS MEDIA ARTS WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Department of English and Cultural Studies

http://english.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Susie O'Brien

DISTINGUISHED UNIVERSITY PROFESSOR

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Henry Giroux/B.S. *(Maine)*, M.A. *(Appalachian State)*, D. Arts *(Carnegie-Mellon)*, Chair for Scholarship in the Public Interest

Susan Searls Giroux/B.A., M.A.T. *(Miami-Oxford, Ohio)*, Ph.D. *(Pennsylvania State)*

Melinda Gough/B.A. *(McGill)*, M.A., Ph.D. *(Yale)*

Rick Monture/B.A., M.A., Ph.D. *(McMaster)*

Susie O'Brien/B.A. *(Queen's)*, M.A. *(Queensland)*, Ph.D. *(Queen's)*

Peter Walmsley/B.A., M.A. *(Toronto)*, Ph.D. *(Cambridge)*

Eugenia Zuroski/B.A. *(Columbia)*, M.A., Ph.D. *(Brown)*

ASSOCIATE PROFESSORS

Ronald Cummings/B.A. *(West Indies)*, M.A. *(Hull)*, Ph.D. *(Leeds)*

Catherine Grisé/B.A. *(Trent)*, M.A., Ph.D. *(Western Ontario)*

Grace Kehler/B.A. *(Regina)*, M.A., Ph.D. *(Western Ontario)*

ASSISTANT PROFESSORS

Ki'en Debicki/B.A. *(McMaster)*, M.A. *(York)*, Ph.D. *(McMaster)*

For the Honours Arts & Science and English and Cultural Studies program (B.Arts.Sc.; See *Arts & Science Program)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN ENGLISH AND CULTURAL STUDIES AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I English.

Notes

1. When registering, students should distribute their required English courses (See Requirements below) as follows:
   - Level II: ENGLISH 2TP3 and 9 units of other Level II English
   - Level III: 12 units of Levels II and/or III English
   - Level IV: 6 units of Levels II and/or III English; 6 units of Level IV English seminars

(No student may take more than six units of Level IV seminars.)

2. Students who are interested in taking ENGLISH 4X03 should contact the faculty member chairing the ENGLISH 4X03 committee early in the first term of Level IV.

3. With permission of the Department, students may enroll in ENGLISH 4Y06 A/B S, 4Y03 and/or 4YY3 in Level IV. Invitations to apply for ENGLISH 4Y06 A/B, 4Y03 and 4YY3 will be circulated to students in the second term of Level III. Students may complete a maximum of 6 units of practicum coursework toward their degree requirements.

4. Most graduate programs in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their program a second language beyond the introductory level.

5. ENGLISH 3CR3 and 4CC3 are restricted to students accepted to the Concurrent Certificate in Creative Writing and Narrative Arts (CWNA) and may not be taken for credit towards an English and Cultural Studies program.

6. Students considering a career in teaching are advised to take 6 units of Canadian courses as many schools of education require this as part of the teachable admissions: ENGLISH 2C03, 2CC3, 2CL3, 2KA3, 3W03.

7. The Faculty of Humanities has introduced a mandatory concurrent skills certificate for all Humanities degree students. All Humanities students are required to take 18 units of the Humanities Concurrent Certificate: Skills for Life. These courses are designed to provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours English and Cultural Studies and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 7)*

3 UNITS

- ENGLISH 2TP3 - Literary and Cultural Studies: Theory and Practice

9 UNITS

from

- Level II English courses

12 UNITS

from

- Level III English Courses *(excluding ENGLISH 3CR3)*

6 UNITS

from

- Level II English courses
- Level III English courses *(excluding ENGLISH 3CR3)*
- ENGLISH 4X03 - Honours Essay
- ENGLISH 4Y06 A/B S - Research Practicum
- ENGLISH 4Y03 - Experiential Practicum I
- ENGLISH 4YY3 - Experiential Practicum II
- GENDRST 2AA3 - Feminist Thought
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 4B03 - Indigenous Literary Governance and Resistance
- INDIGST 4J03 - Indigenous Erotics
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- THTRFLM 3DD3

6 UNITS

- Level IV English seminars *(excluding ENGLISH 4CC3, 4Y03, 4YY3, 4Y06 A/B S)*

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

9 UNITS

- electives to total 120 units

HONOURS ENGLISH AND CULTURAL STUDIES (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I English.

Notes

- When registering, students should distribute their required English courses (See Requirements below) as follows:
- Level II: ENGLISH 2TP3 and 15 units of other Level II English
- Level III: 18 units of Level II and/or III English
- Level IV: 9 units of Level II and/or III English; 9 units of Level IV English seminars.
- Students who are interested in taking ENGLISH 4X03 should contact the faculty member chairing the ENGLISH 4X03 committee early in the **first** term of Level IV.
- With permission of the Department, students may enroll in ENGLISH 4Y06 A/B S, 4Y03, and/or 4YY3 in Level IV. Invitations to apply for ENGLISH 4Y06 A/B, 4Y03, and 4YY3 will be circulated to students in the second term of Level III. Students may complete a maximum of 6 units of practicum coursework toward their degree requirements.
- Most graduate programs in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their program a second language beyond the introductory level.
- ENGLISH 3CR3 and 4CC3 are restricted to students accepted to the Concurrent Certificate in Creative Writing and Narrative Arts (CWNA) and may not be taken for credit towards an English and Cultural Studies program.
- Students considering a career in teaching are advised to take 6 units of Canadian courses many schools of education require this as part of the teachable admissions: ENGLISH 2C03, 2CC3, 2CL3, 2KA3, 3W03.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Honours English and Cultural Studies (B.A.) prior to September 2024 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Level I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 7)*

3 UNITS

- ENGLISH 2TP3 - Literary and Cultural Studies: Theory and Practice

15 UNITS

from

- Level II English courses

18 UNITS

from

- Level III English courses (excluding ENGLISH 3CR3)

9 UNITS

from

- Level II English courses
- Level III English courses (excluding ENGLISH 3CR3)
- ENGLISH 4X03 - Honours Essay
- ENGLISH 4Y06 A/B S - Research Practicum
- ENGLISH 4Y03 - Experiential Practicum I
- ENGLISH 4YY3 - Experiential Practicum II
- GENDRST 2AA3 - Feminist Thought
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 4B03 - Indigenous Literary Governance and Resistance
- INDIGST 4J03 - Indigenous Erotics
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- THTRFLM 3DD3

9 UNITS

- Level IV English seminars (excluding ENGLISH 4CC3, 4Y03, 4YY3, 4Y06 A/B S)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27 UNITS

- electives

HONOURS ENGLISH AND CULTURAL STUDIES AND MATHEMATICS (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I English; and successful completion of one of MATH 1A03, 1LS3 or 1X03 and one of MATH 1AA3, 1LT3, or 1XX3 with a grade of at least C+ *(see Note 6 below)*.

Notes

- When registering, students should distribute their required English courses (See *Requirements* below) as follows:
- Level II: 12 units of Level II English
- Level III: 12 units of Levels II and/or III English
- Level IV: 6 units of Levels II and/or III English; 6 units of Level IV English seminar

(No student may take more than six units of Level IV seminars.)

- MATH 1B03 and MATH 1C03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
- Students who are interested in taking ENGLISH 4X03 should contact the faculty member chairing the ENGLISH 4X03 committee early in the first term of Level IV.
- With permission of the Department, students may enroll in ENGLISH 4Y06 A/B S, 4Y03 and/or 4YY3 in Level IV. Invitations to apply for ENGLISH 4Y06 A/B S, 4Y03 and 4YY3 will be circulated to students in the second term of Level III. Students may complete a maximum of 6 units of practicum coursework toward their degree requirements.
- Most graduate programs in English require proficiency in a second language. Students who plan to pursue graduate studies in English are strongly encouraged to include in their program a second language beyond the introductory level.
- Students seeking admission to the program should note that MATH 1A03 and MATH 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. Math 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. Math 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take Math 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
- ENGLISH 3CR3 and 4CC3 are restricted to students accepted to the *Concurrent Certificate in Creative Writing and Narrative Arts (CWNA)* and may not be taken for credit towards an English and Cultural Studies program.
- Students considering a career in teaching are advised to take 6 units of Canadian courses as many schools of education require this as part of the teachable admissions: ENGLISH 2C03, 2CC3, 2CL3, 2KA3, 3W03.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities

1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours English and Cultural Studies and Mathematics (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Level I to IV), of which 48 units may Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 9)*

3 UNITS

- ENGLISH 2TP3 - Literary and Cultural Studies: Theory and Practice

9 UNITS

from

- Level II English courses

9 UNITS

from

- Level III English courses (excluding ENGLISH 3CR3)

6 UNITS

from

- Level II English courses
- Level III English courses (excluding ENGLISH 3CR3)
- ENGLISH 4X03 - Honours Essay
- ENGLISH 4Y06 A/B S - Research Practicum
- ENGLISH 4Y03 - Experiential Practicum I
- ENGLISH 4YY3 - Experiential Practicum II
- GENDRST 2AA3 - Feminist Thought
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- INDIGST 4B03 - Indigenous Literary Governance and Resistance
- INDIGST 4J03 - Indigenous Erotics
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- THTRFLM 3DD3

6 UNITS

- Level IV English seminars (excluding ENGLISH 4CC3, 4Y03, 4YY3, 4Y06 A/B S)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

0-6 UNITS

- MATH 1B03 - Linear Algebra I *(if not completed in Level I)*
- MATH 1C03 - Introduction to Mathematical Reasoning *(if not completed in Level I)*

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 UNITS

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

3 UNITS

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

6 UNITS

from

- MATH 3A03 - Real Analysis I or
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3IA3 - Introduction to Analysis
- MATH 3F03 - Ordinary Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology
- MATH 3X03 - Complex Analysis I

15 UNITS

- Level II-IV Mathematics or Statistics which must include at least 6 units at Level III and/or IV

12 -18 UNITS

- electives to total 120 units

HONOURS ENGLISH AND CULTURAL STUDIES WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

ENGLISH AND CULTURAL STUDIES (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 including a grade in C- in three units of Level I English.

Notes

- When registering, students should distribute their required English courses (See Requirements below) as follows:
- Level II: ENGLISH 2TP3 and 9 units of other Level II English
- Level III: 18 units of Level II and/or III English
- ENGLISH 3CR3 and 4CC3 are restricted to students accepted to the Concurrent Certificate in Creative Writing and Narrative Arts (CWNA) and may not be taken for credit towards an English and Cultural Studies Program.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the English and Cultural Studies (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

90 units total (Level I to III), of which 42 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program (see *note 3)*

3 UNITS

- ENGLISH 2TP3 - Literary and Cultural Studies: Theory and Practice

9 UNITS

from

- Level II English Courses

12 UNITS

from

- Level III English courses (excluding ENGLISH 3CR3)

6 UNITS

from

- Level II English courses
- Level III English courses *(excluding ENGLISH 3CR3)*
- GENDRST 2AA3 - Feminist Thought
- GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- THTRFLM 3DD3

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

21 UNITS

- electives

Minor(s):

MINOR IN ENGLISH AND CULTURAL STUDIES

Requirements

- Six units of Level I English and 18 units of Levels II and III English.

Department of French

http://french.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Elzbieta Grodek

PROFESSORS

William F. Hanley/B.A. *(Toronto)*, M. ès L. *(Paris-Sorbonne)*, D.Phil. *(Oxford)*

John C. Stout/B.A. *(British Columbia)*, Ph.D. *(Princeton)*

ASSOCIATE PROFESSORS

Eugène Nshimiyimana/B.A. *(Rwanda)*, M.A., Ph.D. *(Western Ontario)*

Joëlle Papillon/B.A., M. ès A. *(Montréal)*, Ph.D. *(Toronto)*

Nicholas Serruys/B.A. *(Western Ontario)*, B.Ed. *(Queen's)*, M.A. *(Western Ontario)*, Ph.D. *(Toronto)*

ASSISTANT PROFESSORS

Elzbieta Grodek/B.A., M.A. *(Jagiellonian University, Cracow)*, Ph.D. *(Toronto)*

The Department of French has an overall theme of *Francophonie* (the French-

speaking world) and Diversity. This theme is reflected in the three areas of study in the following table which serves to give an overview of courses available in each area of concentration. Students are not expected to specialize officially in any one area.

Area	Courses
Translation, Literary Theory, Culture and Pedagogy	FRENCH 2CT3, 2L03, 3CT3, 3P03, 3PP6 A/B, 4CC3, 4CT3
Francophone Literatures and Cultures of Quebec and Canada, of Africa, Asia and the Caribbean	FRENCH 2AC3, 2CC3, 2E03, 3AA3, 3AC3, 3FF3, 3HH3, 4DD3, 4LL3, 4U03
Franco-European Literatures and Cultures	FRENCH 2F03, 3EE3, 3KK3, 3Q03, 3W03, 4I03, 4MM3, 4Y03

Students registered in Level I or above in any program interested in practicing French conversation may want to consider the following course:

Conversational French	FRENCH 2OR3

Students registered in Level I or above in any program interested in learning more about French and francophones cultures may want to consider the following courses:

Courses taught in English	FRENCH 2Q03, 2XX3

Language courses taught in the Department of French adhere to the *Common European Framework of Reference for Languages*, which focuses on oral and written comprehension and production through task-based learning.
For the Honours Arts & Science and French program (B.Arts.Sc.), see *Arts & Science Program*

Bachelor of Arts (Honours)

COMBINED HONOURS IN FRENCH AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in FRENCH 1A06 A/B, FRENCH 1AA3 and FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AA3 and FRENCH 2AB3, or a grade of at least A in FRENCH 2Z06 A/B or FRENCH 2ZA3 and FRENCH 2ZB3.

Notes

- Upon completion of 60 units of work (including 12 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, up to 15 units of Level III French may be replaced by courses of study at a French-language university.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.
- The following courses may not be used to satisfy Level II program requirements: FRENCH 2AA3, 2AB3, FRENCH 2M06 A/B, 2Q03, 2XX3, 2Z06 A/B, 2ZA3, and 2ZB3.

Requirements

Students who entered Combined Honours in French and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program (see *note 2)*

9 UNITS

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 3C03 - French Language Practice III: Advanced

9 UNITS

- Level II French (see *note 3)*

9 UNITS

- Level III French

9 UNITS

- Level IV French

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- Electives to total 120 units

HONOURS FRENCH (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in FRENCH 1A06 A/B, FRENCH 1AA3 and FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AA3 and FRENCH 2AB3, or a grade of at least A in FRENCH 2Z06 A/B or FRENCH 2ZA3 and FRENCH 2ZB3.

Notes

- Upon completion of 60 units of work (including 18 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, Level III of Honours French may be replaced by courses of study at a French-language university.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.
- The following courses may not be used to satisfy Level II program requirements: FRENCH 2AA3, 2AB3, 2M06 A/B, 2Q03, 2XX3, 2Z06 A/B, 2ZA3, and 2ZB3.

Requirements

Students who entered Honours French (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.
120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program (see *note 2)*

9 UNITS

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 3C03 - French Language Practice III: Advanced

15 UNITS

- Level II French (see *note 3)*

15 UNITS

- Level III French

12 UNITS

- Level IV French

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

30 UNITS

- Electives

HONOURS FRENCH AND MATHEMATICS (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in FRENCH 1A06 A/B, FRENCH 1AA3 and FRENCH 1AB3, 2M06 A/B, or FRENCH 2AA3 and 2AB3, or a grade of at least A in 2Z06 A/B or FRENCH 2ZA3 and FRENCH 2ZB3; and successful completion of one of MATH 1A03, 1LS3 or 1X03 and one of MATH 1AA3, 1LT3, or 1XX3 with a grade of at least C+ *(see Note 3 below)*.

Notes

- Upon completion of 60 units of work (including 12 units of required Level II French courses), and with the approval of the Department of French and the Office of the Dean of the Faculty of Humanities, up to 15 units of Level III French may be replaced by courses of study at a French-language university.
- MATH 1B03 and MATH 1C03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
- Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. Math 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. Math 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take Math 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy.

The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

- The following courses may not be used to satisfy Level II program requirements: FRENCH 2AA3, 2AB3, 2M06 A/B, 2Q03, 2XX3, 2Z06 A/B, 2ZA3, and 2ZB3.

Requirements

Students who entered Honours French and Mathematics (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from any Level I program completed prior to admission into the program (see *note 4)*

9 UNITS

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 3C03 - French Language Practice III: Advanced

9 UNITS

- Level II French (see *note 5)*

9 UNITS

- Level III French

9 UNITS

- Level IV French

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship

* (if not previously taken)

- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

0-6 UNITS

- MATH 1B03 - Linear Algebra I *(if not completed in Level I)*
- MATH 1C03 - Introduction to Mathematical Reasoning *(if not completed in Level I)*

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

3 UNITS

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

6 UNITS

from

- MATH 3A03 - Real Analysis I or
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3IA3 - Introduction to Analysis
- MATH 3F03 - Ordinary Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology
- MATH 3X03 - Complex Analysis I

15 UNITS

- Levels II-IV Mathematics or Statistics which must include at least 6 units at Levels III or IV

9-15 UNITS

- Electives to total 120 units

HONOURS FRENCH WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

FRENCH (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 including a grade of at least C- in FRENCH 1A06 A/B, FRENCH 1AA3 and FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AA3 and FRENCH 2AB3, or a grade of at least A in FRENCH 2Z06 A/B or FRENCH 2ZA3 and FRENCH 2ZB3.

Notes

- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities

1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

- The following courses may not be used to satisfy Level II program requirements: FRENCH 2AA3, 2AB3,, 2Q03, 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and 2ZB3.

Requirements

Students who entered French (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program (see *note 1)*

9 UNITS

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 3C03 - French Language Practice III: Advanced

12 UNITS

- Level II French (see *note 2)*

15 UNITS

- Level III French

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship * *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

15 UNITS

- Electives

Minor(s):

MINOR IN FRENCH

Requirements

24 units total

6 UNITS

from

- FRENCH 1A06 A/B
- FRENCH 2M06 A/B
- FRENCH 1AA3 - Introduction to French Studies: Intermediate I
- FRENCH 1AB3 - Introduction to French Studies: Intermediate II
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II

6 UNITS

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate

12 UNITS

Levels II or III French, excluding

- FRENCH 2M06 A/B
- FRENCH 2Z06 A/B
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II
- FRENCH 2Q03 - Montreal, a City of Many Faces (Taught in English)
- FRENCH 2XX3 - French Movie Stars and Entertainers (Taught in English)
- FRENCH 2ZA3 - Intensive French Elementary I
- FRENCH 2ZB3 - Intensive French Elementary II

Department of Greek and Roman Studies

http://greekandromanstudies.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Martin Beckmann

PROFESSORS

ASSOCIATE PROFESSORS

Martin Beckmann/B.A. *(Wilfrid Laurier)*, M.A. Ph.D. *(McMaster)*
Sean Corner/B.A., M.A. *(Oxford)*, Ph.D. *(Princeton)*
Claude Eilers/B.A. *(Saskatchewan)*, M.A. *(McMaster)*, D.Phil. *(Oxford)*
Kathryn Mattison/B.A., Ph.D. *(Toronto)*
Mariapia Pietropaolo/B.A., M.A., Ph.D. *(Toronto)*
Spencer Pope/B.A. *(Middlebury College)*, Ph.D. *(Brown)*

ASSISTANT PROFESSOR

Emily Lamond/B.A., M.A. *(McMaster)*, Ph.D. *(Michigan)*

Notes

- Students in a Greek and Roman Studies program may choose courses from the following subfields: Ancient History and Society, Ancient Philosophy, Greek and Roman Archaeology and Art History, Greek and Roman Literature in Translation, Greek Language and Literature, Latin Language and Literature.
- With the approval of the Department of Greek and Roman Studies and the Office of the Dean of the Faculty of Humanities, students who have completed 60 units of work of any Honours program in Classics or Greek and Roman Studies may replace all or part of their Level III work by courses of study at a university or equivalent institution abroad. Consult the Department for further details.
- Students may receive up to six units of credit for archaeological field

work at an approved Greek and Roman site. Consult the Department for further details.
- Students are encouraged to include at least six units of Greek or Latin in their program. GREEK 1Z03, 1ZZ3 and LATIN 1Z03, 1ZZ3, if not completed in the Level I program, may be taken to fulfill the degree requirements. Students intending to do graduate work in the field of Greek and Roman Studies should note that most universities offering such programs require several years of undergraduate work in both Greek and Latin for admission. These students are strongly encouraged to include Greek and Latin courses as early as possible in their program.
- Students intending to do graduate work in the field of Greek and Roman Studies may wish to include an independent study course (CLASSICS or GKROMST 4T03 A/B S) in the final level of their program.

For the Honours Arts & Science and Greek and Roman Studies program (B.Arts. Sc.), see *Arts & Science Program*.

Interdisciplinary Minor in Archaeology

See the *Interdisciplinary Minors and Thematic Areas* section of this Calendar.

Bachelor of Arts (Honours)

COMBINED HONOURS IN GREEK AND ROMAN STUDIES AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in three units of Level I Classics, Greek and Roman Studies, Greek or Latin courses. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

Notes

- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours in Greek and Roman Studies and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 1)*

12 UNITS

- Level II Classics, Greek and Roman Studies, Greek, Latin (may include Level I Greek or Latin)
- PHILOS 2P03 - Ancient Greek Philosophy

9 UNITS

- Level III Classics, Greek and Roman Studies, Greek, Latin (may include Level II Greek or Latin)
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle

6 UNITS

- Level IV Classics, Greek and Roman Studies, Level III or IV Greek, Level III or IV Latin
- PHILOS 4K03 - Seminar in Ancient Philosophy

9 UNITS

- Levels II, III, IV Classics, Greek and Roman Studies, Greek or Latin
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle
- PHILOS 4K03 - Seminar in Ancient Philosophy

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- Electives to total 120 units

HONOURS GREEK AND ROMAN STUDIES (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in three units of Level I Classics, Greek and Roman Studies, Greek or Latin. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

Notes

- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Honours Greek and Roman Studies (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the Level I program completed prior to admission into the program *(see note 1)*

15 UNITS

- Level II Classics, Greek and Roman Studies, Greek, Latin (may include Level I Greek or Latin)
- PHILOS 2P03 - Ancient Greek Philosophy

12 UNITS

- Level III Classics, Greek and Roman Studies, Greek, Latin (may include Level II Greek or Latin)
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle

6 UNITS

- Level IV Classics, Greek and Roman Studies, Level III or IV Greek, Level III or Level IV Latin
- PHILOS 4K03 - Seminar in Ancient Philosophy

15 UNITS

- Levels II, III, IV Classics, Greek or Roman Studies, Greek or Latin
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle
- PHILOS 4K03 - Seminar in Ancient Philosophy

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

33 UNITS

- Electives

HONOURS GREEK AND ROMAN STUDIES WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

GREEK AND ROMAN STUDIES (B.A.)

Admission

Completion of any Level I program and a Grade Point Average (GPA) of at least 3.5 and a grade of at least C- in three units of Level I Classics, Greek and Roman Studies, Greek or Latin courses. (Students with Grade 12 Greek U may substitute three units of Level II Greek; students with Grade 12 Latin U may substitute three units of Level II Latin.)

Notes

- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Greek and Roman Studies (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.
90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 1)*

9 UNITS

- Level II Classics, Greek and Roman Studies, Greek, Latin (may include Level I Greek or Latin)
- PHILOS 2P03 - Ancient Greek Philosophy

9 UNITS

- Level III Classics, Greek and Roman Studies, Greek, Latin (may include Level II Greek or Latin)
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle

6 UNITS

- Levels II and III Classics, Greek and Roman Studies, Greek or Latin (may include Level I Greek or Latin)
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 3XX3 - Plato
- PHILOS 3ZZ3 - Aristotle

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27 UNITS

- Electives

Minor(s):

MINOR IN GREEK

Requirements

- 24 units of Greek, of which no more than six units may be from Level I.

MINOR IN GREEK AND ROMAN STUDIES

Requirements

- 24 units of Classics, Greek and Roman Studies, Greek or Latin, of which no more than six units may be from Level I.

Note

Students who began their studies prior to September 2023 may declare this as a minor in Classics.

MINOR IN LATIN

Requirements

- 24 units of Latin, of which no more than six units may be from Level I.

Global Peace and Social Justice

http://gpsj.humanities.mcmaster.ca/

Faculty as of January 15, 2025

DIRECTOR

Chandrima Chakraborty

PROFESSOR

Chandrima Chakraborty *(English and Cultural Studies)*/B.A. *(Calcutta)*, M.A., M.Phil. *(Jawaharlal Nehru)*, Ph.D. *(York)*

Ingrid R.G. Waldron *(HOPE Chair in Peace and Health)*/B.A. *(McGill)*, M.A. *(University of London)*, Ph.D. *(Toronto)*

ASSOCIATE PROFESSOR

Nancy Doubleday *(Philosophy)*/B.Sc. *(Brock)*, B.Ed. *(Toronto)*, LL.B., M.E.S. *(York)*, Ph.D. *(Queen's)*

ASSISTANT PROFESSOR

Alpha Abebe *(Communication Studies and Media Arts)*/ B.A. *(Toronto)*, M.A. *(York)*, Ph.D. *(Oxford)*

Derek Woods *(Communication Studies and Media Arts)*/ B.A. *(British Columbia)*, M.A. *(Rice University)*, Ph.D. *(Rice University)*

COMMITTEE OF INSTRUCTION

Susie O'Brien *(English and Cultural Studies)*
Faiza Hirji *(Communications Studies and Media Arts)*
Martin Horn *(History)*
Bonny Ibhawoh *(History)*
Christine Quail *(Communications Studies and Media Arts)*
Derek Woods *(Communications Studies and Media Arts)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN GLOBAL PEACE AND SOCIAL JUSTICE AND ANOTHER SUBJECT (B.A.)

Global Peace and Social Justice is an interdisciplinary program where students investigate systems of social inequity and injustice at the local, national, and global levels. Students in the program develop research skills and practical knowledge to understand the root causes and perpetuation of social conflict, violence, and oppression in politics and culture. They learn strategies for reimagining and making transformative change in order to build peaceful, equitable, and just communities. The program offers many opportunities for community-based learning through our experiential learning courses and public-engagement events.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in PEACEST 1A03, PEACJUST 1A03, PEACJUST 1VM3, GENDRST 1A03, WORKLABR 1A03 or, if not taken, three units acceptable to the Global Peace and Social Justice program.

Notes

- It is possible, but not necessary, to emphasize particular areas or sample from our thematically structured lists. These include: Course List 1: Health & Environment; Course List 2: Human Rights; Course List 3: Race, Gender & Sexuality; Course List 4: Social Activism.
- Students must be aware that some courses in the Course Lists have their own disciplinary prerequisites. Given the multidisciplinary nature of the Global Peace and Social Justice Program, with its different approaches and expectations, it is the responsibility of students in the Global Peace and Social Justice Program to meet other Faculties', departments' and programs' requirements.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course Lists

COURSE LIST 1: HEALTH & ENVIRONMENT

- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3NH3 - Narratives of Health
- HISTORY 3CH3 - Climate History
- INDIGST 4A03 - Indigenous Climate Justice
- PEACJUST 2E03
- PEACJUST 2HC3 - The History of Childhood (In)Justice in Canada
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4J03
- PEACJUST 4L03 - Peace, Environment and Health
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 4V03 - Multidisciplinary Workshop in Applied Ethics and Policy

COURSE LIST 2: HUMAN RIGHTS

- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3KK3 - The Vietnam War
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- INDIGST 4G03 - Indigenous Genocide
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2E03
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in Migration
- PEACJUST 2GW3 - A History of Global War
- PEACJUST 2M03 - Being, Belonging, and Migration: In pursuit of rights and justice
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3XX3 - Human Rights in History
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4GG3 - Nation and Genocide in the Modern World
- PEACJUST 4RR3 - Truth and Reconciliation After Atrocity
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2G03 - Social and Political Issues
- PHILOS 3P03
- PHILOS 3Q03 - Philosophy of Law
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3Q03 - The Causes of War
- POLSCI 3Y03 - Democratization and Human Rights
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives

COURSE LIST 3: RACE, GENDER & SEXUALITY

- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 3A03 - Critical Race Studies
- GENDRST 2AA3 - Feminist Thought
- GENDRST 4A03
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3KK3 - The Vietnam War
- INDIGST 2F03 - Indigenous Education in Canada
- PEACJUST 2E03
- PEACJUST 2LS3 - Language and Society
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3CY3 - Children, Youth & Media
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3RR3 - Race, Religion and Media
- PEACJUST 3V03 - Global Anglophone Literature and Film
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PEACJUST 3X03
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 3I03 - Philosophy and Feminism

- PHILOS 3T03 - Philosophy and Race
- SCAR 3RC3 - Race, Religion, and Coloniality

COURSE LIST 4: SOCIAL ACTIVISM

- CMST 3DJ3 - Digital Justice
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- PEACJUST 2A03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2E03
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PEACJUST 3X03
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4ST3 - Special Topics Seminar
- PHILOS 2G03 - Social and Political Issues
- PHILOS 3P03
- THTRFLM 3QA3 - Documentary, Politics, and Social Change

Requirements

Students who entered Combined Honours in Global Peace and Social Justice and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program *(see note 3)*

6 UNITS

from

- PEACEST 2BB3
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in Migration
- PEACJUST 2HC3 - The History of Childhood (In)Justice in Canada
- PEACJUST 2M03 - Being, Belonging, and Migration: In pursuit of rights and justice
- PEACJUST 2XX3 - Social & Structural Determinants of Health

3 UNITS

- PEACJUST 3C03 - Researching Global Peace and Social Justice

3 UNITS

from

- GENDRST 4A03
- PEACEST 4A03
- PEACEST 4E03
- PEACEST 4K03
- PEACEST 4PR3
- PEACEST 4M06 A/B
- PEACEST 4MA3
- PEACEST 4MB3
- PEACJUST 4B03 - Independent Research
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4GG3 - Nation and Genocide in the Modern World
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PEACJUST 4J03
- PEACJUST 4L03 - Peace, Environment and Health
- PEACJUST 4RR3 - Truth and Reconciliation After Atrocity
- PEACJUST 4ST3 - Special Topics Seminar

24 UNITS

- from *Course Lists 1-4*

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- Electives to total 120 units

Minor(s):

MINOR IN GLOBAL PEACE AND SOCIAL JUSTICE

Notes

- Students who began their studies prior to September 2021 may declare this as a minor in Peace Studies. Similarly, courses included in this minor at any point during a student's studies may continue to be used toward the minor's requirements at the time of graduation.
- Students must be aware that some courses have their own disciplinary

prerequisites. Given the multidisciplinary nature of Global Peace and Social Justice, with its different approaches and expectations, it is the responsibility of students to meet other Faculties', departments' and programs' requirements.

Requirements

24 units total (Must include a minimum of 9 units of PEACEST or PEACJUST courses)

24 UNITS

from

- CMST 3CY3 - Children, Youth, and Media
- CMST 3DJ3 - Digital Justice
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3RR3 - Race, Religion, and Media
- ECON 2F03
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3NH3 - Narratives of Health
- ENGLISH 3R06 A/B
- ENGLISH 3V03 - Global Anglophone Literature and Film
- ENGLISH 3W03 - Contemporary Native Literature in Canada
- ENGLISH 3X03
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2G03 - Modern Latin America Since 1820
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3KK3 - The Vietnam War
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3XX3 - Human Rights in History
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- INDIGST 3D03 - Contemporary Indigenous Literatures of Turtle Island
- INDIGST 3E03
- INDIGST 4A03 - Indigenous Climate Justice
- INDIGST 4G03 - Indigenous Genocide
- PEACEST 2BB3
- PEACEST 3HH3
- PEACEST 3UU3
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in Migration
- PEACJUST 2GW3 - A History of Global War
- PEACJUST 2HC3 - The History of Childhood (In)Justice in Canada
- PEACJUST 2LS3 - Language and Society
- PEACJUST 2M03 - Being, Belonging, and Migration: In pursuit of rights and justice
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3CY3 - Children, Youth & Media
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PEACJUST 3Q03
- PEACJUST 3RR3 - Race, Religion and Media
- PEACJUST 3V03 - Global Anglophone Literature and Film
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PEACJUST 3X03
- PEACJUST 3XX3 - Human Rights in History
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PHILOS 2D03 - Bioethics
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3P03
- PHILOS 3Q03 - Philosophy of Law
- PHILOS 3T03 - Philosophy and Race
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3Q03 - The Causes of War
- POLSCI 3Y03 - Democratization and Human Rights
- RELIGST 2E03
- RELIGST 2H03
- RELIGST 2L03
- RELIGST 2MM3
- RELIGST 3KK3
- SCAR 3RC3 - Race, Religion, and Coloniality
- THTRFLM 3QA3 - Documentary, Politics, and Social Change

Department of History

http://history.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Megan Armstrong

DISTINGUISHED UNIVERSITY PROFESSOR

John C. Weaver/B.A. *(Queen's)*, M.A., Ph.D. *(Duke)*

PROFESSORS

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Stephen Heathorn/B.A. *(Toronto)*, M.A. *(McMaster)*, Ph.D. *(Toronto)*

Martin Horn/B.A. *(Western Ontario)*, M.A. *(McMaster)*, Ph.D. *(Toronto)*

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Alison McQueen/B.A. *(McGill)*, M.A., Ph.D. *(Pittsburgh)*

Jaeyoon Song/B.A., M.A. *(Korea)*, Ph.D. *(Harvard)*

Pamela Swett/A.B. *(Bryn Mawr)*, M.A., Ph.D. *(Brown)*

Ingrid Waldron/B.A. *(McGill)*, M.A. *(University of London)*, Ph.D. *(Toronto)*, Hope Chair in Peace and Health

Barrington Walker/B.A. *(York)*, M.A. *(Toronto)*, Ph.D. *(Toronto)*

ASSOCIATE PROFESSORS

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Stephen Streeter/B.S. *(Bates)*, M.A. *(SUNY-Stonybrook)*, M.A. *(California-Riverside)*, Ph.D. *(Connecticut)*

Jessica van Horssen/B.A. *(Bishop's University)*, M.A. *(Ottawa)*, Ph.D. *(Western University)*

ADJUNCT ASSISTANT PROFESSORS

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Max Dagenais/ B.A. *(Concordia)*, M.A., Ph.D. *(Ottawa)*
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Shane Lynn/B.A. *(Dublin)*, M.A., Ph.D. *(Toronto)*
ASSOCIATE MEMBERS
David Goutor/*(Labour Studies)* B.A., M.A., Ph.D. *(Toronto)*
Mat Savelli/(Health, Aging, and Society), B.A *(McMaster)*, M.Sc. *(Oxford)*, D.Phil. *(Oxford)*
The Department has defined two course lists that define areas of study. Course Lists A and B apply to Level II-III courses.
Historical experiences are vast and varied across time periods, nations and identity groups. The Department of History recommends that students take courses that reflect the diverse experiences of different peoples in various time periods and geographical locations. As part of the Truth and Reconciliation process in Canada, the department also strongly recommends that students take courses that focus in whole or in part on the experiences of Indigenous peoples.
Students should consult the *Program Notes* for their specific program to determine the requirements regarding these course lists:

Course List A: Canada

- HISTORY 2HC3 HISTORY 2HC3 - The History of Childhood (In)Justice in Canada
- HISTORY 2HE3 HISTORY 2HE3 - History of Education in Canada
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 2V03 - Re-Making History
- HISTORY 3AR3 - Atlantic Revolutions, 1750-1804
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3CW3
- HISTORY 3HQ3 - History of Quebec
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3SR3 - Histories of Indigenous Sport and Recreation
- HISTORY 3ST3 - Street Life in Canada
- HISTORY 3W03
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920

Course List B: Caribbean, Latin America, Asia, Africa, Middle East, Brazil, Eur-Asia

- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2EN3 - The Post-Slavery Caribbean
- HISTORY 2G03 - Modern Latin America Since 1820
- HISTORY 2GW3 - A History of Global War
- HISTORY 2HH3 - Pirates, Pilgrims and the Enslaved in the Mediterranean, 1450-1750
- HISTORY 2IC3
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 2MC3 - Modern China
- HISTORY 2Q03 - Imperial Russia
- HISTORY 2QQ3 - The Soviet Union
- HISTORY 3AR3 - Atlantic Revolutions, 1750-1804
- HISTORY 3EC3 - Chinese Intellectual Traditions
- HISTORY 3GH3
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3KK3 - The Vietnam War
- HISTORY 3RU3 - Early Modern Russia

For the Honours Arts & Science and History program (B.Arts.Sc), see *Arts & Science Program*)

Bachelor of Arts (Honours)

COMBINED HONOURS IN HISTORY AND ANOTHER SUBJECT (B.A.)

Admissions

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I History.

Notes

- When registering, it is recommended that students distribute their required History courses (see Requirements below) as follows:
- Level II: 12 units from Level II or III History
- Level III: 12 units Levels II or III History
- Level IV: 3 units Level II or III History; 6 units Level IV History. (No combined Honours student may take more than six units of Level IV seminars.)
- Students considering a career in teaching are advised to take HISTORY 2T03 and HISTORY 2TT3, as many schools of education require the equivalent of six units in a Canadian History survey course.
- Students considering graduate work in History are strongly encouraged to include in their program a second language beyond the introductory level, as many graduate programs require proficiency in a second language.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined History and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.
120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the level I program completed prior to admission into the program *(see note 4)*

3 UNITS

- Level II History

3 UNITS

from

- *Course List A*

3 UNITS

from

- *Course List B*

18 UNITS

from

- **Level II History**
- **Level III History**
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies

- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTHIST 3JA3
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CLASSICS 2HA3
- CLASSICS 2HB3
- CLASSICS 2HC3
- CLASSICS 2HD3
- CLASSICS 2K03
- CLASSICS 2LA3
- CLASSICS 2LB3
- CLASSICS 2LC3
- CLASSICS 2LD3
- CLASSICS 2LW3
- CLASSICS 3EE3
- CLASSICS 3HH3
- CLASSICS 3M03
- CLASSICS 3X03
- GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
- GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- GKROMST 3EE3 - The Greek Historians
- GKROMST 3HH3 - Roman Slavery
- GKROMST 3M03 - Greek Intellectual Revolution
- GKROMST 3X03 - Roman Religion
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 3FI3 - Fashion and Identity
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3VV3 - The Indian Act: A Social Problem
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

6 UNITS

- Level IV History

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified by the other subject. (Combinations with Social Sciences may require more than 36 units.)

12 UNITS

Electives to total 120 units

HONOURS HISTORY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I History.

Notes

- When registering, it is recommended that students distribute their required History courses (see Requirements below) as follows:
- Level II: 18 units of Levels II or III History
- Level III: 3 units of Level IV seminar; 15 units from Levels II or III History
- Level IV: 6 units of Levels II or III History; 9 units Level IV History. (No Honours student may take more than 12 units of Level IV seminars.)
- Students considering a career in teaching are advised to take HISTORY 2T03 and HISTORY 2TT3, as many schools of education require the equivalent of six units in a Canadian History survey course.
- Students considering graduate work in History are strongly encouraged to include in their program a second language beyond the introductory level, as many graduate programs require proficiency in a second language.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Honours History (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 4)*

3 UNITS

- Level II History

3 UNITS

- *Course List A*

3 UNITS

- *Course List B*

30 UNITS

from

- **Level II History**
- **Level III History**
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTHIST 3JA3
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CLASSICS 2HA3
- CLASSICS 2HB3
- CLASSICS 2HC3
- CLASSICS 2K03
- CLASSICS 2LA3
- CLASSICS 2LB3
- CLASSICS 2LC3
- CLASSICS 2LD3
- CLASSICS 2LW3
- CLASSICS 3EE3
- CLASSICS 3HH3
- CLASSICS 3M03
- CLASSICS 3X03
- GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
- GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- GKROMST 3EE3 - The Greek Historians
- GKROMST 3HH3 - Roman Slavery
- GKROMST 3M03 - Greek Intellectual Revolution
- GKROMST 3X03 - Roman Religion
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 3FI3 - Fashion and Identity
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3VV3 - The Indian Act: A Social Problem
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

12 UNITS

- Level IV History

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship * *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

30 UNITS

- Electives

HONOURS HISTORY AND MATHEMATICS (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including a grade of at least C in three units of Level I History; and successful completion of one of MATH 1A03, 1LS3 or 1X03; and one of MATH 1AA3, 1LT3, or 1XX3 with a grade of at least C+ *(see Note 5 below)*.

Notes

- When registering, it is recommended that students distribute their required History courses (See Requirements below) as follows:
- Level II: 12 units of Levels II or III History
- Level III: 12 units of Levels II or III History
- Level IV: 3 units of Levels II or III History; 6 units Level IV History. (No combined Honours student may take more than six units of Level IV seminars.)
- Students considering a career in teaching are advised to take HISTORY 2T03 and HISTORY 2TT3, as many schools of education require the equivalent of six units in a Canadian history survey course.
- Students considering graduate work in History are strongly encouraged to include in their program a second language beyond the introductory level, as many graduate programs require proficiency in a second language.
- MATH 1B03 and MATH 1C03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
- Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for

students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours History and Mathematics (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.
120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 6)*

3 UNITS

- Level II History

3 UNITS

from

- *Course List A*

3 UNITS

from

- *Course List B*

18 UNITS

from

- **Level II History**
- **Level III History**
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTHIST 3JA3
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CLASSICS 2HA3
- CLASSICS 2HB3
- CLASSICS 2HC3
- CLASSICS 2HD3
- CLASSICS 2K03
- CLASSICS 2LA3
- CLASSICS 2LB3
- CLASSICS 2LC3
- CLASSICS 2LD3
- CLASSICS 2LW3
- CLASSICS 3EE3
- CLASSICS 3HH3
- CLASSICS 3M03
- CLASSICS 3X03
- GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
- GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- GKROMST 3EE3 - The Greek Historians
- GKROMST 3HH3 - Roman Slavery
- GKROMST 3M03 - Greek Intellectual Revolution
- GKROMST 3X03 - Roman Religion
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 3FI3 - Fashion and Identity
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3VV3 - The Indian Act: A Social Problem
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

6 UNITS

- Level IV History

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

0-6 UNITS

- MATH 1B03 - Linear Algebra I (if not completed in Level I)
- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

3 UNITS

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

6 UNITS

from

- MATH 3A03 - Real Analysis I or

- MATH 3IA3 - Introduction to Analysis
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3F03 - Ordinary Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology
- MATH 3X03 - Complex Analysis I

15 UNITS

- Levels II-IV Mathematics or Statistics, which must include at least 6 units at Levels III and/or IV

12-18 UNITS

- Electives to total 120 units

HONOURS HISTORY WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

HISTORY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 including a grade of at least C- in three units of Level I History.

Notes

- In selecting courses, students must ensure that they take a minimum of three units in each of two identified areas of History.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the History (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the level I program completed prior to admission into the program *(see note 2)*

3 UNITS

- *Course List A*

3 UNITS

- *Course List B*

18 UNITS

from

- **Level II History**
- **Level III History**
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTHIST 3JA3
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CLASSICS 2HA3
- CLASSICS 2HB3
- CLASSICS 2HC3
- CLASSICS 2K03
- CLASSICS 2LA3
- CLASSICS 2LB3
- CLASSICS 2LC3
- CLASSICS 2LD3
- CLASSICS 2LW3
- CLASSICS 3EE3
- CLASSICS 3HH3
- CLASSICS 3M03
- CLASSICS 3X03
- GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
- GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- GKROMST 3EE3 - The Greek Historians
- GKROMST 3HH3 - Roman Slavery
- GKROMST 3M03 - Greek Intellectual Revolution
- GKROMST 3X03 - Roman Religion
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 3FI3 - Fashion and Identity
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3VV3 - The Indian Act: A Social Problem
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)

- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27 UNITS

- Electives

Minor(s):

MINOR IN HISTORY

Requirements

24 units of History of which no more than six units may be from Level I and which may include no more than 9 units from the course list below. Consult the Course Listings section for course prerequisites and limited enrolment courses.

Additional Course List:

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTHIST 3JA3
- ARTHIST 3Q03 - Colours of the World
- ARTHIST 3Z03 - Intercultural Arts Along the Silk Road
- CLASSICS 2HA3
- CLASSICS 2HB3
- CLASSICS 2HC3
- CLASSICS 2HD3
- CLASSICS 2K03
- CLASSICS 2LW3
- CLASSICS 3EE3
- CLASSICS 3HH3
- CLASSICS 3M03
- CLASSICS 3X03
- GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
- GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- GKROMST 3EE3 - The Greek Historians
- GKROMST 3HH3 - Roman Slavery
- GKROMST 3M03 - Greek Intellectual Revolution
- GKROMST 3X03 - Roman Religion
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 3FI3 - Fashion and Identity
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3VV3 - The Indian Act: A Social Problem
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

Department of Linguistics and Languages

http://linguistics.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Wendy M. D'Angelo

PROFESSORS

John J. Colarusso/B.A. *(Cornell)*, M.A. *(Northwestern)*, Ph.D. *(Harvard)*
Ivona Kucerova/M.A. *(Charles University, Prague)*, Ph.D. *(MIT)*
Victor Kuperman/ B.A., M.A. *(Jerusalem)*, Ph.D. *(Nijmegen)*

ASSOCIATE PROFESSORS

Catherine Anderson/B.A. *(McMaster)*, Ph.D. *(Northwestern)*
Iris Bruce/M.A., Ph.D. *(Toronto)*
Anna L. Moro/B.A., M.A., Ph.D. *(Toronto)*
Daniel Pape/M.A. *(Technical University of Berlin)*, Ph.D. *(Humboldt University of Berlin)*

ASSISTANT PROFESSORS

Alison Biggs/B.A. *(SOAS)*, M.Phil., Ph.D. *(Cambridge)*
Phoebe Gaston/B.A. *(Yale)*, Ph.D. *(University of Maryland)*
Nikolai Penner/M.A., Ph.D. *(Waterloo)*
Wendy M. D'Angelo/B.A. *(McMaster)*, M.A., Ph.D. *(Toronto)*

The Department of Linguistics and Languages offers B.A. Honours programs in:

- Cognitive Science of Language
- Linguistics

In addition, Minors are available, using electives only, in: German, Italian and Linguistics. **For information on the** *Minor in Japanese Studies***, see the** *Department of Religious Studies***.**

Language courses in American Sign Language, Chinese, Farsi, Japanese, Korean, Russian and Spanish are also offered by the Department.

For the Honours Arts & Science and Linguistics program (B.Arts.Sc.), see *Arts & Science Program*

Bachelor of Arts (Honours)

COMBINED HONOURS IN COGNITIVE SCIENCE OF LANGUAGE AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including an average of at least 5.0 in LINGUIST 1A03, 1AA3 and PSYCH 1F03 or 1X03.

Notes

- Students must include LINGUIST 2D03 in Level II or III of their program in order to take any Level IV seminars in Linguistics. Students who are registered in the Combined Honours Cognitive Science of Language and Communication Studies program will substitute 3 units of elective work for LINGUIST 2D03 in view of their completion of CMST 2TM6 (formerly CMST 2A03 **and** 2B03). Such students should consult with the Undergraduate Advisor for Linguistics to ensure access to Level IV courses.
- Students should be aware that, PSYCH 1XX3 (or 1FF3) requires either Grade 12 Biology U or BIOLOGY 1P03 as a prerequisite. Please note, however, that students can complete BIOLOGY 1P03, and PSYCH 1XX3 (or 1FF3), 2H03 in their second year of studies.
- At some time during the program, students must meet a laboratory requirement by completing one course from Course List 1 below.
- Students combining this program with Combined Honours in Psychology, Neuroscience and Behaviour should consult an academic advisor to ensure that courses are credited to the appropriate program. Required courses may not be double-counted.
- Students combining this program with a program in Social Science should consult an academic advisor to confirm which courses satisfy

their statistics requirements.
- Students registered in Level IV of any Honours or Combined Honours program in Linguistics or Cognitive Science of Language with a Grade Point Average of at least 9.0 may apply to register in the Honours Thesis course (LINGUIST 4Y06 A/B) where they would conduct an individual research project under the supervision of a faculty member.
- Students in the Honours or Combined Honours program in Cognitive Science of Language are encouraged to consider additional Linguistics elective offerings (see 'Department Notes' for Linguistics course offerings).
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course List 1

- LINGUIST 4D03 - Computers and Linguistic Analysis
- LINGUIST 4EL3 - Laboratory in Experimental Linguistics
- LINGUIST 4NN3 - Laboratory in Cognitive Neuroscience of Language
- LINGUIST 4PL3 - Advanced Programming for Linguistics
- LINGUIST 4II3 A/B S - Independent Study
- LINGUIST 4Y06 A/B - Honours Thesis

Requirements

Students who entered Combined Honours in Cognitive Science of Language and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program *(see note 8)*

30 UNITS

from

- LINGUIST 2D03 - Research Methods
- LINGUIST 2DD3 - Statistics for Language Research
- LINGUIST 2L03 - Phonetics
- LINGUIST 2PH3 - Phonology
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 2SY3 - Syntax
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3II3 - Semantics
- LINGUIST 3M03 - Morphology
- LINGUIST 3NL3 - Cognitive Neuroscience of Language

3 UNITS

from

- Level IV Linguistics (excluding LINGUIST 4SL3, LINGUIST 4TE3, and LINGUIST 4TP3)

6 UNITS

from

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

or

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

and

- PSYCH 2H03 - Human Learning and Cognition

3 UNITS

from

- *Course List 1*

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject.

(See *Note 4* above.)

3 UNITS

- electives

COMBINED HONOURS IN LINGUISTICS AND ANOTHER SUBJECT (B.A.)

This program is designed for students who want to combine the scientific study of language with another subject of their choice.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including an average of at least 5.0 in LINGUIST 1A03 and 1AA3.

Notes

- Students are required to complete 18 units of language other than English for this program, either in one or two languages. Please note that some languages have only 3 or 6 units of study available. Courses taught in English do not satisfy this requirement. The following languages are offered at McMaster:

- **Romance Languages:** French, Italian, Spanish
- **Classical:** Greek, Latin, Sanskrit
- **Other Indo-European Languages:** Farsi, German, Russian
- **Non Indo-European Languages:** American Sign Language, Arabic, Cayuga, Chinese (Mandarin), Hebrew, Inuktitut, Korean, Japanese, Mohawk, Ojibwe
- Students whose other subject involves the study of a language may substitute 12 units of language other than English with 12 units of Linguistics courses.
- Students must include LINGUIST 2D03 in Level II or III of their program in order to take any Level IV seminars in Linguistics. Students who are registered in the Combined Honours Linguistics and Communication Studies program will substitute 3 units of elective work for LINGUIST 2D03 in view of their completion of CMST 2TM6 (formerly CMST 2A03 and 2B03). Such students should consult with the Undergraduate Advisor for Linguistics to ensure access to Level IV courses.
- Students registered in Level IV of any Honours or Combined Honours program in Linguistics or Cognitive Science of Language with a Grade Point Average of at least 9.0 may apply for Honours Thesis course (LINGUIST 4Y06 A/B) where they would conduct an individual research project under the supervision of a faculty member.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Combined Honours in Linguistics and Another Subject (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program *(see note 5)*

18 UNITS

- LINGUIST 2D03 - Research Methods
- LINGUIST 2L03 - Phonetics
- LINGUIST 2PH3 - Phonology
- LINGUIST 2SY3 - Syntax
- LINGUIST 3II3 - Semantics
- LINGUIST 3M03 - Morphology

6 UNITS

from

- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 2FL3 - Introduction to Forensic Linguistics
- LINGUIST 2LC3 - Historical Linguistics: Language Evolution and Change
- LINGUIST 2LL3 - Languages of the World and Linguistic Universals
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 2S03 - Language and Society
- LINGUIST 3AA3 - Applied Linguistics
- LINGUIST 3AS3 - Language and Communication in Autism Spectrum Disorder
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3DS3 - ASL & Deaf Studies
- LINGUIST 3E03 - Teaching English as a Second Language (ESL)
- LINGUIST 3F03 - Anatomy and Physiology for Speech, Language and Hearing
- LINGUIST 3LA3 - Introduction to Second Language Acquisition
- LINGUIST 3P03 - Pragmatics
- LINGUIST 3PG3 - Introduction to Programming for Linguistics
- LINGUIST 3TT3

3 UNITS

from

- Level IV Linguistics (excluding LINGUIST 4SL3, LINGUIST 4TE3, LINGUIST 4TP3 and LINGUIST 4Y06 A/B)

18 UNITS

from

- a language other than English (See *Notes 1* and *2* above)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

0-9 UNITS

- electives to total 120 units

HONOURS COGNITIVE SCIENCE OF LANGUAGE (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including an average of at least 5.0 in LINGUIST 1A03, 1AA3 and PSYCH 1F03 or 1X03.

Notes

- Students should be aware that, PSYCH 1XX3 (or 1FF3) requires either Grade 12 Biology U or BIOLOGY 1P03 as a prerequisite. Please note, however, that students can complete BIOLOGY 1P03 and PSYCH 1XX3 (or 1FF3), 2E03, 2H03, 2NF3 in their second year of studies.
- Students must include LINGUIST 2D03 in Level II or III of their program in order to take any Level IV seminars in Linguistics.
- At some time during the program, students must meet a laboratory requirement by completing one course from Course List 1 below.
- In this program students are required to complete 12 units of language courses other than English, of which at least six units must be in a single language. Courses taught in English do not satisfy this requirement. The following languages are offered at McMaster:

Romance Languages: French, Italian, Spanish
Classical: Greek, Latin, Sanskrit
Other Indo-European Languages: Farsi, German, Russian
Non Indo-European Languages: American Sign Language, Arabic, Cayuga, Chinese (Mandarin), Hebrew, Inuktitut, Korean, Japanese, Mohawk, Ojibwe

- Students registered in Level IV of any Honours or Combined Honours program in Linguistics or Cognitive Science of Language with a Grade Point Average of at least 9.0 may apply to register in the Honours Thesis course (LINGUIST 4Y06 A/B) where they would conduct an individual research project under the supervision of a faculty member.
- Students interested in doing graduate work in Speech and Language Pathology should consult with the Departmental Counsellor for the Cognitive Science of Language program.
- Students in the Honours or Combined Honours program in Cognitive Science of Language are encouraged to consider additional Linguistics elective offerings (see 'Department Notes' for Linguistics course offerings).
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Course List 1

- LINGUIST 4D03 - Computers and Linguistic Analysis
- LINGUIST 4EL3 - Laboratory in Experimental Linguistics
- LINGUIST 4II3 A/B S - Independent Study
- LINGUIST 4NN3 - Laboratory in Cognitive Neuroscience of Language
- LINGUIST 4PL3 - Advanced Programming for Linguistics
- LINGUIST 4Y06 A/B - Honours Thesis

Requirements

Students who entered Honours Cognitive Science of Language (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program *(see note 8)*

30 UNITS

from

- LINGUIST 2D03 - Research Methods
- LINGUIST 2DD3 - Statistics for Language Research
- LINGUIST 2L03 - Phonetics
- LINGUIST 2PH3 - Phonology
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 2SY3 - Syntax
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3II3 - Semantics
- LINGUIST 3M03 - Morphology
- LINGUIST 3NL3 - Cognitive Neuroscience of Language

6 UNITS

from

- Level IV Linguistics (excluding LINGUIST 4SL3, LINGUIST 4TE3, and LINGUIST 4TP3)

6 UNITS

from

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

or

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

and

- PSYCH 2H03 - Human Learning and Cognition

3 UNITS

from

- PSYCH 2E03 - Sensory Processes
- PSYCH 2F03
- PSYCH 2N03
- PSYCH 2NF3 - Clinical Neuropsychology
- LINGUIST 3F03 - Anatomy and Physiology for Speech, Language and Hearing

12 UNITS

from

- a language other than English

(See *Note 4* above.)

3 UNITS

from

- *Course List 1*

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)

- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

21 UNITS

- electives

HONOURS LINGUISTICS (B.A.)

This program is designed for students who are concentrating on the scientific study of language (phonology, morphology, syntax, semantics, etc.). Students should speak with the Departmental Counsellor for Linguistics to determine which linguistics electives are most appropriate for their academic and professional objectives.

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including an average of at least 5.0 in LINGUIST 1A03 and 1AA3. It is strongly recommended that students include six units of a language other than English in their Level I program.

Notes

- In this program students are required to study at least two languages for a total of 24 units of language study. The department has defined four language groups (see below) for this purpose. Of the 24 units, students must take at least 12 units from one language group of their choice, and 6 units of a language from another group. Please note that some languages have only 6 units of study available. Example: A student completes 12 units of Language A plus 6 units of Language B; the remaining 6 units of language study (to total 24 units) may be completed as the student chooses - by adding 6 units to Language A or B, or by completing 3 or 6 units of Language C or D. Courses taught in English do not satisfy this requirement
- **Romance Languages:** French, Italian, Spanish
- **Classical:** Greek, Latin, Sanskrit
- **Other Indo-European Languages:** Farsi, German, Russian
- **Non Indo-European Languages:** American Sign Language, Arabic, Cayuga, Chinese (Mandarin), Hebrew, Inuktitut, Korean, Japanese, Mohawk, Ojibwe
- Students must include LINGUIST 2D03 in Level II or III of their program in order to take any Level IV seminars in Linguistics.
- It is recommended that students interested in pursuing TESL Certification after graduation include the following courses in their program of study: LINGUIST 3E03 and 4TP3. They should also consult the TESL Ontario website for certified programs and requirements of certification.
- Students registered in Level IV of any Honours or Combined Honours program in Linguistics or Cognitive Science of Language with a Grade Point Average of at least 9.0 may apply for the Honours Thesis course (LINGUIST 4Y06 A/B) where they would conduct an individual research project under the supervision of a faculty member.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Honours Linguistics (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 5)*

21 UNITS

from

- LINGUIST 2D03 - Research Methods
- LINGUIST 2L03 - Phonetics
- LINGUIST 2PH3 - Phonology
- LINGUIST 2SY3 - Syntax
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3II3 - Semantics
- LINGUIST 3M03 - Morphology

9 UNITS

from

- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 2FL3 - Introduction to Forensic Linguistics
- LINGUIST 2LC3 - Historical Linguistics: Language Evolution and Change
- LINGUIST 2LL3 - Languages of the World and Linguistic Universals
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 2S03 - Language and Society
- LINGUIST 3AA3 - Applied Linguistics
- LINGUIST 3AS3 - Language and Communication in Autism Spectrum Disorder
- LINGUIST 3DS3 - ASL & Deaf Studies
- LINGUIST 3E03 - Teaching English as a Second Language (ESL)
- LINGUIST 3F03 - Anatomy and Physiology for Speech, Language and Hearing
- LINGUIST 3LA3 - Introduction to Second Language Acquisition
- LINGUIST 3P03 - Pragmatics
- LINGUIST 3PG3 - Introduction to Programming for Linguistics
- LINGUIST 3TT3

6 UNITS

from

- Level IV Linguistics (excluding LINGUIST 4SL3, LINGUIST 4TE3, LINGUIST 4TP3 and LINGUIST 4Y06 A/B)

12 UNITS

from

- one language as specified in *Note 1* above

12 UNITS

- additional language study as specified in *Note 1* above

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

21 UNITS

- Electives

HONOURS LINGUISTICS WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Diploma(s)

MCMASTER ENGLISH LANGUAGE DEVELOPMENT DIPLOMA (MELD)

Department of Linguistics and Languages (Faculty of Humanities)
Phone: (+1) 905.525.9140 Ext. 23718
Email: meld@mcmaster.ca
Web: https://meld.humanities.mcmaster.ca/diploma/
Students who meet the academic admission requirements for their choice of Level 1 program, but do not meet McMaster's English Language Proficiency requirement may be admitted to the MELD bridging program which has been developed for international students, providing them with a supportive environment in which they can succeed. The diploma is a two-term, full-time intensive bridging program in English language development, acculturation and engagement.
Students accepted into MELD are given a conditional offer of admission to their program of choice, pending successful completion of the MELD diploma. Once the diploma in MELD has been successfully completed, the student may register in the program to which the student was given conditional admission and will have completed 6 units of degree credit courses in Linguistics that may be applied as electives to that program. In exceptional circumstances, MELD will consider transfers from other McMaster programs.
Please visit https://meld.humanities.mcmaster.ca/diploma/ for more information or email meld@mcmaster.ca.

Fall Term

(September - December)

- LINGUIST 1E03 - Introduction to English Linguistics I (degree credit course)
- MELD 1M00 - Mentorship Lab 1
- MELD 1Q03 - Critical and Analytic Reading
- MELD 1QQ3 - Grammar, Structure and University Writing
- MELD 1R03 - Aural Communication and Academic Culture
- MELD 1RR3 - Oral Communication for Academic and Social Interactions

Winter Term

(January - April)

- LINGUIST 1EE3 - Introduction to English Linguistics II (degree credit course)
- MELD 1MM0 - Mentorship Lab 2
- MELD 1S03 - Critical Reading, Research and Academic Vocabulary
- MELD 1SS3 - Academic Writing, Reporting and Research
- MELD 1T03 - Cross-Cultural Perspectives on Language and Language Learning
- MELD 1TT3 - Oral Communication for Academic Discourse

Minor(s):

MINOR IN GERMAN STUDIES

Requirements

24 units total

6 UNITS

from

- Level I German
- Level II German

18 UNITS

from

- Levels II German
- Levels III German
- Levels IV German
- HISTORY 2II3 - Modern Germany
- HISTORY 3FF3 - Nazi Germany
- PHILOS 3VV3 - Kant
- PHILOS 3YY3 - Hegel

MINOR IN ITALIAN STUDIES

Notes

- Students are advised that not all courses will be offered each year.
- No more than twelve units of the minor may be from Level I.

Requirements

24 units total

6 UNITS

from

- Level I Italian
- Level II Italian
- Level I Latin

18 UNITS

from

- Level II Italian
- Level III Italian
- Level IV Italian
- ARTHIST 3I03
- ARTHIST 3SS3 - Pompeii, Herculaneum, and Ostia
- GKROMST 1M03 - History of Greece and Rome
- GKROMST 2C03 - Roman Art
- GKROMST 2CC3 - Archaeology of the Roman Empire
- GKROMST 2HC3 - Caesar and the Rise of Autocracy
- GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
- GKROMST 3S03 - Pompeii, Herculaneum, and Ostia
- HISTORY 1M03 - History of Greece and Rome
- HISTORY 3H03 - Italian Renaissance, 1300-1600
- LATIN 1Z03 - Beginner's Intensive Latin I
- LATIN 1ZZ3 - Beginner's Intensive Latin II

MINOR IN LINGUISTICS

Requirements

6 UNITS

- LINGUIST 1A03 - Introduction to Linguistics: Speaking, Signing and Hearing
- LINGUIST 1AA3 - Introduction to Linguistics: Words, Sentences and Meaning

18 UNITS

- Levels II and III Linguistics

Department of Philosophy

http://philos.humanities.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Mark Johnstone

DISTINGUISHED UNIVERSITY PROFESSOR

Barry Allen/B.A. *(Lethbridge)*, Ph.D. *(Princeton)*

PROFESSORS

Claudia Emerson/B.Sc. *(Guelph)*, B.A., M.A., Ph.D. *(McMaster)*

Alexander Klein/B.A. *(Wesleyan)*, M.A., Ph.D. *(Indiana-Bloomington)*/ Canada Research Chair in Bertrand Russell and Crosscurrents of Early Analytic Philosophy

Sandra Lapointe/B.A., M.A. *(Ottawa)*, Ph.D. *(Leeds)*

ADJUNCT PROFESSORS

Kenneth M. Blackwell/*(Russell Archivist, Mills Library)*, B.A. *(Victoria)*, M.L.S. *(Western Ontario)*, M.A. *(McMaster)*, Ph.D. (Guelph)

Diane Enns/B.A. *(Ottawa)*, M.A. *(Carleton)*, Ph.D. *(SUNY-Binghamton)*

ASSOCIATE PROFESSORS

Ariella Binik/B.A., M.A. *(McGill)*, Ph.D. *(Western Ontario)*

Nancy C. Doubleday/B.Sc. *(Brock)*, B.Ed. *(Toronto)*, LL.B., M.E.S. *(York)*, Ph.D. *(Queen's)*

Violetta Igneski/B.A., M.A. *(Western Ontario)*, Ph.D. *(Toronto)*

Mark Johnstone/B.A. *(Canterbury)*, M.A. *(Melbourne)*, M.A., Ph.D. *(Princeton)*

Alice Pinheiro Walla/Mag Phil *(Vienna)*, M.Litt., Ph.D. *(St. Andrews)*

Stefan Sciaraffa/B.A. *(Southern Methodist)*, M.A. *(Ohio State)*, J.D. *(Texas)*, Ph.D. *(Arizona)*

Johannes Steizinger/M.A., Ph.D. *(Vienna)*

Megan Stotts/B.A. *(Denison)*, M.A., Ph.D. *(California-Riverside)*

ADJUNCT ASSOCIATE PROFESSORS

Michael Giudice/B.A. *(New Brunswick)*, M.A., Ph.D. *(McMaster)*

Francois Tanguay-Renaud/LL.B., B.C.L. *(McGill)*, B.C.L., M.Phil., D.Phil. *(Oxford)*

ASSISTANT PROFESSORS

Eric Bayruns García/B.A. *(Hunter College, City University of New York)*, Ph.D. *(The Graduate Center, City University of New York)*

Allauren Forbes/B.A., M.A. *(Wilfrid Laurier)*, Ph.D. *(Pennsylvania)*

ADJUNCT ASSISTANT PROFESSORS

Gülberk Koç Maclean/B.A. *(Hacettepe)*, M.A. *(Boğaziçi)*, Ph.D. *(McMaster)*

ASSOCIATE MEMBERS

Lisa Schwartz/B.A., M.A. *(McGill)*, Ph.D. *(Glasgow)*/ Arnold L. Johnson Chair in Health Care Ethics

Mathew Mercuri/B.Kin. *(McMaster)*, M.Sc. *(McMaster)*, Ph.D. *(McMaster)*, Ph.D. *(Toronto)*

For the Honours Arts & Science and Philosophy program (B.Arts.Sc.), see *Arts & Science Program*

Bachelor of Arts (Honours)

COMBINED HONOURS IN PHILOSOPHY AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in three units of Level I Philosophy or, if no such course was taken, in three units of work acceptable to the Department of Philosophy.

Notes

- Students intending to do graduate work in Philosophy are advised to include PHILOS 2B03 in their program.
- Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note that not all courses are offered every year. Please consult the university Master Timetable.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the Combined Honours in Philosophy and Another Subject (B.A.) program prior to September 2025 should refer to the Undergraduate Calendar for the year of program entry and their personal Advisement Report for program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 4)*

9 UNITS

- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2XX3
- PHILOS 2YY3 - Ethics

3 UNITS

from

- PHILOS 2B03 - Introductory Logic
- PHILOS 2CT3 - Critical Thinking

3 UNITS

from

- PHILOS 3B03 - European Philosophy from Nietzsche to World War II
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3VV3 - Kant
- PHILOS 3WP3 - Modern Women Philosophers
- PHILOS 3XX3 - Plato
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

3 UNITS

from

- PHILOS 3D03 - Philosophy of Science
- PHILOS 3E03 - Philosophy of Language
- PHILOS 3HH3 - Metaphysics
- PHILOS 3MI3 - Philosophy of Mind
- PHILOS 3O03 - Theory of Knowledge
- PHILOS 3SR3 - Metaphysics of Social Reality

12 UNITS

- Level III Philosophy

6 UNITS

- Level IV Philosophy (Excluding PHILOS 4V03)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

36 UNITS

- Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

9 UNITS

- Electives to total 120 units

HONOURS JUSTICE, POLITICAL PHILOSOPHY, AND LAW (B.A.)

The aims of this program are to foster a sophisticated understanding of the law and legal institutions that make up the social world in which we live and of the political and moral theories that address the value and justice of these institutions. Students will be well-prepared for further studies or careers in law, philosophy, politics, education, human rights or public policy.

Admission

Enrolment in this program is limited. Selection is based on academic achievement and a supplemental application. See Note #1 below. It is recommended that students include three units of Level I Philosophy in their Level I program.

Notes

- Students must complete a supplemental application for admission that is available on the Program website (jppl.humanities.mcmaster.ca, due April 30).
- Students are strongly advised to complete PHILOS 2Q03 - Justice, Political Philosophy, and Law and PHILOS 2S03 - History of Political Philosophy in the first year they enter the JPPL program.
- Students must complete 18 units from the *Interdisciplinary Core Course List*, at least 3 units in each of the three categories: Policy and Law, Political and Moral Philosophy, and Human Rights and Global Justice. The remaining nine units may be from any of the three categories.
- Students may petition the Undergraduate Counsellor in Philosophy for approval to count toward this requirement courses that are within the interdisciplinary themes, but not on these lists.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities

1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Interdisciplinary Core Course List

I. POLICY AND LAW

- CLASSICS 2K03
- CLASSICS 2LW3
- CMST 2K03 - Political Economy of the Media
- CMST 2LW3 - Communication Policy and Law
- CMTYENGA 2A03 - Foundations of Community Engagement
- CMTYENGA 3A03 - The Art of Change
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- ENGLISH 2M03 - Concepts of Culture
- GKROMST 2K03 - The Society of Greece and Rome
- GKROMST 2LW3 - Ancient Law
- HISTORY 3G03
- HISTORY 3JJ3 - Crime, Constables, and Courts: Modern Criminal Justice, 1700 to Present
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- INDIGST 2B03 - Indigenous Sovereignty
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PHILOS 2N03 - Business Ethics
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3L03 - Environmental Philosophy
- WORKLABR 2A03 - Unions in Action

II. POLITICAL AND MORAL PHILOSOPHY

- CLASSICS 3M03
- CMST 2LW3 - Communication Policy and Law
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- GENDRST 2AA3 - Feminist Thought
- GKROMST 3M03 - Greek Intellectual Revolution
- INDIGST 2B03 - Indigenous Sovereignty
- INDIGST 4D03 - Indigenous Critical Theory and Inquiry
- PHILOS 2CT3 - Critical Thinking
- PHILOS 2B03 - Introductory Logic
- PHILOS 2D03 - Bioethics
- PHILOS 2F03 - Philosophical Psychology
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2ZZ3 - Philosophy of Love and Sex
- PHILOS 3C03 - Advanced Bioethics
- PHILOS 3CC3 - Advanced Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3M03
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3SR3 - Metaphysics of Social Reality
- PHILOS 3T03 - Philosophy and Race
- PHILOS 3XX3 - Plato
- PHILOS 3WP3 - Modern Women Philosophers
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

III. HUMAN RIGHTS AND GLOBAL JUSTICE

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ARTSSCI 3GJ3 - Global Justice Inquiry
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3AA3 - Theories of Gender and Sexuality
- ENGLISH 3R06 A/B
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3V03 - Global Anglophone Literature and Film
- INDIGST 2B03 - Indigenous Sovereignty
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2GW3 - A History of Global War
- HISTORY 2KK3 - History of Capitalism
- HISTORY 2MC3 - Modern China
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3XX3 - Human Rights in History
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- PEACJUST 2B03
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 4J03
- PEACEST 2B03
- PEACEST 2BB3
- PEACEST 3D03
- PEACEST 4J03
- PEACEST 4K03
- PHILOS 2LA3 - Latin American Philosophy
- PHILOS 3GH3 - Global Health Ethics
- PHILOS 3P03
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism

Requirements

Students who entered the Honours Justice, Political Philosophy, and Law (B.A.) program prior to September 2025 should refer to the Undergraduate Calendar for the year of program entry and their personal Advisement Report for program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission into the program *(see note 6)*

9 UNITS

- PHILOS 2Q03 - Justice, Political Philosophy, and Law
- PHILOS 2S03 - History of Political Philosophy
- PHILOS 2YY3 - Ethics

3 UNITS

from

- PHILOS 2B03 - Introductory Logic
- PHILOS 2CT3 - Critical Thinking

18 UNITS

from

- *Interdisciplinary Core List,* of which 9 units must be at Level III or IV.

6 UNITS

- PHILOS 3N03 - Political Philosophy
- PHILOS 3Q03 - Philosophy of Law

6 UNITS

from

- PHILOS 3C03 - Advanced Bioethics
- PHILOS 3CC3 - Advanced Ethics
- PHILOS 3GH3 - Global Health Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3L03 - Environmental Philosophy
- PHILOS 3P03

- PHILOS 3SR3 - Metaphysics of Social Reality
- PHILOS 3T03 - Philosophy and Race
- PHILOS 3WP3 - Modern Women Philosophers

6 UNITS

from

- PHILOS 4B03
- PHILOS 4C03 - Philosophy of Constitutional Law
- PHILOS 4JP3 - Topics in Justice, Political Philosophy, and Law
- PHILOS 4Q03
- PHILOS 4S03 - Human Rights and Global Justice
- PHILOS 4SE3 - Social Epistemology
- PHILOS 4XP3 A/B - Law and Community
- PHILOS 4YY3 - Topics in Ethics

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

33 UNITS

- electives to total 120 units

HONOURS JUSTICE, POLITICAL PHILOSOPHY, AND LAW WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities* offered by the DeGroote School of Business.

HONOURS PHILOSOPHY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in three units of Level I Philosophy or, if no such course was taken, in three units of work acceptable to the Department of Philosophy.

Notes

- Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note that not all courses are offered every year. Please consult the university Master Timetable.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the Honours Philosophy (B.A.) program prior to September 2025 should refer to the Undergraduate Calendar for the year of program entry and to their personal Advisement Report for program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 3)*

15 UNITS

- PHILOS 2B03 - Introductory Logic
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2XX3
- PHILOS 2YY3 - Ethics
- PHILOS 3N03 - Political Philosophy

9 UNITS

- Level II Philosophy

6 UNITS

from

- PHILOS 3D03 - Philosophy of Science
- PHILOS 3E03 - Philosophy of Language
- PHILOS 3HH3 - Metaphysics
- PHILOS 3MI3 - Philosophy of Mind
- PHILOS 3O03 - Theory of Knowledge
- PHILOS 3SR3 - Metaphysics of Social Reality

3 UNITS

from

- PHILOS 3B03 - European Philosophy from Nietzsche to World War II
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3VV3 - Kant
- PHILOS 3WP3 - Modern Women Philosophers

- PHILOS 3XX3 - Plato
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

9 UNITS

- Level III Philosophy

6 UNITS

- Level IV Philosophy (Excluding PHILOS 4V03)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving

(if not previously taken)

- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

33 UNITS

- Electives

HONOURS PHILOSOPHY AND BIOLOGY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 and a grade of at least C in three units of Level I Philosophy (or, if no such course was taken, in three units of work acceptable to the Department of Philosophy) and Grade 12 Biology U or BIOLOGY 1P03 (High School replacement) and three units of Level I Mathematics. Students are cautioned to observe that CHEM 1AA3 is the normal prerequisite for BIOLOGY 2B03 and 2C03 which are listed in a 24-unit series of courses from which students must complete 12 units. **Enrolment in this program is limited**.

Notes

- Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note that not all courses are offered every year. Please consult the university Master Timetable.
- Students should seek counselling from both the Department of Philosophy and the Department of Biology.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the Honours Philosophy and Biology (B.A.) program prior to September 2025 should refer to the Undergraduate Calendar for the year of program entry and their personal Advisement Report for program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 4)*

6 UNITS

- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

12 UNITS

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2C03 - Genetics
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- CHEM 2E03 - Introductory Organic Chemistry

9 UNITS

- Levels III or IV Biology

9 UNITS

from

- courses offered by the Faculty of Science

6 UNITS

- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2XX3

3 UNITS

from

- PHILOS 2B03 - Introductory Logic
- PHILOS 2CT3 - Critical Thinking

3 UNITS

from

- PHILOS 2D03 - Bioethics

- PHILOS 2YY3 - Ethics

6 UNITS

- Level II Philosophy

3 UNITS

from

- PHILOS 3O03 - Theory of Knowledge
- PHILOS 3D03 - Philosophy of Science

3 UNITS

from

- PHILOS 3B03 - European Philosophy from Nietzsche to World War II
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3VV3 - Kant
- PHILOS 3WP3 - Modern Women Philosophers
- PHILOS 3XX3 - Plato
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

9 UNITS

- Level III Philosophy

3 UNITS

- Level IV Philosophy (Excluding PHILOS 4V03)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

9 UNITS

- Electives

HONOURS PHILOSOPHY AND MATHEMATICS (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0; and successful completion of one of MATH 1A03, 1LS3 or 1X03; and one of MATH 1AA3, 1LT3, or 1XX3 with a grade of at least C+ *(see Note 4 below)*; and a grade of at least C in three units of Level I Philosophy or, if no such course was taken, in three units of work acceptable to the Department of Philosophy.

Notes

- Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note that not all courses are offered every year. Please consult the university Master Timetable.
- MATH 1B03 and MATH 1C03 must be completed by the end of Level II. Completion in Level 1 is strongly recommended.
- Upon completion of 60 units of work and with the approval of the Department of Philosophy and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III may be replaced by courses of study at a designated university abroad.
- Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. Math 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. Math 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take Math 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered the Honours Philosophy and Mathematics (B.A.) program prior to September 2025 should refer to the Undergraduate Calendar for the year of program entry and their personal Advisement Report for program requirements.

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 5)*

0-6 UNITS

- MATH 1B03 - Linear Algebra I (if not completed in Level I)
- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

3 UNITS

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

6 UNITS

from

- MATH 3A03 - Real Analysis I or
- MATH 3IA3 - Introduction to Analysis
- MATH 3F03 - Ordinary Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology
- MATH 3X03 - Complex Analysis I
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables

15 UNITS

- Levels II, III or IV Mathematics or Statistics which must include at least 6 units at Levels III and/or IV

12 UNITS

- PHILOS 2B03 - Introductory Logic
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2XX3
- PHILOS 2YY3 - Ethics

3 UNITS

from

- PHILOS 3B03 - European Philosophy from Nietzsche to World War II
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3VV3 - Kant
- PHILOS 3WP3 - Modern Women Philosophers
- PHILOS 3XX3 - Plato
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

6 UNITS

- Level II Philosophy

15 UNITS

- Level III Philosophy

3 UNITS

- Level IV Philosophy (Excluding PHILOS 4V03)

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

6-12 UNITS

- Electives

HONOURS PHILOSOPHY WITH A SPECIALIZED MINOR IN COMMERCE (B.A.)

For details on this Specialized Minor, please see *Specialized Minor in Commerce for Students Completing a Single Honours B.A. in Humanities*, offered by the DeGroote School of Business.

Bachelor of Arts

PHILOSOPHY (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 3.5 and a grade of at least C- in three units of Level I Philosophy or, if no such course was taken, in three units of work acceptable to the Department of Philosophy.

Notes

- Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note that not all courses are offered every year. Please consult the university Master Timetable.
- The Faculty of Humanities introduced a new requirement for all Humanities degree students starting in 2024-25. The Skills for Life Concurrent Certificate comprises 18 units that provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The mandatory requirements below assume successful completion of HUMAN 1DL3, HUMAN 1HL3 and HUMAN 1VV3 in Humanities 1. Students transferring to Humanities programs beyond Level 1 are exempt from the concurrent certificate. Please see Faculty of Humanities Academic Regulations for more information.

Requirements

Students who entered Philosophy (B.A.) prior to September 2025 should refer to the Undergraduate Calendar of their entry year and their individual advisement report for their program requirements.

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission into the program *(see note 2)*

9 UNITS

- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2X03 - Early Modern Philosophy
- PHILOS 2XX3
- PHILOS 2YY3 - Ethics

3 UNITS

from

- PHILOS 2B03 - Introductory Logic
- PHILOS 2CT3 - Critical Thinking

3 UNITS

- Level II Philosophy

3 UNITS

from

- PHILOS 3B03 - European Philosophy from Nietzsche to World War II
- PHILOS 3NN3 - Philosophy of the Enlightenment
- PHILOS 3VV3 - Kant
- PHILOS 3WP3 - Modern Women Philosophers
- PHILOS 3XX3 - Plato
- PHILOS 3YY3 - Hegel
- PHILOS 3ZZ3 - Aristotle

6 UNITS

- Level III Philosophy

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 2TP1 - Time and Project Management
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 2TP1 - Time and Project Management (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3IF1 A/B S - Full-time Internship * (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship * (if not previously taken)
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II *HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

27 UNITS

- Electives

Minor(s):

MINOR IN PHILOSOPHY

Requirements

24 UNITS

- 24 units of Philosophy, of which no more than six units may be from Level I

Gender Studies

https://gsj.humanities.mcmaster.ca/
Chester New Hall, Room 321, ext. 27734
DIRECTOR
Catherine Anderson
COMMITTEE OF INSTRUCTION
Aytak Akbari-Dibavar *(Gender and Social Justice; Global Peace and Social Justice))* LL.B. *(Islamic Azad)*, B.A. *(York)*, M.A. *(McMaster)*, Ph.D. *(York)*
Catherine Anderson *(Linguistics & Languages; Gender and Social Justice)* B.A. *(McMaster)*, Ph.D. *(Northwestern)*
Christina Baade *(Communication Studies and Media Arts)* B.Mus. *(Northwestern)*, M.Mus., Ph.D. *(Wisconsin-Madison)*
Karen Balcom *(History; Gender and Social Justice)* B.A. *(Carleton),* M.A. *(Dalhousie),* Ph.D. *(Rutgers)*
Lyndsey Beutin *(Communication Studies and Media Arts)* B.A. *(Duke),* M.A., Ph.D. *(Pennsylvania)*
Lucy El-Sherif *(Gender and Social Justice; Global Peace and Social Justice)* B.B.A. *(American University in Cairo)*, M.A. *(Toronto)*, Ph.D. *(Toronto)*
Allauren Forbes *(Philosophy; Gender and Social Justice)* B.A., M.A. *(Wilfrid Laurier)*, Ph.D. *(Pennsylvania)*
Melinda Gough *(English and Cultural Studies; Gender and Social Justice)* B.A. *(McGill)*, M.A., Ph.D. *(Yale)*
Christine Quail *(Communication Studies & Media Arts; Gender and Social Justice)* B.A., M.A. *(Pennsylvania)*, Ph.D. *(Oregon)*
Ingrid R.G. Waldron *(HOPE Chair in Peace and Health)* B.A. *(McGill)*, M.A. *(University of London)*, Ph.D. *(Toronto)*
Syrus Ware *(iARTS - Integrated Arts; Gender and Social Justice)* B.A. *(Toronto)*, M.A. *(OISE/UT)*, Ph.D. *(York)*
Andrea Zeffiro *(Communication Studies and Media Arts)* B.A., M.A. *(Western),* Ph.D. *(Concordia)*

Minor(s):

MINOR IN GENDER STUDIES

A Minor in Gender Studies consists of 24 units including the courses listed below. If students wish to propose that a course not cross-listed and not on the course list be considered as a credit toward the Minor in Gender Studies, they may contact (905) 525-9140 x 27734 or visit CNH 321.

Notes

- Students must be aware that some courses in the Course Lists have their own disciplinary prerequisites. Given the multidisciplinary nature of the Gender Studies Minor, with its different approaches and expectations, it is the responsibility of the students in the Gender Studies Minor to meet other Faculties', departments' and programs' requirements.
- Students who began their studies prior to September 2021 may declare this as the Women's Studies minor.

Requirements

24 units total

3 UNITS

from

- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- PEACJUST 1A03 - Peace, Justice, Human Rights

3 UNITS

- GENDRST 2AA3 - Feminist Thought

18 UNITS

from

- GENDRST 1A03 - Gender, Race, Culture, Power (if not previously taken)
- GENDRST 1AA3 - Gender, Feminism and Social Justice (if not previously taken)
- PEACJUST 1A03 - Peace, Justice, Human Rights (if not previously taken)
- CMST 2H03 - Gender and Performance
- CMST 2XX3 - Queer Popular Culture
- CMST 3RR3 - Race, Religion, and Media
- ENGLISH 2KK3 - Studies in Women Writers
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3AA3 - Theories of Gender and Sexuality
- ENGLISH 3GS3 - Reading the Embodied Past: Gender and Sexuality
- ENGLISH 4QA3 - Queerness in the Archives: Lesbian and Gay Writing, Art and Activism in Canada, 1969-1989
- ENVSOCTY 4US3 - Sustainable Cities
- GENDRST 2BB3 - Images of the Divine Feminine
- GENDRST 3BB3 - Gender and Visual Culture
- GENDRST 3BW3 - Gender in Ancient Eastern Mediterranean
- GENDRST 3FF3 - Gender and Religion
- GENDRST 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- GENDRST 4A03
- HTHSCI 2T03 - Sex, Gender, & Health
- HISTORY 3W03
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- INDIGST 4J03 - Indigenous Erotics
- LINGUIST 4G03 - Language, Sex and Gender
- PEACJUST 2B03
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 4GH3 - Social Justice Perspectives on Gender and Health
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3WP3 - Modern Women Philosophers
- RELIGST 2BN3
- SCAR 2MH3 - Motherhood
- WORKLABR 3E03 - Gender, Sexuality and Work
- WOMENST 2B03
- WOMENST 4D03

Faculty of Science

Burke Science Building, Room 136, ext. 27590
http://www.science.mcmaster.ca/
science@mcmaster.ca
DEAN OF SCIENCE (ACTING)
G. Parise/B.Kin., M.Sc., Ph.D.
ASSOCIATE DEAN (UNDERGRADUATE STUDIES)
R. da Silva/B.Sc., Ph.D.
ASSISTANT DEAN (UNDERGRADUATE STUDIES)
S. Robinson/B.Kin., M.Sc.
ASSOCIATE DIRECTOR, UNDERGRADUATE RECRUITMENT AND EDUCATION
B. O'Connor/B.A.
MANAGER, UNDERGRADUATE RECRUITMENT AND EDUCATION
K. Michailow/B.Com.
ACADEMIC ADVISORS
N. Buston
E. dos Santos/B.A.
T. Gammon/B.A., B.A.
C. Mifflin/B.A.
J. Sewnauth/B.Sc.
R. Tebbutt/B.A.
FACULTY ACADEMIC OFFICER
T. Sutton/B.A.
FACULTY ACCESSIBILITY AND ACCOMMODATION OFFICER (ACTING)
J. Geddes/B.A.
ACADEMIC SUPPORT ASSOCIATES
S. Saiyed/B.Sc.
L. Sham/B.Sc.
DIRECTOR, CAREER DEVELOPMENT AND COOPERATIVE EDUCATION
A. O'Carroll/M.A.
PROGRAM MANAGER, COOPERATIVE EDUCATION
S. Couch/B.A.
PROGRAM MANAGER, CAREER DEVELOPMENT
L. Keenan/M.B.A.
CAREER DEVELOPMENT AND RELATIONSHIP MANAGERS
L. MacKinnon/B.Ed., B.F.A.
A. Nicu/B.Com.
H. Rose/B.Sc.
A. Selkirk
H. Wade/B.A.
S. Yousefzai/B.A.
TALENT PARTNERSHIP CONSULTANT
B. Wasim/B.Eng., M.B.A.
COOPERATIVE EDUCATION COORDINATOR
I. Ahmed/B.Sc.
CAREER EDUCATION COORDINATOR
B. Denicola/B.A., M.Ed.
RECRUITMENT ASSISTANT
B. Wijesiri/B.Sc.
PROJECT COORDINATOR, ADVANCING TOMORROW'S SCIENCE CAREERS
M. Adebo/B.Sc., M.Ed.
PROJECT COORDINATOR, DESIGN YOUR SCIENCE CAREER
D. Manns
EVENTS AND COMMUNICATIONS SPECIALIST
D. Gallant/B.A.
ADMINISTRATIVE ASSISTANT
H. Yasara

The Faculty of Science provides studies through the following Departments/Programs/Schools:

- Biology
- Chemistry and Chemical Biology
- Earth, Environment and Society
- Interdisciplinary Science
- Kinesiology
- Mathematics and Statistics
- Physics and Astronomy
- Psychology, Neuroscience & Behaviour

Degree Programs

Honours Bachelor of Science Programs

An Honours B.Sc. normally requires the completion of 120 units, including a set of courses in a specific discipline and allows for interdisciplinary, and/or liberal arts studies through electives from other Departments and Faculties.
An Honours B.Sc. with Specialization or Sub-Plan requires the completion of the same courses required for the Honours program, as well as designated upper level courses in a specialized area of study. Please refer to departmental program descriptions for details.
Honours Integrated Science is a limited enrolment, interdisciplinary research-based science program designed to develop students as broadly educated research scientists capable of contributing to all modern fields of science. Program courses will develop scientific understanding through integration of multiple disciplines in the study of a series of relevant themes or problems. Many disciplines of science will contribute toward courses offered in the Integrated Science program. Students will be involved in individual and team research projects throughout the program.
Students who successfully complete the first three levels of any Honours B.Sc. degree may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with a three-level B.Sc. degree.

Honours Bachelor of Science Kinesiology Program

Similar to the Honours Bachelor of Science, the Honours Bachelor of Science Kinesiology (Honours B.Sc.Kin.) requires 120 units, including the completion of a set of required courses and electives. Honours Bachelor of Science Kinesiology, a limited enrolment, direct-entry program is only available to students who completed Level I Honours Kinesiology. Kinesiology students who successfully complete the first three levels of the Honours B.Sc.Kin. degree may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with the three-level B.Sc.Kin. (exit) degree.

Honours Bachelor of Applied Science Programs

An Honours Applied Psychology in Human Behaviour (B.A.Sc.) program is available, as well as two Specializations offered in collaboration with Mohawk College of Applied Arts and Technology. Graduates of the Specializations will be eligible to receive both the McMaster B.A.Sc. (Honours) and either the Mohawk College Certificate in Autism & Behavioural Science or the Early Childhood Education (ECE) Diploma. The Honours B.A.Sc. requires the completion of 120 units, including a set of courses in a specific discipline and allows for interdisciplinary and/or liberal arts studies through electives from other Departments and Faculties. The Honours B.A.Sc. with a Specialization requires the completion of 150 units, including similar courses for the affiliated Honours B.A.Sc. program, as well as designated upper level courses and applied placements, in the area of the Specialization. Levels II through IV of the program run consecutively from September of Level II to completion of the program at the end of April in Level IV.
An Honours Sustainable Chemistry (B.A.Sc.) program is available. The Honours B.A.Sc. requires the completion of 120 units, including a set of courses in a specific discipline and allows for interdisciplinary and/or liberal arts studies through electives from other Departments and Faculties. Please refer to departmental program descriptions for details.
Honours B.A.Sc. students who successfully complete 90 units, including the first three levels of the Honours B.A.Sc. degree, may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with the B.A.Sc. (exit) degree.

Honours Bachelor of Medical Radiation Sciences Program

The Honours Bachelor of Medical Radiation Sciences (B.M.R.Sc.) is a four-year degree. Students who successfully complete the first three levels of the Honours Bachelor of Medical Radiation Sciences (B.M.R.Sc.) degree may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with a three-level B.Sc. (exit) degree.

Co-op Programs

The Faculty of Science has Cooperative Education programs, beginning in Level III, in Honours Actuarial and Financial Mathematics, Honours Biochemistry, Honours Chemical Biology, Honours Chemistry, Honours Earth and Environmental Sciences, Honours Environmental Sciences, Honours Kinesiology, Honours Life Sciences, Honours Mathematics and Statistics, Honours Medical and Biological Physics, Honours Molecular Biology and Genetics, Honours Physics and Honours Sustainable Chemistry.
Co-op programs have **limited enrolment** and admission is by selection. Students will not be admitted to a Co-op program if they have less than 30 units of academic work outstanding in their program by the end of the Spring/Summer Term prior to admission. Please see the admission statement for each program in this section of the Calendar. Students must complete SCIENCE 2C00 (or SCIENCE 2D00) prior to the Fall Term of admission to the Co-op program. Students must complete all mandatory orientation activities, including SCIENCE 3C00 (or SCIENCE 3D00), prior to the start of the first work term. Employment must be full-time, academically relevant and approved by the Science Career and Cooperative Education office.
Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 9 units in a term) and will be charged per unit registered. An annual administrative fee will be charged in each of the three years a student is enrolled in a Co-op program, and additional Science Co-op fees will be charged for each work term of a Co-op program. With written permission from the work term supervisor and the Office of the Associate Dean, Undergraduate Studies, 3 units of academic work may be taken during each four-month period of a work term and the student will be responsible for the additional tuition. For further information, please consult Science Career and Cooperative Education in the Faculty of Science.
In exceptional circumstances, students may need to investigate re-sequencing their academic and work terms. Students must meet with their Career Development Relationship Manager, as well as an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss program progression and completion. If re-sequencing must be explored, students must do so no later than the last day for enrolment and course changes (drop/add) of their scheduled work term. (Please refer to *Sessional Dates* in the Undergraduate Calendar). In some cases, re-sequencing may not be possible. If so, a student would be required to transfer to a program in the Faculty of Science for which they qualify.

Internships

The Faculty of Science offers students the opportunity to participate in 4, 8, 12, or 16 month full-time, paid work placements in academically relevant areas, as approved by the Science Career and Cooperative Education office. Internship placements are available to students registered as full time students in good standing in Level II or III of an Honours B.Sc. program or Honours B.Sc.Kin. or Level II or III of an Honours B.A.Sc. in Sustainable Chemistry or Honours B.A.Sc. in Applied Psychology in Human Behaviour program and who will have at least 9 units left to complete upon their return. Students must complete SCIENCE 2C00 and all mandatory orientation activities prior to the start of their internship. Students secure placements, in consultation with the Science Career and Cooperative Education office, with participating companies through an application and interview process. A fee is assessed following the start

of the placement. For further information, please consult Science Career and Cooperative Education in the Faculty of Science.

Minors

Within the Faculty of Science, Minors are available to students registered in an Honours program only, provided that the subject area of the Minor is not integral to the requirements of their degree program. In addition to the University's regulations governing the designation of a Minor, all Departments in the Faculty of Science require the inclusion of at least six units of Level III or IV courses to complete a Minor in a Science subject. At least 12 units (above Level I) toward the Minor must be considered elective to degree. At least 18 units must be completed at McMaster.

Please see *Minors* in the *General Academic Regulations* section of this Calendar for further information. All courses have an enrolment capacity and the Faculty cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Minors offered by the Faculty of Science include:

- Astrophysics
- Biology
- Chemical Biology
- Chemistry
- Earth Sciences
- Environment and Society
- Environmental Sciences
- Geographic Information Systems (GIS) (last available to students graduating in 2026)
- Mathematics
- Medical and Biological Physics
- Physics
- Psychology
- Statistics
- Sustainable Chemistry

Concurrent Certificates

A credential is a body or collection of academic work that stands on its own. McMaster credentials include certificates, diplomas and degrees. A single course is permitted to be counted toward a maximum of two credentials. Concurrent certificates are a recognized credential and open to undergraduate students. Additional restrictions regarding completion and/or overlap with a student's enrolled program (major) may apply. All courses have an enrolment capacity and the Faculty cannot guarantee enrolment, even when all requisites have been met. Therefore, the completion of a Concurrent Certificate may not be guaranteed. Students apply for recognition of the Concurrent Certificate, at the time of graduation.

Concurrent Certificates offered by the Faculty of Science:

- Anti-Racism, Inclusion and Equity (ARIE) in Science
- Environmental Sustainability
- Geographic Information Science (GIS)
- Kinesiology
- Quantum Science and Technology
- Science Communication
- Scientific Computing
- Urban Studies and Planning

For a complete list of Concurrent Certificates available, students should see the *'Concurrent Certificates'* section of this Calendar.

Bachelor of Science Programs

Three-level B.Sc. programs offered by the Faculty of Science include: Environmental Sciences, Life Sciences, Mathematical Science and Chemical and Physical Sciences (formerly Physical Sciences). B.Sc. programs require completion of 90 units, including a set of required courses and electives. Students interested in the Environmental Sciences program are encouraged to see *School of Earth, Environment & Society* in this section of the Calendar. Students interested in the Life Sciences program are encouraged to see *School of Interdisciplinary Science (SIS)* in this section of the Calendar. Students interested in the Mathematical Science program are encouraged to see *Department of Mathematics and Statistics* in this section of the Calendar. Students interested in the Chemical and Physical Sciences are encouraged to see *Chemical and Physical Sciences* in the *Department of Physics and Astronomy* section of the Calendar.

Students who successfully complete the first three levels of any Honours B.Sc. program may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with a B.Sc. degree.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases, priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enrol as soon as online enrolment is available to them in the Student Centre in Mosaic. In addition, in the Faculty of Science, there are two types of courses for which permission must be obtained prior to registration. For these courses, students will be given seat authorizations rather than being admitted on a first-come basis.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the University provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in Science programs, in addition to meeting the *General Academic Regulations* of the University, shall be subject to additional Faculty Regulations.

Admission to Level I Programs

The Faculty of Science offers the following Level I gateway programs leading to the Honours Bachelor of Science, Honours Bachelor of Applied Science and Bachelor of Science programs at Level II:

- Chemical and Physical Sciences Gateway
- Environmental and Earth Sciences Gateway
- Life Sciences Gateway
- Mathematics and Statistics Gateway

Review of the Admission Requirements of Level II programs and successful

completion of recommended courses in Level I will allow students a range of Level II program options including those from within their chosen Gateway as well as the others. Students are encouraged to review Level II program admission requirements through the Undergraduate Calendar and the McMaster Academic Planner (MAP) at mapsci.ca.
Additionally, the Faculty offers the following direct-entry Level I programs (and degrees):

- Honours Integrated Science (Leading to the Honours Bachelor of Science degree)
- Honours Kinesiology (Leading to the Honours Bachelor of Science Kinesiology degree)
- Honours Medical Radiation Sciences (Leading to the Honours Bachelor of Medical Radiation Sciences degree)

Integrated Science Equitable Admissions for Black Applicants (EABA) Process

The EABA process aims to reduce barriers that may discourage Black-identifying applicants from applying to the Honours Integrated Science I Program, and to enhance accessibility and inclusiveness for Black-identified learners. Applicants who elect to use the EABA process need to apply for admission through normal processes. Applicants will have the opportunity to self-identify for the EABA as they submit their mandatory supplementary application. Applicants must meet the same minimum academic criteria for admission as for the general pool of candidates.
More details about the EABA process are available on the program website: https://science.mcmaster.ca/sis/undergraduate/isci/isci-admission-requirements.html

Transfer/Application to Level I Honours Kinesiology

In-course, McMaster students seeking transfer/admission to Level I Honours Kinesiology for the following Fall Term must submit an Application for Admission through Mosaic by the stated deadline (normally April) and should see the Admission Requirements section of this Calendar. Please speak to the Office of the Associate Dean, Undergraduate Studies if you are unable to add your program transfer request on MOSAIC. Additionally, transfer students must submit the mandatory Supplemental Application to the Department of Kinesiology by the stated deadline. Students will be notified of their eligibility for transfer to Level I Honours Kinesiology through their Student Centre on MOSAIC in June. McMaster students interested in transferring should contact the Academic Program Advisor in the Department of Kinesiology or the Office of the Associate Dean, Undergraduate Studies. Students transferring from another university are required to submit the mandatory Supplemental Application to the Department of Kinesiology by the stated deadline and should see the Admission Requirements and *Application Procedures* sections of this Calendar. A limited number of exceptionally qualified students are admitted each year. To be considered, applicants must have a cumulative GPA of at least 9.0 (B+) in a minimum of 24 units of university work, taken during the Fall and Winter Terms. Given the number of required units and prerequisites of Kinesiology courses, transfer students may not be able to complete the requirements in three additional years of study.

Admission to Level II Programs

All Level I students who wish to be reviewed for admission to a Level II program in the Faculty of Science for the following Fall/Winter Term must submit an Application for Admission to Level II through MOSAIC by the University stated deadline (normally in April). Students may rank up to four program choices. Rank ordering must be done very carefully because once admitted to a program, no further consideration is given to lower ranked choices.

Level I students must meet the admission criteria for a Level II program according to the Calendar in effect when they registered for Level I. Students must follow the program requirements of the Calendar in effect when they enter Level II, except when a later Calendar explicitly modifies such requirements. Students are encouraged to review Level II program admission requirements through the Undergraduate Calendar and the McMaster Academic Planner (MAP) at mapsci.ca.
Students who are in good academic standing, but who do not achieve the admission requirements for any Level II program may continue in the Faculty of Science in the undeclared 'Science' program, or may seek transfer to another Faculty.

Open Enrolment Programs

Admission at Level II (and above) is open for the following:

- Honours Applied Psychology in Human Behaviour (B.A.Sc.)
- Honours Sustainable Chemistry (B.A.Sc.)
- Honours Astrophysics (B.Sc.)
- Honours Biodiversity and Environmental Sciences (B.Sc.)
- Honours Biology Core (B.Sc.)
- Honours Chemistry (B.Sc.)
- Honours Earth and Environmental Sciences (B.Sc.)
- Honours Environmental Sciences (B.Sc.)
- Honours Life Sciences (B.Sc.)
- Honours Mathematics and Physics (B.Sc.)
- Honours Mathematics and Statistics (B.Sc.)
- Honours Mathematics and Statistics - Mathematics Specialization (B.Sc.)
- Honours Mathematics and Statistics - Statistics Specialization (B.Sc.)
- Honours Medical and Biological Physics (B.Sc.)
- Honours Physics (B.Sc.)
- Chemical and Physical Sciences (B.Sc.)
- Environmental Sciences (B.Sc.)
- Life Sciences (B.Sc.)
- Mathematical Science (B.Sc.)

Limited Enrolment Programs

Admission at Level I (and above) is limited for the following programs:

- Honours Integrated Science
- Honours Kinesiology
- All Honours Medical Radiation Sciences programs

Admission at Level II (and above) is limited for the following:

- Honours Actuarial and Financial Mathematics (B.Sc.)
- Honours Biology Research Specialization (B.Sc.)
- Honours Biology - Physiology Core (B.Sc.)
- Honours Biology - Physiology Research Specialization (B.Sc.)
- Honours Biology and Mathematics (B.Sc.)
- Honours Biology and Psychology, Neuroscience & Behaviour (B.Sc.)
- Honours Chemical Biology (B.Sc.)
- Honours Applied Psychology in Human Behaviour - Autism and Behavioural Science Specialization (B.A.Sc.)
- Honours Applied Psychology in Human Behaviour - Early Childhood Studies Specialization (B.A.Sc.)
- Honours Life Sciences - Origins of Disease Specialization (B.Sc.)
- Honours Life Sciences - Sensory Motor Systems Specialization (B.Sc.) (Last Available September 2024)
- Honours Mathematics and Computer Science (B.Sc.)
- Honours Molecular Biology and Genetics Core (B.Sc.)
- Honours Molecular Biology and Genetics Research Specialization (B.Sc.)
- Honours Neuroscience (B.Sc.)
- All Honours Psychology, Neuroscience & Behaviour programs

All Co-op programs, beginning at Level III, are limited enrolment.

Transfers

Science students may be permitted to transfer between programs or students in other Faculties may apply to transfer to a program in the Faculty of Science provided they have obtained a Grade Point Average of at least 3.5 and have completed the necessary admission requirements. Such students must consult with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss process and the assessment of transfer credit.
Students transferring from a Bachelor of Technology program are only eligible to transfer to a Level I Gateway program and must meet all admission requirements to that program including the required entrance average. Such students must consult with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss process and the assessment of transfer credit. Given the number of required units and prerequisites of some Science courses, transfer students may not be able to complete the requirements in three additional years of study.

Minimum Requirements to Continue in the Faculty of Science

Further to the information found in the *General Academic Regulations* section of this Calendar:

Reinstatement

Students with an Academic Standing of *May Not Continue at the University* who wish to be considered for undergraduate studies must apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the stated deadline. The Faculty of Science does not consider Requests for Reinstatement for the Spring/Summer Term. See the *Application Procedures* section of this Calendar. Reinstatement forms will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation and other appropriate documentation. **Reinstatement is not automatic or guaranteed.** Decisions are normally made after June 30 for September entry.
Effective September 1997, the Grade Point Average (formerly Cumulative Average) for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. **Note: If at a review after reinstatement the Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.**
Former Kinesiology students will be considered for reinstatement to Kinesiology upon completion of a minimum of 24 units of university work taken on a full-time basis in a non-Kinesiology program with a minimum average of 7.0 (B-). Application forms are available from the Office of the Associate Dean, Undergraduate Studies. The application deadline is April 30 for September entry. **Reinstatement is not guaranteed.**
Former Honours Medical Radiation Sciences students will be considered for reinstatement to their program upon completion of a minimum of 24 units of university work taken on a full-time basis in a non-Medical Radiation Sciences program with a minimum average of 7.0 (B-). Application forms are available from the Office of the Associate Dean, Undergraduate Studies or the School of Interdisciplinary Science (SIS). The application deadline is April 30 for September entry. **Reinstatement is not guaranteed.**

Deadlines

The Faculty of Science will not consider applications for admission, admission to a second degree or continuing studies, registration, deleting, cancelling, or adding of courses after the deadlines stated in this Calendar under Sessional Dates and Application Procedures sections, unless documentation showing good cause is submitted to the Office of the Associate Dean, Undergraduate Studies.

Limited Enrolment Courses Requiring Pre-Registration Balloting

The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses. Students entering Level IV Honours Life Sciences (including those enrolled in a Specialization) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. Ballots will be sent directly to students in Honours Life Sciences in the Winter Term.
Students entering Level IV Honours Applied Psychology in Human Behaviour (including Autism and Behavioural Science or Early Childhood Studies Specialization students interested in using a seminar course to fulfil their Human Behaviour Course List requirement) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Applied Psychology in Human Behaviour during the Winter Term. Students wishing to take these courses must complete and submit a ballot by the end of March. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Applied Psychology in Human Behaviour program pre-registration ballot will include all Level IV Human Behaviour research seminar courses (HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3).

Workload

All programs in the Faculty of Science may be taken by full-time and part-time students, with the exception of all Honours Co-op programs. Students enrolled in Co-op programs must maintain a full academic load during the study terms of their program.
Students must maintain a full academic load during the Fall/Winter Term to be eligible for scholarships available to full-time students.
Students are expected to avoid timetable conflicts among their courses, and students on a full academic load should ensure the number of courses is balanced in each term. Students who wish to take more courses than recommended for a single level of their program may do so if their Grade Point Average on completion of the previous Fall/Winter Terms is at least 7.0. Students are permitted to overload by up to three units during Fall/Winter Terms. Students registered in the final level of their program are permitted to overload by up to six additional units (three units per Term) in order to become eligible to graduate. Students are not permitted to overload during the Spring/Summer Term.

Courses Requiring an Additional Fee

The Faculty offers courses that may require a payment of a fee, above the regular associated tuition. Examples include: field courses and experiential offerings. Some of these courses may be taken outside of the University's Sessional Dates.
Students who enrol in these types of offerings must pay **both**:

- a fee to the Department to cover travel expenses, room and board and
- the associated tuition fee to McMaster at time of registration.

Although students initially register for field courses through the appropriate departmental offices, it is their responsibility to include field courses on their registration forms for the appropriate session.
Detailed information regarding field courses and deadlines for registration may be obtained from the individual departmental offices.

Letter of Permission

All students in good academic standing, with the exception of students registered in second degree programs, may apply to the Office of the Associate Dean, Undergraduate Studies to take courses at another university on Letter of

Permission. Students must achieve a grade of at least C- for transfer of credit. The transcript designation reads 'T', indicating *transfer*, when a grade of C- or better is attained, or *NC*, indicating *not complete*, when a grade of less than C- is attained.

The Faculty of Science will permit a maximum of 18 units to be taken at another university on Letter of Permission towards either a three-year B.Sc. or a four-year Honours B.Sc. degree. Required courses for the student's degree program may not be taken elsewhere. Non-Science electives may be taken through the Letter of Permission policy, subject to regulations. Please see *McMaster Students Studying at Another University: Letter of Permission (LOP)* in the *General Academic Regulations*.

Courses taken at another university cannot be used to satisfy the University's minimum residence requirements, will not be included in the calculation of the Grade Point or Term Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on Letter of Permission. Students must complete their final level at McMaster as per the Residence Requirements. Please see *Residence Requirements* in the *General Academic Regulations*.

Students who transfer to McMaster from a different institution may find it difficult to complete courses on Letter of Permission based on the transfer credit they have already received from the prior institution. Students are encouraged to meet with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to explore this situation.

Student Exchanges

McMaster University has agreements with institutions in Canada and abroad including Australia, Denmark, France and the United Kingdom to provide students with the opportunity to participate in an exchange program for one year or term. Exchanges allow students to gain a varied perspective on their course of study and enhance their professional and personal goals. In addition, exchange programs offer students the most inexpensive means of studying abroad as students participating in these exchanges avoid the foreign fees by paying fees to McMaster.

All students must have completed at least one year of continuous study and be in good standing to be eligible to participate in an exchange. In most cases, students who participate in exchange programs go abroad for the third level of an Honours program.

Students interested should begin discussions with the Office of the Associate Dean, Undergraduate Studies about one year before they plan to enrol elsewhere. Students must propose and submit an academic program to their Department for approval. Academic approval must be completed by the end of February for registration in the following Fall/Winter Term. In certain cases, students may be recommended for the Deans' Honour List on the basis of work undertaken while on exchange.

For further information please see *International Study* in the *General Academic Regulations* section in this Calendar. Information concerning exchanges can also be found from International Student Services. Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

International and Exchange Student Experience
Gilmour Hall, Room 110
Telephone: (905) 525-9140, extension 24748

Graduation

FROM AN HONOURS B.SC., HONOURS B.A.SC. AND B.SC. PROGRAMS

To graduate from a program, students must meet all course requirements for their degree program.

The requirements for graduation from these programs are described under the heading *Graduation* in the *General Academic Regulations* section in this Calendar.

TRANSFERRING TO GRADUATE WITH A THREE-LEVEL B.SC. DEGREE FROM AN HONOURS B.SC. PROGRAM

Students who successfully complete at least 90 units including all admission requirements and expected course requirements up to the end of Level III of any Honours B.Sc. degree, with a minimum Grade Point Average of 3.5 may request permission from the Office of the Associate Dean, Undergraduate Studies for transfer to graduate with a corresponding three-level B.Sc. degree as follows:

Honours Biochemistry programs qualify for the (B.Sc). Science degree. Honours Biology, Chemical Biology, Life Sciences, Molecular Biology and Genetics and Psychology, Neuroscience & Behaviour programs qualify for the B.Sc. Life Sciences degree. All Environmental Sciences programs qualify for the B.Sc. Environmental Sciences degree. All Mathematics and Statistics programs qualify for the B.Sc. Mathematical Science degree. All Chemistry, Medical and Biological Physics, and Physics programs qualify for the B.Sc. Chemical and Physical Sciences degree. Students enrolled in Honours Biodiversity and Environmental Sciences or Honours Biology and Environmental Sciences may be given the option of either the B.Sc. Environmental Sciences or Life Sciences degree. Honours B.Sc. Kinesiology qualifies for the B.Sc.Kin. degree. Integrated Sciences (iSci) programs, with a concentration, will qualify for the exit degree most relevant to the concentration. Integrated Sciences (iSci), without a concentration, qualifies for the B.Sc. Science degree. Students who do not qualify for the degrees, as stated above, may request to be considered to graduate with the B.Sc. Science degree. Honours Medical Radiation Sciences (B.M.R.Sc.) qualifies for the three-level B.Sc. degree.

TRANSFERRING TO GRADUATE WITH A THREE-LEVEL B.A.SC. DEGREE FROM AN HONOURS B.A.SC. PROGRAM

Students who successfully complete at least 90 units including all admission requirements and expected course requirements up to the end of Level III of any Honours B.A.Sc. degree, with a minimum Grade Point Average of 3.5 may request permission from the Office of the Associate Dean, Undergraduate Studies for transfer to graduate with the B.A.Sc. (exit) degree.

Level I Programs

The Faculty of Science offers the following Level I gateway programs leading to the Honours Bachelor of Science, Honours Bachelor of Applied Science and Bachelor of Science programs at Level II:

- Chemical and Physical Sciences Gateway
- Environmental and Earth Sciences Gateway
- Life Sciences Gateway
- Mathematics and Statistics Gateway

Science Gateway students should review the Admission Requirements of Level II programs and successful completion of recommended courses in Level I will allow students a range of Level II program options including those from within their chosen Gateway as well as the others. Students in the Level I Gateway programs will have the opportunity to take units from the S*cience I Course List*, in preparation for their Level II programs of interest. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program.

Level II Programs available to Science Gateway students:

- Honours Actuarial and Financial Mathematics (B.Sc.)
- Honours Astrophysics (B.Sc.)
- Honours Biodiversity and Environmental Sciences (B.Sc.)
- Honours Biology Core (B.Sc.)
- Honours Biology and Mathematics (B.Sc.)
- Honours Biology - Physiology Core (B.Sc.)
- Honours Biology - Physiology Research Specialization (B.Sc.)
- Honours Biology and Psychology, Neuroscience & Behaviour (B.Sc.)
- Honours Biology Research Specialization (B.Sc.)
- Honours Chemical Biology (B.Sc.)

- Honours Chemistry (B.Sc.)
- Honours Earth and Environmental Sciences (B.Sc.)
- Honours Environmental Sciences (B.Sc.)
- Honours Life Sciences (B.Sc.)
- Honours Life Sciences - Origins of Disease Specialization (B.Sc.)
- Honours Mathematics and Computer Science (B.Sc.)
- Honours Mathematics and Physics (B.Sc.)
- Honours Mathematics and Statistics (B.Sc.)
- Honours Mathematics and Statistics - Mathematics Specialization (B.Sc.)
- Honours Mathematics and Statistics - Statistics Specialization (B.Sc.)
- Honours Medical and Biological Physics (B.Sc.)
- Honours Molecular Biology and Genetics Core (B.Sc.)
- Honours Molecular Biology and Genetics Research Specialization (B.Sc.)
- Honours Neuroscience (B.Sc.)
- Honours Physics (B.Sc.)
- Honours Psychology, Neuroscience & Behaviour (B.Sc.)
- Honours Psychology, Neuroscience & Behaviour - Mental Health Specialization (B.Sc.)
- Honours Psychology, Neuroscience & Behaviour - Music Cognition Specialization (B.Sc.)
- Honours Applied Psychology in Human Behaviour (B.A.Sc.)
- Honours Applied Psychology in Human Behaviour - Autism and Behavioural Science Specialization (B.A.Sc.)
- Honours Applied Psychology in Human Behaviour - Early Childhood Studies Specialization (B.A.Sc.)
- Honours Sustainable Chemistry (B.A.Sc.)
- Chemical and Physical Sciences (B.Sc.)
- Environmental Sciences (B.Sc.)
- Life Sciences (B.Sc.)
- Mathematical Science (B.Sc.)

Additionally, the Faculty offers the following direct-entry Level I programs (and degrees):

- Honours Integrated Science (Leading to the Honours Bachelor of Science degree)
- Honours Kinesiology (Leading to the Honours Bachelor of Science Kinesiology degree)
- Honours Medical Radiation Sciences (Leading to the Honours Bachelor of Medical Radiation Sciences degree)

Important Note for Level I Students:

Level I courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. **For details of the various admission requirements see Faculty of Science program descriptions in this section of the Calendar.** Students are also encouraged to review the McMaster Academic Planner (MAP) at www.mapsci.ca. Additionally, in late June and early July, Academic Advisors from the Office of the Associate Dean of Science, Undergraduate Studies are readily available to provide Level I students with academic advice and registration assistance.
Students in the Level I Gateway programs will have the opportunity to take units from the *Science I Course List*, consisting of:
Science I Course List

Bachelor of Medical Radiation Sciences (Honours)

HONOURS MEDICAL RADIATION SCIENCES (LEVEL I)

Note

Students considering the Honours Medical Radiation Sciences program should refer to the Regulations for License to Practice and Functional Demands in the Medical Radiation Sciences section of this Calendar.
Enrolment in this program is limited.

Program Notes

1. As places in the Honours Medical Radiation Sciences program are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission.
2. The University reserves the right to grant admission to a limited number of students and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.
3. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level I courses with a lab component and must be completed prior to the first lab.
4. BIOSAFE 1BS0 a mandatory online introduction to bio-safety lab training, is a co-requisite to BIOLOGY 1A01, 1A02 and 1A03 and must be completed prior to the first lab.
5. Laboratory Routine Practices, an online module available through Mosaic (Health and Safety Training), must be completed prior to attendance in the first lab associated with each of: KINESIOL 1Y03, 1YY3.
6. For consideration to a Level II Honours Medical Radiation Specialization, Honours Medical Radiation Sciences (Level I) students must complete at least 24 units during the Fall/Winter session, including BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), KINESIOL 1Y03, 1YY3, one of LIFESCI 1D03, or MEDRADSC 1C03, one of MATH 1A03, 1LS3 or 1MM3, MEDRADSC 1B03, 1C03, 1E03, 1F03 and achieve a Grade Point Average of at least 5.0. Failure to complete these minimum requirements may compromise consideration for admission to a Specialization.
7. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Requirements: 30 Units

3 UNITS
from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology

(See *Program Note 7* above.)

6 UNITS

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 UNITS
from

- MATH 1A03 - Calculus For Science I

- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

12 UNITS

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

6 UNITS

- Electives

Bachelor of Science (Honours)

CHEMICAL AND PHYSICAL SCIENCES GATEWAY

Admission

Prior to registration, to better prepare Level I Gateway students for Level I courses and Level II program selection, students are encouraged to review Level II program admission requirements through this section of the Undergraduate Calendar or the McMaster Academic Planner (MAP) at mapsci.ca. Level I students must review the admission requirements of the Level II programs they are considering. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. To maximize the selection of Level II programs from the disciplines of Chemical and Physical Sciences, students should consider choosing the courses recommended below.

Program Notes

- BIOLOGY 1P03, which may be completed as an elective, serves as the prerequisite for BIOLOGY 1A01, 1A02, 1A03 and 1M03 for those students who did not complete Grade 12 Biology U.
- WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level I courses with a lab component and must be completed prior to the first lab.
- BIOSAFE 1BS0, a mandatory online introduction to bio-safety lab training, is a co-requisite to BIOLOGY 1A01, 1A02 and 1A03 and must be completed prior to the first lab.

Recommended Courses: 30 Units

12 UNITS FROM:

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6 UNITS FROM:

- MATH 1A03 - Calculus For Science I
- MATH 1AA3 - Calculus For Science II
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1LT3 - Calculus for the Life Sciences II

6 UNITS

from

- the *Science I Course List*

6 UNITS

- Electives (See *Program Note 1* above.)

ENVIRONMENTAL AND EARTH SCIENCES GATEWAY

Admission

Prior to registration, to better prepare Level I Gateway students for Level I courses and Level II program selection, students are encouraged to review Level II program admission requirements through this section of the Undergraduate Calendar or the McMaster Academic Planner (MAP) at mapsci.ca. Level I students must review the admission requirements of the Level II programs they are considering. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. To maximize the selection of Level II programs from the disciplines of Environmental and Earth Sciences, students should complete the courses recommended below.

Program Notes

1. Students without Grade 12 Calculus and Vectors U must complete MATH 1F03.
2. Students who did not complete Grade 12 Biology U must complete BIOLOGY 1P03 in Level I. BIOLOGY 1P03 serves as the prerequisite for BIOLOGY 1A01, 1A02, 1A03 and 1M03 for those students who did not complete Grade 12 Biology U.
3. CHEM 1R03 serves as the prerequisite for CHEM 1A03 for those students who did not complete Grade 12 Chemistry U. CHEM 1A03 is required for admission to Level II Honours Earth and Environmental Sciences.
4. PHYSICS 1A03 may be taken by students who did not complete Grade 12 Physics U.
5. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level I courses with a lab component and must be completed prior to the first lab.
6. BIOSAFE 1BS0, a mandatory online introduction to bio-safety lab training, is a co-requisite to BIOLOGY 1A01, 1A02 and 1A03 and must be completed prior to the first lab.

Recommended Courses: 30 Units

6 UNITS

from:

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

3 UNITS

from:

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

15 UNITS

from:

- the *Science I Course List*

6 UNITS

- Electives (See *Program Notes 1, 2, 3* and *4* above.)

HONOURS INTEGRATED SCIENCE (LEVEL I)

Enrolment in this program is limited.

Program Notes

1. As places in the Honours Integrated Science program are limited to approximately 60 students, admission is by selection, and possession of published minimum requirements does not guarantee admission.
2. All Level I Honours Integrated Science students may be asked to complete an online orientation course prior to the start of classes in September. The course will serve to review and consolidate material covered by the secondary school math and science curriculum and will

be especially valuable to those who have not completed one of Grade 12 Biology U, Chemistry U or Physics U.

3. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to ISCI 1A24 A/B and must be completed prior to the first lab.
4. BIOSAFE 1BS0, a mandatory online introduction to bio-safety lab training, is a co-requisite to ISCI 1A24 A/B and must be completed prior to the first lab.
5. Beginning at Level II, Honours Integrated Science students may complete a concentration in one of the following areas:

- Biology
- Chemical Biology
- Chemistry
- Earth and Environmental Sciences
- Environmental Sciences
- Mathematics and Statistics
- Medical and Biological Physics
- Physics
- Psychology, Neuroscience & Behaviour
- Sustainable Chemistry

Level I Honours Integrated Science students are encouraged to review the specific program requirements of all concentrations they are considering in Level II (https://science.mcmaster.ca/sis/undergraduate/isci/isci-home.html). In addition to the content covered within the ISCI courses, completion of a concentration normally requires a minimum of 24 units in the other subject.

- Honours Integrated Science students, completing a concentration, are eligible to obtain a maximum of one minor, provided that the subject area is not integral to the requirements of the concentration. Honours Integrated Science students not completing a concentration may be eligible for up to two minors provided that, for each minor, at least 12 units (above Level I) are elective to the degree. All students should consult the Academic Program Advisor.
- Honours Integrated Science students may not proceed to the next level unless a Grade Point Average of at least 5.0 has been achieved and all required courses for their current level have been successfully completed including:
- Level I students must successfully complete all discipline-specific components of ISCI 1A24 A/B before proceeding to Level II and enrolment in ISCI 2A18 A/B.
- Level I students who fail one or two discipline-specific components of ISCI 1A24 A/B may have the opportunity to successfully complete equivalent courses before proceeding to Level II and enrolment in ISCI 2A18 A/B.
- Level I students who fail more than two discipline-specific components of ISCI 1A24 A/B may not continue in the program. Such students may apply to transfer to a program for which they qualify.
- Level II students must successfully complete all discipline-specific components of ISCI 2A18 A/B or make up any failed course work prior to proceeding to Level III and enrolment in ISCI 3A12 A/B.
- Level III students must successfully complete all discipline-specific components of ISCI 3A12 A/B prior to proceeding to Level IV and enrolment in ISCI 4A12 A/B.
- Students who have successfully completed the required ISCI courses and whose Grade Point Average is between 4.5 and 4.9, may remain in the program but will be placed on Program Probation for one reviewing period. Students may be on Program Probation only once during the program.
- The University reserves the right to grant admission to a limited number of students and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.

Requirements: 30 Units

24 UNITS

- ISCI 1A24 A/B - Integrated Science I (See *Program Note 7* above.)

6 UNITS

- Electives (See *Program Notes 5* and *6* above.)

LIFE SCIENCES GATEWAY

Admission

Prior to registration, to better prepare Level I Gateway students for Level I courses and Level II program selection, students are encouraged to review Level II program admission requirements through this section of the Undergraduate Calendar or the McMaster Academic Planner (MAP) at mapsci.ca. Level I students must review the admission requirements of the Level II programs they are considering. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. To maximize the selection of Level II programs from the disciplines of Life Sciences, students should consider choosing the courses recommended below.

Program Notes

1. Students without Grade 12 Calculus and Vectors U must complete MATH 1F03.
2. CHEM 1R03 serves as the prerequisite for CHEM 1A03 for those students who did not complete Grade 12 Chemistry U.
3. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level I courses with a lab component and must be completed prior to the first lab.
4. BIOSAFE 1BS0, a mandatory online introduction to bio-safety lab training, is a co-requisite to BIOLOGY 1A01, 1A02 and 1A03 and must be completed prior to the first lab.
5. Completion of CHEM 1A03 as part of the Science I Course List requirement is recommended.
6. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Recommended Courses: 30 Units

9 UNITS

from:

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

(See *Admission Note 6* above.)

3 UNITS

from:

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from:

- PHYSICS 1A03 - Introductory Physics

- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

9 UNITS

from

- the *Science I Course List*

(See Program Note 5 above.)

6 UNITS

- Electives (See *Program Notes 1* and *2* above.)

MATHEMATICS AND STATISTICS GATEWAY

Admission

Prior to registration, to better prepare Level I Gateway students for Level I courses and Level II program selection, students are encouraged to review Level II program admission requirements through this section of the Undergraduate Calendar or the McMaster Academic Planner (MAP) at mapsci.ca. Level I students must review the admission requirements of the Level II programs they are considering. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. To maximize the selection of Level II programs from the disciplines of Mathematics and Statistics, students should consider choosing the courses recommended below.

Program Notes

1. MATH 1A03 and 1AA3 or MATH 1LS3 and 1LT3 may be used as substitutions for MATH 1X03 and 1XX3 for consideration to Level II Mathematics and Statistics programs for students from other Level I programs. Students seeking admission to an Honours Mathematics & Statistics program should note that MATH 1A03 and 1AA3 were designed for Chemical and Physical Sciences Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Environmental & Earth Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
2. With the exception of COMPSCI 1TA3, students may substitute a Level I Computer Science course for the 3 units required from the Faculty of Science.
3. Completion of COMPSCI 1MD3 or MATH 1MP3 is required for admission to the Honours Mathematics and Computer Science program.
4. Completion of ECON 1B03 and 1BB3 is required by the end of Level II for the Honours Actuarial and Financial Mathematics program. Completion in Level I is recommended.
5. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level 1 courses with a lab component and must be completed prior to the first lab.
6. BIOSAFE 1BS0, a mandatory online introduction to bio-safety lab training, is a co-requisite to BIOLOGY 1A03 and must be completed prior to the first lab.

Recommended Courses: 30 Units

15 UNITS

- MATH 1B03 - Linear Algebra I
- MATH 1C03 - Introduction to Mathematical Reasoning
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1XX3 - Calculus for Math and Stats II

(See *Program Notes 1* and *3* above.)

3 UNITS

from

- the *Science I Course List* (See *Program Notes 2 and 3* above.)

12 UNITS

- Electives (See *Program Note 4* above.)

Bachelor of Science Kinesiology (Honours)

HONOURS KINESIOLOGY (LEVEL I)

Enrolment in this program is limited.

Program Notes

1. Application is made to Level I of the Honours Kinesiology program.
2. Students must complete MATH 1A03 or 1LS3 by the end of Level II.
3. PHYSICS 1A03 serves as excellent preparation for KINESIOL 2A03, especially for students who did not complete Grade 12 Physics U. Completion in Level I is recommended.
4. Upon completion of Level I Honours Kinesiology, including KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03, students must maintain a Grade Point Average of at least 6.0 to continue in the program. Students who do not meet the admission requirements upon completion of Level I Honours Kinesiology will be subject to one of the following:
5. Students whose Grade Point Average is between 5.5 and 5.9 may register in the Level II Honours Kinesiology program but will be placed on program probation for one reviewing period.
6. A student may be on program probation only once, including upon admittance, and, therefore, by the next academic review must raise their Grade Point Average to at least 6.0 to continue in the Honours Kinesiology program.
7. Students whose Grade Point Average is between 3.5 and 5.4 and/or who have failed to successfully complete each of KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 may register in Level II Kinesiology General.
8. Such students must attend a mandatory preregistration session with an Academic Advisor.
9. Students may take the Level II Kinesiology required courses for which the prerequisites have been met.
10. At the next academic review:
11. Students with a Grade Point Average of at least 6.0 and successful completion of KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 will be eligible to transfer to Honours Kinesiology.
12. Students with a Grade Point Average between 5.5 and 5.9, and successful completion of KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 may transfer to the Honours Kinesiology program, but, will be placed on program probation. Students may be on program probation only once during their program, including upon admittance. By the next academic review, a student on program probation must raise their Grade Point Average to at least 6.0 to continue in the Honours Kinesiology program.
13. Students with a Grade Point Average less than 5.5 and/or who have not successfully completed KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 must transfer to a non-Kinesiology program for which they qualify.
14. Students whose Grade Point Average is between 3.0 and 3.4 will be on Academic Probation and will be transferred to Sciences Undeclared.
15. Students who are reviewed but who do not successfully complete 24 units of credit in Honours Kinesiology 1 will be subject to one of the following:
16. Students whose Grade Point Average is 6.0 of higher may remain in

the Level 1 Honours Kinesiology program.

17. Students whose Grade Point Average is between 5.5 and 5.9 may remain in the Level 1 Honours Kinesiology program but will be placed on program probation for one reviewing period.
18. A student may be on program probation only once and, therefore, by the next academic review must raise their Grade Point Average to at least 6.0, and complete KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 in order to continue in the Honours Kinesiology program.
19. Students whose Grade Point Average is between 3.5 and 5.4 must transfer to a non-Kinesiology program for which they qualify.
20. Students whose Grade Point Average is between 3.0 and 3.4 will be on Academic Probation and must transfer to a non-Kinesiology program for which they qualify.
21. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, is a co-requisite to Level I courses with a lab component (KINESIOL 1A03, 1AA3) and must be completed prior to the first lab.
22. *Laboratory Routine Practices*, an online module available through Mosaic (Health and Safety Training), must be completed prior to attendance in the first lab associated with each of: KINESIOL 1A03, 1AA3.

Requirements: 30 Units

15 UNITS

- KINESIOL 1A03 - Human Anatomy and Physiology I
- KINESIOL 1AA3 - Human Anatomy and Physiology II
- KINESIOL 1ED3 - Equity, Diversity, and Inclusion in Physical Activity
- KINESIOL 1F03 - Human Nutrition and Health
- KINESIOL 1K03 - Foundations in Kinesiology

15 UNITS

- Electives (See *Program Notes 2* & *3* above.)

Department of Biochemistry & Biomedical Sciences

https://healthsci.mcmaster.ca/biochem

Faculty as of January 15, 2025

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Stephen Hill/*(Pathology)* B.Sc., Ph.D. *(Western)*
Alison Holloway/*(ObsGyn)* B.Sc. *(Toronto)*, Ph.D. *(Guelph)*
Alexander Hynes/*(Medicine)* B.Sc. *(Calgary)*, Ph.D. *(Newfoundland)*
Mark Larche/*(Medicine)* Ph.D. *(University of London)*/Canada Research Chair
Karen Mossman/*(Pathology)* B.Sc. *(Guelph)*, Ph.D. *(Alberta)*
Manali Mukherjee/*(Medicine)* B.Sc. *(University of Pune, India)*, M.Sc. *(University of Abertay Dundee, Scotland)*, Ph.D. *(University of Nottingham, UK)*
Ishac Nazy/*(Medicine)* B.Sc. *(Guelph)*, Ph.D. *(McMaster)*
Guillaume Paré /*(Pathology)* M.D. *(Montreal)*, M.Sc. *(McGill)*
Sandeep Raha/*(Pediatrics)* B.Sc., M.Sc., Ph.D. *(Toronto)*
Sheila Singh/*(Surgery)* B.Sc. *(McGill)*, M.D. *(McMaster)*, Ph.D. *(Toronto)*/ Canada Research Chair
Jennifer Stearns/*(Medicine)* B.Sc., Ph.D. *(Waterloo)*
Jeffrey I. Weitz/*(Medicine)* B.Sc., M.D. *(Ottawa)*/Canada Research Chair

Notes Applicable to all Honours Biochemistry Programs

- In addition to the Honours Biochemistry program, the Department offers a Specialization in Biomedical Research. The Honours program has a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Alternatively, students may wish to apply to the Biomedical Research Specialization which is strongly recommended for students intending to pursue graduate studies.
- **Admission to the Honours Biochemistry program is limited.** Selection is based on academic achievement but requires, as a minimum, completion of the Level I requirements listed below.

- **Admission to the Honours Biochemistry - Biomedical Research Specialization program is limited.** Admission to this program begins at Level III and requires, as a minimum, completion of Level II Honours Biochemistry and completion of a supplementary application.
- Transfer between programs is possible at any time, subject to satisfying the admission requirements and availability of space.
- Students considering graduate studies in Biochemistry are recommended to complete one of BIOCHEM 4F09 A/B or 4T15 A/B.

Bachelor of Science (Honours)

HONOURS BIOCHEMISTRY (B.SC.)

Effective September 2022, all Honours Biochemistry programs are administered by the Faculty of Health Sciences and offered as a Bachelor of Health Sciences (B.H.Sc.) degree. Students interested in the B.H.Sc. should refer to the Honours Biochemistry (B.H.Sc.) program in the Faculty of Health Sciences section of this Calendar.
Students who are currently enrolled in the Honours Biochemistry (B.Sc.) program are given the choice to remain in that program or transfer into Honours Biochemistry (B.H.Sc.). Students who choose to remain in Honours Biochemistry (B.Sc.) will graduate at a Faculty of Science convocation and students who transfer to Honours Biochemistry (B.H.Sc.) will graduate at a Faculty of Health Sciences convocation.

Program Notes

1. Registration in an Honours Biochemistry program does not guarantee access to all courses. Some courses have program restrictions. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
2. Both CHEMBIO 2A03 and 2P03 are highly recommended for students interested in pursuing an undergraduate thesis or graduate studies in biophysical chemistry.
3. Students who do not complete a research, thesis, or advanced biochemistry laboratory course (BIOCHEM 3A03, 3LA3, 3R06 A/B S, 4F09 A/B, 4T15 A/B, 4Z03) must complete BIOCHEM 4C03.
4. Students who entered the program prior to September 2022 can use BIOCHEM 3LA3 towards the Biochemistry Course List.
5. Students may take a maximum of 9 units of project/thesis courses in Level III. Students may take a maximum of 18 units of project/thesis courses in Level IV.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

LEVEL II: 30 UNITS

12 units
- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 units
- BIOLOGY 2C03 - Genetics

3 units

from
- the *Biochemistry Course List* (See *Program Note 2* above.)

6 units
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

6 units
- Electives

LEVEL III: 30 UNITS

3 units
- BIOCHEM 3D03 - Metabolism and Regulation

3 units
- BIOMEDDC 3WR3 - Biochemistry and Biomedical Scientific Writing: Right your Write

9 units

from
- the *Biochemistry Course List* (See *Program Notes 2, 4 and 5* above.)

3 units
- STATS 2B03 - Statistical Methods for Science

12 units
- Electives

LEVEL IV: 30 UNITS

3 units

from
- Level IV Biochemistry courses, excluding:
- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Note 5* above)

9 units

from
- the *Biochemistry Course List* (See *Program Notes 2, 4 and 5* above.)

6-15 units

from
- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry,

Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:
- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project
- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Notes 3 and 5* above.)

3-12 units
- Electives

Requirements For Students Who Entered Prior To September 2022

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units
- (See *Admission* above.)

LEVEL II: 30 UNITS

12 units
- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 units
- BIOLOGY 2C03 - Genetics

3 units

from
- the *Biochemistry Course List* (See *Program Notes 2 and 4* above.)

6 units
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

6 units
- Electives

LEVEL III: 30 UNITS

3 units
- BIOCHEM 3D03 - Metabolism and Regulation

12 units

from
- the *Biochemistry Course List* (See *Program Notes 2 and 4* above.)

3 units
- STATS 2B03 - Statistical Methods for Science

12 units
- Electives

LEVEL IV: 30 UNITS

3 units

from
- Level IV Biochemistry courses, excluding:
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

9 units

from
- the *Biochemistry Course List* (See *Program Notes 2 and 4 above.*)

6-15 units

from
- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:
- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project
- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Notes 3 and 4 above.*)

3-12 units
- Electives

HONOURS BIOCHEMISTRY - BIOMEDICAL RESEARCH SPECIALIZATION (B.SC.)

Effective September 2022, all Honours Biochemistry programs are administered by the Faculty of Health Sciences. Level II students interested in applying to this program should see the Honours Biochemistry - Biomedical Research Specialization (B.H.Sc.) program in the Faculty of Health Sciences section of this Calendar.
Students who are currently enrolled in the Honours Biochemistry - Biomedical Research Specialization (B.Sc.) are given the choice to remain in Honours Biochemistry - Biomedical Research Specialization (B.Sc.) or transfer into Honours Biochemistry - Biomedical Research Specialization (B.H.Sc.). Students who choose to remain in Honours Biochemistry - Biomedical Research Specialization (B.Sc.) will graduate at a Faculty of Science convocation and students who transfer to Honours Biochemistry - Biomedical Research Specialization (B.H.Sc.) will graduate at a Faculty of Health Sciences convocation.

Program Notes

- Registration in an Honours Biochemistry program does not guarantee access to all courses. Some courses have program restrictions. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
- Completion of one of BIOCHEM 4F09 A/B, 4T15 A/B or 4Z03 is required in Level IV.
- A 'research intensive' option, available to students registered in this Specialization, offers additional laboratory research experience through completion of BIOCHEM 3R06 A/B S and 4T15 A/B. This option is intended for students planning to pursue graduate studies or a career in research and development. Enrolment in the courses is limited and admission is by selection.
- Both CHEMBIO 2A03 and 2P03 are highly recommended for students interested in pursuing an undergraduate thesis or graduate studies in biophysical chemistry.
- Students may take a maximum of 9 units of project/thesis courses in Level III. Students may take a maximum of 18 units of project/thesis courses in Level IV.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine

- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Biochemistry, including:

12 units

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- the *Biochemistry Course List* (See *Program Note 4* above.)

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

LEVEL III: 30 UNITS

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3-6 units

from

- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project

(See *Program Note 5* above.)

3 units

- BIOMEDDC 3WR3 - Biochemistry and Biomedical Scientific Writing: Right your Write

9 units

from

- the *Biochemistry Course List* (See *Program Note 4* above.)

3 units

- STATS 2B03 - Statistical Methods for Science

6-9 units

- Electives

LEVEL IV: 30 UNITS

3 units

from Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

9 units

from

- the *Biochemistry Course List* (See *Program Notes 4 and 5* above.)

12-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

(See *Program Note 5* above.)

which must include one of:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Notes 2 and 5* above.)

3-6 units

- Electives

Requirements For Students Who Entered Prior To September 2022

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Biochemistry

LEVEL III: 30 UNITS

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3-6 units

from

- BIOCHEM 3A03 - Biochemical Research Practice
- BIOCHEM 3LA3 - Advanced Biochemistry Techniques
- BIOCHEM 3R06 A/B S - Research Project

12 units

from

- the *Biochemistry Course List* (See *Program Note 4* above.)

3 units

- STATS 2B03 - Statistical Methods for Science

6-9 units

- Electives

LEVEL IV: 30 UNITS

3 units

from Level IV Biochemistry courses, excluding:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis

- BIOCHEM 4Z03 - Senior Project

9 units

from

- the *Biochemistry Course List* (See *Program Note 4* above.)

12-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Note 2* above.)

3-6 units

- Electives

Note

Students who entered the program prior to September 2020 may refer to their Academic Advisement report or contact an Academic Advisor in the Office of the Associate Dean of Science (Academic) for program requirements.

HONOURS BIOCHEMISTRY - BIOMEDICAL RESEARCH SPECIALIZATION CO-OP (B.SC.)

Effective September 2022, all Honours Biochemistry programs are administered by the Faculty of Health Sciences. Level II students interested in applying to this program should see the Honours Biochemistry Co-op (B.H.Sc.) program in the Faculty of Health Sciences section of this Calendar.
Students who are currently enrolled in the Honours Biochemistry - Biomedical Research Specialization Co-op (B.Sc.) are given the choice to remain in Honours Biochemistry - Biomedical Research Specialization Co-op (B.Sc.) or transfer into Honours Biochemistry Co-op (B.H.Sc.) . Students who choose to remain in Honours Biochemistry - Biomedical Research Specialization Co-op (B.Sc.) will graduate at a Faculty of Science convocation and students who transfer to Honours Biochemistry Co-op (B.H.Sc.) will graduate at a Faculty of Health Sciences convocation.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in biochemistry related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2D00 (or SCIENCE 2C00) prior to the Fall Term of Level III. Students are required to complete SCIENCE 3D00 (or SCIENCE 3C00) before the first work placement.
4. Registration in an Honours Biochemistry program does not guarantee access to all courses. Some courses have program restrictions. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
5. Completion of one of BIOCHEM 4F09 A/B, 4T15 A/B or 4Z03 is required in Level IV.
6. Both CHEMBIO 2A03 and 2P03 are highly recommended for students interested in pursuing an undergraduate thesis or graduate studies in biophysical chemistry.
7. Students may take a maximum of 9 units of project/thesis courses in Level III. Students may take a maximum of 18 units of project/thesis courses in Level IV.

Biochemistry Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3R03 - Clinical Research Project
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOMEDDC 2C03 - Exploring Careers in Biomedical Sciences
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- MOLBIOL 3O03 - Microbial Genetics

Requirements For Students Who Enter in September 2022 or Prior

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

Completion of Level II Honours Biochemistry, including completion of:

12 units

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- the *Biochemistry Course List* (See *Program Note 6* above.)

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

1 course

- SCIENCE 2D00 - Skills for Career Success in Biochemistry (or SCIENCE 2C00)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOCHEM 3D03 - Metabolism and Regulation

3 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

(See *Program Note 7* above.)

3 units

from

- the *Biochemistry Course List* (See *Program Notes 6 and 7* above.)

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from Level IV Biochemistry courses, excluding:

- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

9 units

from

- the *Biochemistry Course List* (See *Program Notes 6 and 7* above.)

12-15 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

which must include one of:

- BIOCHEM 4F09 A/B - Senior Thesis
- BIOCHEM 4T15 A/B - Senior Thesis
- BIOCHEM 4Z03 - Senior Project

(See *Program Notes 5 and 7* above.)

3-6 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

from

- the *Biochemistry Course List* (See *Program Note 6* above.)

6 units

from

- Levels III, IV Biochemistry, Biology, Chemical Biology, Chemistry, Molecular Biology courses
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

3 units

- Electives

Co-op Program Chart (For Students Who Enter in September 2022 or Prior)

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III and SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Minor(s):

MINOR IN BIOCHEMISTRY

Notes

1. ISCI 1A24 A/B is a substitution for CHEM 1A03 and 1AA3.
2. ISCI 2A18 A/B is a substitution for 3 units of Level II Biochemistry toward the Minor in Biochemistry.
3. In order to obtain a Minor in Biochemistry at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

(See *Note 1* above)

3 UNITS

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEMBIO 2OG3 - Organic Chemistry I

15 UNITS

- Levels II, III, IV Biochemistry courses with at least 6 units of level III, IV Biochemistry Courses

(See Note 2 above)

Department of Biology

http://www.biology.mcmaster.ca

Faculty as of January 15, 2025

CHAIR

Marie Elliot

ASSOCIATE CHAIRS

Jonathon Stone *(Undergraduate)*
Graham Scott *(Graduate)*
Joanna Wilson *(Research)*

UNIVERSITY SCHOLAR

Graham Scott (2021-2025)

PROFESSORS

Ben Bolker*/(Mathematics and Statistics)* B.S. *(Yale)*, Ph.D. *(Cambridge)*
Robin K. Cameron/B.Sc. *(Waterloo)*, Ph.D. *(McGill)*
Patricia Chow-Fraser/B.Sc., M.Sc. *(Waterloo)*, Ph.D. *(Toronto)*
Juliet M. Daniel/B.Sc. *(Queen's)*, Ph.D. *(British Columbia)*
Susan A. Dudley/B.Sc., M.Sc. *(McGill)*, Ph.D. *(Chicago)*
Jonathan Dushoff/B.Sc. *(Pennsylvania)*, Ph.D. *(Princeton)*
Ian Dworkin/B.Sc. *(Trent)*, Ph.D. *(Toronto)*
Marie Elliot/B.Sc., Ph.D. *(Alberta)*
Ben Evans/B.S. *(Tufts)*, M.S., M.Phil., Ph.D. *(Columbia)*
G. Brian Golding/B.Sc. *(Dalhousie)*, Ph.D. *(Alberta)*
Bhagwati Gupta/B.Sc. *(Banaras Hindu)*, M.Sc. *(Jawaharlal Nehru)*, Ph.D. *(TATA Institute)*
Suleiman A. Igdoura/B.Sc. *(Victoria)*, M.Sc. *(Western Ontario)*, Ph.D. *(McGill)*
Karen Kidd/B.Sc. *(Guelph)*, Ph.D. *(Alberta)*
Jurek Kolasa/M.Sc., Ph.D. *(Poznan)*
Grant B. McClelland/B.Sc. *(Ottawa)*, Ph.D. *(British Columbia)*
Carmel E. Mothersill/B.Sc., Ph.D. *(University College Dublin)*/Senior Canada Research Chair
Herbert E. Schellhorn/B.Sc., M.Sc. *(Guelph)*, Ph.D. *(North Carolina)*
Graham Scott/B.Sc. *(McMaster)*, M.Sc., Ph.D. *(British Columbia)*
Elizabeth A. Weretilnyk/B.Sc., Ph.D. *(Alberta)*
Joanna Wilson/B.Sc. *(McMaster)*, M.Sc. *(Victoria)*, Ph.D. *(MIT/Woods Hole Oceanographic Institution)*
Jianping Xu/B.Sc. *(Jiangxi)*, M.Sc. *(Nanjing and Toronto)*, Ph.D. *(Toronto)*
Xu-Dong Zhu/B.Sc. *(Nanjing)*, M.Sc. *(Regina)*, Ph.D. *(Toronto)*

ADJUNCT PROFESSORS

Tao Dong/B.Sc. *(Shandon University)*, Ph.D. *(McMaster)*
Thomas A. Edge/B.Sc. *(Guelph)*, M.Sc. *(Ottawa)*, Ph.D. *(Carleton)*
Kim Fernie/B.A., M.Sc. *(Toronto)*, Ph.D. *(McGill)*
Kelly Munkittrick/B.Sc., M.Sc. *(Guelph)*, Ph.D. *(Waterloo)*
Michael Paterson/B.Sc. *(Winnipeg)*, M.Sc. *(Indiana)*, Ph.D. *(Halifax)*
James S. Pringle/A.B. *(Dartmouth)*, M.S. *(New Hampshire)*, Ph.D. *(Tennessee)*
Lisa Taylor/B.Sc. *(Guelph)*, Ph.D. *(McMaster)*
Glen Van Der Kraak/B.Sc., M.Sc. *(Manitoba)*, Ph.D. *(British Columbia)*
Ze-Chun Yuan/B.Sc. *(Henan)*, M.Sc., Ph.D. *(McMaster)*

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Lovaye Kajiura/B.Sc., M.Sc., Ph.D. *(McMaster)*
Jonathon Stone/B.Sc., M.Sc., Ph.D. *(Toronto)*

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Elizabeth A. Gow/B.Sc., M.Sc. *(Toronto)*, Ph.D. *(Saskatoon)*
Ethan Paschos/Ph.D. *(Munich)*
Ryan Prosser/B.Sc., Ph.D. *(Guelph)*
Arthur Zastepa/B.Sc. *(Toronto)*, Ph.D. *(Ottawa)*

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Emily Choy/B.Sc., M.Ed. *(Queen's)*, M.Sc. *(Ottawa)*, Ph.D. *(Manitoba)*
Alexander Little/B.Sc., M.Sc. *(Queen's)*, Ph.D. *(Sydney)*
Krupa Patel/B.Sc. *(Mississauga)*, B.Ed., Ph.D. *(Toronto)*
Muhammed Simsek/B.Sc. *(Middle East Technical, Turkey)*, M.Sc. *(Rutgers)*, Ph.D. *(SUNY)*

ADJUNCT ASSISTANT PROFESSORS

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Erik J.S. Emilson/B.Sc. *(Guelph)*, M.Sc., Ph.D. *(Laurentian)*
David A. Galbraith/B.Sc., M.Sc. *(Guelph)*, Ph.D. *(Queen's)*
Jonathan Midwood/B.Sc., Ph.D. *(McMaster)*
Mahbuba Rahman/B.Sc., M.Sc. *(Dhaka)*, Ph.D. *(Kyushu Institute of Technology)*
Angela Scott/B.Sc., B.A., Ph.D. *(Saskatchewan)*

ASSOCIATE MEMBERS

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Ana Campos*/(Interdisciplinary Science)* B.Sc., M.Sc. *(Rio de Janeiro)*, Ph.D. *(Brandeis)*
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Chad Harvey*/(Interdisciplinary Science)* B.Sc. *(Guelph)*, M.Sc. *(Auburn)*, Ph.D. *(Wisconsin-Madison)*
Paul G. Higgs*/(Physics & Astronomy)* B.Sc., Ph.D. *(Cambridge)* /Senior Canada Research Chair
Hendrik Poinar*/(Anthropology)* B.Sc., M.Sc. *(California)*, Ph.D. *(Munich)* / Canada Research Chair in Paleogenomics
Elyanne Ratcliffe*/(Pediatrics)* B.Arts Sc., M.D. *(McMaster)*

Notes Applicable to all Honours Biology Programs

1. The department offers the following Honours programs:

- Honours Biodiversity and Environmental Sciences
- Honours Biology Core
- Honours Biology Research Specialization
- Honours Biology - Physiology Core
- Honours Biology - Physiology Research Specialization
- Honours Biology and Psychology, Neuroscience & Behaviour
- Honours Biology and Mathematics
- Honours Molecular Biology and Genetics Core
- Honours Molecular Biology and Genetics Research Specialization
- Honours Molecular Biology and Genetics Research Specialization Co-op (entry at Level III)

As well, Honours Neuroscience is offered jointly with the Department of Psychology, Neuroscience & Behaviour. (See *Department of Psychology, Neuroscience & Behaviour* section of the Calendar for program details.)
All options are suitable for students wishing to pursue graduate studies in Biology.

2. Transfer between programs is possible, subject to satisfying the admission requirements and availability of space.
3. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.
4. Students wishing to include more mathematical statistics may replace STATS 2B03 with 2D03, 2MB3. In this case, students are advised to complete MATH 1AA3 or 1LT3 in Level I.
5. Students considering graduate studies in Biology are recommended to complete BIOLOGY 2L03 and either BIOLOGY 4C12 A/B S or 4F06 A/B S.

B.Sc. Three-Level Degree

A three-level program with a general Life Sciences orientation is available through the B.Sc. in Life Sciences.

Bachelor of Science (Honours)

HONOURS BIODIVERSITY AND ENVIRONMENTAL SCIENCES (B.SC.)

Honours Biodiversity and Environmental Sciences is a flexible program that enables students to obtain an understanding of how a variety of organisms are able to adapt to their changing environments at the community and ecosystem levels. Offered jointly by the Department of Biology and the School of Earth, Environment & Society, this program enables students to select courses according to their interests; to develop broad knowledge, and understanding of the linkages between biodiversity and environmental processes; and to apply these to questions of biological, biomedical, or environmental interests. This program prepares students for graduate studies, careers in industry or academic research laboratories.

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
2. Students are strongly recommended to take CHEM 1A03 and 1AA3 in Level I.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

3 UNITS

from the following courses, with a grade of at least C+

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

12 UNITS

from

- ASTRON 1F03 - Introduction to Astronomy and Astrophysics
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II
- COMPSCI 1JC3 - Introduction to Computational Thinking
- COMPSCI 1MD3 - Introduction to Programming
- COMPSCI 1XA3
- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- LIFESCI 1D03 - Medical Imaging Physics
- MATH 1AA3 - Calculus For Science II
- MATH 1B03 - Linear Algebra I
- MATH 1LT3 - Calculus for the Life Sciences II
- MEDPHYS 1A03 - Physics in Medicine and Biology
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCIENCE 1A03 - Investigating Science: Opportunities & Experiences

(See *Admission Note 2* above.)

Program Notes

1. The Biodiversity and Environmental Sciences program allows students (especially those focused on ecology and conservation) to choose Biology and Environmental Science courses that reflect their own interests. Students are strongly encouraged to discuss their course selections with an academic program advisor in the Department of Biology or the School of Earth, Environment & Society.
2. Prerequisites for upper year courses must be checked carefully when selecting courses in Level II. Biochemistry and Organic Chemistry prerequisites exist in many upper year biology courses. Students are encouraged to take six units from CHEM 2E03, 2OA3, 2OB3 (or CHEM 2OC3, 2OD3, 2OG3).
3. Students interested in completing a thesis may take one of BIOLOGY 4C12 A/B S, 4F06 A/B S or EARTHSC 4MT6 A/B in Level IV, subject to meeting the prerequisites. Students considering graduate studies are recommended to complete a thesis course.
4. Only one of BIOLOGY 4C12 A/B S, 4F06 A/B S or EARTHSC 4MT6 A/B may be completed as part of the program requirements. Completion of EARTHSC 3RD3 in Level III is required preparation for EARTHSC 4MT6 A/B.

Course List 1

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2C03 - Genetics
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3ET3 - Ecotoxicology

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2BC3 - Making Chemistry More Sustainable
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II
- CHEM 2OC3
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- LIFESCI 2X03 - Environmental Change and Human Health
- PSYCH 3T03 - Behavioural Ecology

Course List 2

- EARTHSC 2E03 - Earth History
- EARTHSC 2FE3 - Introduction to Field Methods in Earth Sciences
- EARTHSC 2G03 - Earth Surface Process
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3P03 - Paleoecology
- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 3W03 - Physical Hydrogeology
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- EARTHSC 4FF3 - Topics of Field Research
- EARTHSC 4G03 - Glacial Sediments and Environments
- EARTHSC 4MT6 A/B - Senior Thesis
- EARTHSC 4P03
- EARTHSC 4PA3 - Paleoenvironmental Analysis
- EARTHSC 4V03 - Exploration Geophysics
- EARTHSC 4VV3
- EARTHSC 4WB3 - Contaminant Hydrogeology
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 3ME3 - Environmental Field Camp
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 3U03
- ENVIRSC 4C03 - Advanced Physical Climatology
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVIRSC 4W03 - Hydrologic Modelling
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS
- ENVSOCTY 3MB3 - Data Analysis
- ENVSOCTY 3SR3 - Remote Sensing
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4SR3 - Advanced Remote Sensing

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

9 units

- BIOLOGY 2F03 - Fundamental and Applied Ecology
- ENVIRSC 2W03 - Physical Hydrology
- ENVSOCTY 2GI3 - Geographic Information Systems

3 units

from

- BIOLOGY 2C03 - Genetics

3 units

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- LIFESCI 2X03 - Environmental Change and Human Health

3 units

from

- EARTHSC 2E03 - Earth History
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry

9 units

- Electives

LEVEL III: 30 UNITS

12 units

from

- BIOLOGY 3DD3 - Communities and Ecosystems
- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3ET3 - Ecotoxicology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3R03 - Field Biology I
- BIOLOGY 3SS3 - Population Ecology
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 3ME3 - Environmental Field Camp

6 units

from

- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- EARTHSC 3W03 - Physical Hydrogeology
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 3U03
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS
- ENVSOCTY 3SR3 - Remote Sensing

12 units

- Electives

LEVEL IV: 30 UNITS

6 units

from

- *Course List 1* or *Course List 2*

6 units

- Levels III, IV courses from *Course List 2*

6 units

- Levels III, IV Biology, Molecular Biology courses

3 units
- ENVIRSC 4EA3 - Environmental Assessment

9 units
- Electives

HONOURS BIOLOGY - PHYSIOLOGY CORE (B.SC.)

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
2. One of PHYSICS 1A03, 1C03 or 1V03 is required for admission. Completion of PHYSICS 1AA3 or 1CC3 is also recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

6 UNITS
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 2* above.)

6 UNITS

from
- the *Science I Course List*

Program Notes

1. The Honours Biology - Physiology Core program allows students to choose Biology courses that reflect their own Physiology-related interests. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. It is recommended that students take both PSYCH 1X03 and 1XX3 if they are interested in upper level Psychology courses.
3. Completion of BIOLOGY 2A03 is required by the end of Level II.
4. Completion of STATS 2B03 is required by the end of Level III.

Physiology Course List

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3MM3
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- BIOLOGY 3ZZ3 - Topics in Physiology
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- BIOLOGY 4MH3 - Microbiome-Host Interactions
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- BIOLOGY 4X03 - Environmental Physiology
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- HTHSCI 4K03 - Human Pathophysiology
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 4C03 - Integrative Exercise Physiology
- KINESIOL 4S03 - Exercise as Medicine
- KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences
- LIFESCI 3AA3 - Human Pathophysiology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PSYCH 2E03 - Sensory Processes
- PSYCH 3A03 - Audition
- PSYCH 3FA3 - Neuroscience of Learning and Memory

Experiential Learning Course List

- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 3R03 - Field Biology I
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 4A03 - Advanced Topics in Ecology
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- BIOLOGY 4IR3 - Advanced Independent Research Project
- BIOLOGY 4J03 - Field Biology II
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- MOLBIOL 3A03
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3V03 - Techniques in Molecular Genetics
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4G12 A/B S - Senior Thesis

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

12 units

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2C03 - Genetics
- BIOLOGY 2F03 - Fundamental and Applied Ecology

(See *Program Note 3* above.)

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

9 units

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3UU3 - Animal Physiology - Regulatory Systems

3 units

from

- the *Experiential Learning Course List*

3 units

from

- Level IV Biology or Molecular Biology courses

21 units

from

- the *Physiology Course List*

30 units

- Electives

HONOURS BIOLOGY - PHYSIOLOGY RESEARCH SPECIALIZATION (B.SC.)

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission
2. One of PHYSICS 1A03, 1C03 or 1V03 is required for admission. Completion of PHYSICS 1AA3 or 1CC3 is also recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 2* above.)

6 UNITS

from

- the Science I Course List

Program Notes

1. The Honours Biology - Physiology Research Specialization program allows students to choose Biology courses which reflect their own Physiology-related interests and includes additional lab and/or field and research experience as compared to the Honours Biology - Physiology Core program. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. It is recommended that students take both PSYCH 1X03 and 1XX3 if they are interested in upper level Psychology courses.
3. All students must take BIOLOGY 2A03 in Level II.
4. Completion of BIOLOGY 4C12 A/B S or 4F06 A/B S is required in Level IV. Students who do not obtain the minimum Grade Point Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and must apply to transfer to the Honours Biology - Physiology Core program. Students who are not interested in completing BIOLOGY 4C12 A/B S or 4F06 A/B S may apply to transfer to the Honours Biology - Physiology Core program.
5. Completion of STATS 2B03 by the end of Level III is required.
6. Completion of BIOLOGY 3ZZ3 is required in Level III.
7. Students are strongly encouraged to complete two of BIOLOGY 3XL3, 4T03, 4X03. Additional units from this list may be used towards the *Physiology Course List* requirement.

Physiology Course List

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3MM3
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- BIOLOGY 3ZZ3 - Topics in Physiology
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- BIOLOGY 4MH3 - Microbiome-Host Interactions
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- BIOLOGY 4X03 - Environmental Physiology
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- HTHSCI 4K03 - Human Pathophysiology
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology

- KINESIOL 4C03 - Integrative Exercise Physiology
- KINESIOL 4S03 - Exercise as Medicine
- KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences
- LIFESCI 3AA3 - Human Pathophysiology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PSYCH 2E03 - Sensory Processes
- PSYCH 3A03 - Audition
- PSYCH 3FA3 - Neuroscience of Learning and Memory

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

12 units

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2C03 - Genetics
- BIOLOGY 2F03 - Fundamental and Applied Ecology

(See *Program Note 3* above.)

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 5* above.)

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

3 units

- BIOLOGY 3ZZ3 - Topics in Physiology

(See *Program Note 6* above.)

9 units

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3UU3 - Animal Physiology - Regulatory Systems

3 units

from

- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- BIOLOGY 4X03 - Environmental Physiology

(See *Program Note 7* above.)

30 units

from

- the *Physiology Course List*

which must include one of:

- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project

(See *Program Note 4* above.)

21 units

- Electives

HONOURS BIOLOGY AND MATHEMATICS (B.SC.)

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission
2. MATH 1B03 must be completed by the end of Level II. Completion in Level I is strongly recommended.
3. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 3* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 3* above.)

Program Notes

1. Students may seek academic advising for this program in either the Department of Mathematics and Statistics or the Department of Biology.
2. Completion of MATH 1B03 (or 1ZC3) is required by the end of Level II. Completion in Level I is strongly recommended.
3. While not required for this program, PHYSICS 1A03, 1C03, 1V03, CHEM 1A03, 1AA3 and one of CHEM 2BA3, 2E03, 2OA3, CHEMBIO 2OA3 are prerequisites for many courses in Biology.
4. Students who wish to complete MATH 4MB3 must complete MATH 3F03. Students are advised to check requisites carefully when choosing Level II and III courses.
5. Many of the courses in the *Course List* have additional prerequisites. Students are advised to check the Course Listings section of this Calendar.
6. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C12 A/B S or 4F06 A/B S. Students

taking BIOLOGY 4C12 A/B S or 4F06 A/B S may be supervised by faculty from the Department of Mathematics & Statistics as long as they are co-supervised by faculty from the Department of Biology.

7. Students considering graduate studies in Mathematics are strongly recommended to complete MATH 3CF3, 3GR3, 3NA3, 3X03, 4A03, 4GR3 and 4MB3.

Course List

- ANTHROP 3HI3
- All Biology and Molecular Biology Level II, III and IV courses
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 3G03 - Modelling Life
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 4KK3 - Bayesian Inference
- PSYCH 4R03 - Special Topics in Animal Behaviour

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

3 units

from

- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- BIOLOGY 3SS3 - Population Ecology

0-3 units

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Program Note 2* above.)

6 units

- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I
- MATH 2X03

6 units

from

- MATH 2C03 - Introduction to Differential Equations
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 2XX3
- MATH 2XB3 - Vector Calculus II

3 units

- MATH 3MB3 - Introduction to Modelling

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3IA3 - Introduction to Analysis
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3X03 - Complex Analysis I
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3U03* - Stochastic Processes

(See *Program Note 7* above.)

3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

9 units

from

- *Course List* (See *Program Note 5* above.)

12 units

from

- Levels III, IV Mathematics, Statistics, Biology, Molecular Biology courses

which must include one of

- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- MATH 4MB3 - Mathematical Biology

(See *Program Notes 4, 6* and *7* above.)

30-33 units

- Electives

Requirements For Students Who Entered Prior to September 2025

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

3 units

from

- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- BIOLOGY 3SS3 - Population Ecology

0-3 units

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Program Note 2* above.)

9 units
- MATH 2X03
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

6 units
from
- MATH 2C03 - Introduction to Differential Equations
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 2XX3 - Advanced Calculus II

(See *Program Notes 4 and 7* above.)

3 units
- MATH 3MB3 - Introduction to Modelling

3 units
from
- MATH 3A03 - Real Analysis I
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3IA3 - Introduction to Analysis
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3X03 - Complex Analysis I
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3U03* - Stochastic Processes

(See *Program Note 7* above.)

3 units
from
- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

9 units
from
- *Course List*

(See *Program Note 5* above.)

12 units
from
- Levels III, IV Mathematics, Statistics, Biology, Molecular Biology courses

which must include one of
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- MATH 4MB3 - Mathematical Biology

(See *Program Notes 4, 6* and *7* above.)

30-33 units
- Electives

HONOURS BIOLOGY AND PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR (B.SC.)

Admission Notes

- When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
- One of PHYSICS 1A03, 1C03 or 1V03 is required for admission.
- Either PSYCH 1FF3 or 1XX3 is required for admission, however PSYCH 1XX3 is recommended.
- Completion of either PSYCH 1F03 or 1X03 is required by the end of Level II, however, PSYCH 1X03 is recommended in Level I.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of 7.0 (between the courses) is required
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

3 UNITS

from the following courses, with a grade of at least B-
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

(See *Admission Note 3* above.)

6 UNITS

from the following courses, where an average of at least 7.0 (between the courses) is required
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 2* above.)

3 UNITS

from
- the Science I Course List (See *Admission Note 4* above.)

Program Notes

1. Academic advising for this program is shared by the Departments of Biology and Psychology, Neuroscience & Behaviour. Information may be obtained through the Undergraduate Programs Advisors in the Life Sciences Building, Room 218 or Psychology Building, Room 109.
2. The Department of Psychology, Neuroscience & Behaviour offers the opportunity to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline indicated on the Department of Psychology, Neuroscience & Behaviour website at https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/.
3. Effective September 2025, students who wish to pursue graduate studies are strongly encouraged to complete one of BIOLOGY 4C12 A/B S, BIOLOGY 4F06 A/B S, PNB 4D06 A/B or PNB 4D09 A/B but this

is no longer a requirement of the program.

4. Both PNB 2XD3, 2XF3 are highly recommended but not required. PNB 2XD3 is included in the Psychology, Neuroscience & Behaviour Course List and may be used towards the Level III Psychology requirements.
5. Students who entered the program in September 2024 or prior, will have the choice to count Level II Biology and Level II Molecular Biology courses toward the Biology Course List.
6. Students who enter the program in September 2026 or later may count a maximum of 6 units from PNB 3Q03 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S towards the *Psychology, Neuroscience & Behaviour Course List*.

Biology Course List

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4Q03 - Biochemical Pharmacology
- all Level III and IV Biology and Molecular Biology courses
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3D03 - Origin of Life
- CHEMBIO 3BM3 - Implanted Biomaterials
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4BB3 - Neuroimmunology
- HTHSCI 4II3 - Advanced Concepts in Immunology

Psychology, Neuroscience & Behaviour Course List

- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- all Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PSYCH 2MP3 - Introduction to Music Cognition
- all Level III and IV PNB courses
- all Level III and IV PSYCH courses (PSYCH 2AA3, 2AP3, 2B03, 2C03, 2E03, 2GG3, 2NF3 may only be used as elective credit.)

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

3 units

from

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

15 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

21 units

from

- the *Biology Course List*, which must include at least three units of Level IV Biology or Molecular Biology courses (See *Program Notes 2, 3 and 5* above.)

15 units

from

- Level III, IV courses from the *Psychology, Neuroscience & Behaviour Course List*, which must include at least three units of Level IV (See *Program Notes 2, 3, 4 and 6* above.)

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

21-24 units

- Electives (See *Program Note 4* above.)

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

9 units

- BIOLOGY 2C03 - Genetics
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

15 units

- PNB 2XA3 - Human Perception & Cognition

- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 2A03 - Python for PNB
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

12 units

from

- Levels III, IV Biology or Molecular Biology courses, which must include at least three units of Level IV

3 units

from

- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 4* above.)

27 units

from

- the *Biology Course List* or Levels III, IV from the *Psychology, Neuroscience & Behaviour Course List* (including at least nine units from the *Biology Course List* and at least nine units of Levels III, IV from the *Psychology, Neuroscience & Behaviour Course List)*

and which may include one of

- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- PNB 4D06 A/B - Senior Thesis
- PNB 4D09 A/B - Senior Honours Thesis
- PNB 4DD6 A/B

(See *Program Notes 2, 3, 4 and 5* above.)

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

15-18 units

- Electives (See *Program Note 4* above.)

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

3 units

from

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

15 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

21 units

from

- the *Biology Course List*, which must include at least three units of Level IV Biology or Molecular Biology courses (See *Program Notes 2, 3* and *5* above.)

15 units

from

- Level III, IV courses from the *Psychology, Neuroscience & Behaviour Course List*, which must include at least three units of Level IV (See *Program Notes 2, 3, 4* and *6* above.)

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

21-24 units

- Electives (See *Program Note 4* above.)

HONOURS BIOLOGY CORE (B.SC.)

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6 UNITS

from

- the Science I Course List

Program Notes

1. The Honours Biology program allows students to choose Biology courses which reflect their own interests. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. Students who wish to take Level III or IV Biochemistry or Chemistry courses should take both CHEM 2OA3 and 2OB3. Students are advised to check prerequisites carefully.
3. Students must complete nine units from BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03. Additional units from this list may be used towards the Biology course list requirement.
4. Completion of STATS 2B03 by the end of Level III is required.
5. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 2EE3, 4PP3, MOLBIOL 3O03, 3V03, 4P03.
6. Students interested in biodiversity and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 2C03, 2D03, 2F03, 3DD3, 3ET3, 3FF3, 3PG3, 4AA3, ENVSOCTY 2GI3.

Biology Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3FA3 - Forensic Anthropology
- ARTSSCI 4CF3 - How Science Speaks to Power
- all Biology and Molecular Biology Level II, III and IV courses
- all Biochemistry courses for which the prerequisites are met
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 3G03 - Modelling Life
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- EARTHSC 2E03 - Earth History
- EARTHSC 4FF3 - Topics of Field Research
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 4C03 - Advanced Physical Climatology
- ENVIRSC 4EA3 - Environmental Assessment
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4K03 - Human Pathophysiology
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3K03 - Neural Control of Human Movement
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- MEDPHYS 4U03 - Radiation Biology
- NEUROSCI 3SN3 - Neural Circuits
- PSYCH 2E03 - Sensory Processes
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2NF3
- PSYCH 3A03 - Audition
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 4R03 - Special Topics in Animal Behaviour
- SCIENCE 2P03 - Impactful Initiatives in Health

Experiential Learning Course List

- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 3R03 - Field Biology I
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 4A03 - Advanced Topics in Ecology
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- BIOLOGY 4IR3 - Advanced Independent Research Project
- BIOLOGY 4J03 - Field Biology II
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- MOLBIOL 3A03
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3V03 - Techniques in Molecular Genetics
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4G12 A/B S - Senior Thesis

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

9 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

(See *Program Note 3* above.)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OC3
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

3 units

from

- the *Experiential Learning Course List*

15 units

from

- Levels III, IV Biology or Molecular Biology courses, which must include at least six units of Level IV

15 units

from

- the *Biology Course List* (See *Program Note 3* above.)

39 units

- Electives

HONOURS BIOLOGY RESEARCH SPECIALIZATION (B.SC.)

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6 UNITS

from

- the Science I Course List

Program Notes

1. The Honours Biology Research Specialization program allows students to choose Biology courses which reflect their own interests and includes additional lab and/or field and research experience as compared to the Honours Biology Core program. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. Students who wish to take Level III or IV Biochemistry and Chemistry courses should take both CHEM 2OA3 and 2OB3. Students are advised to check prerequisites carefully.
3. Students must complete nine units from BIOLOGY 2A03, 2B03, 2D03, 2EE3, 2F03. Additional units from this list may be used towards the Biology course list requirement.
4. In addition, for students who enter Level II of the program as of September 2022, BIOLOGY 2L03 must be completed in Level II.
5. Completion of STATS 2B03 by the end of Level III is required.
6. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 2EE3, 4PP3, MOLBIOL 3O03, 3V03, 4P03.
7. Students interested in biodiversity and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 2C03, 2D03, 2F03, 3DD3, 3ET3, 3FF3, 3PG3, 4AA3, ENVSOCTY 2EI3.
8. Honours Biology Research Specialization students who entered the program prior to September 2022 are required to complete nine units from the list of lab and field offerings listed below, however, additional units are recommended. Students who enter Level II of Honours Biology Research Specialization in September 2022 or later are required to complete BIOLOGY 2L03 and six units from the list of lab and field offerings listed below, however, additional units are recommended. When completed, the additional units may be used towards the Level III and IV Biology and Molecular Biology program requirements.
9. Honours Biology Research Specialization students must complete one of BIOLOGY 4C12 A/B S or 4F06 A/B S. Students who have not obtained the minimum Grade Point Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and must apply to transfer to the Honours Biology Core program. Students who are not interested in completing BIOLOGY 4C12 A/B S or 4F06 A/B S may apply to transfer to the Honours Biology Core program.

Biology Course List

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3FA3 - Forensic Anthropology
- ARTSSCI 4CF3 - How Science Speaks to Power
- all Biology and Molecular Biology Level II, III and IV courses

- all Biochemistry courses for which requisites are met
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 3G03 - Modelling Life
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- EARTHSC 2E03 - Earth History
- EARTHSC 4FF3 - Topics of Field Research
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 4C03 - Advanced Physical Climatology
- ENVIRSC 4EA3 - Environmental Assessment
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4K03 - Human Pathophysiology
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3K03 - Neural Control of Human Movement
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- MEDPHYS 4U03 - Radiation Biology
- NEUROSCI 3SN3 - Neural Circuits
- PSYCH 2E03 - Sensory Processes
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2NF3 - Clinical Neuropsychology
- PSYCH 3A03 - Audition
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 4R03 - Special Topics in Animal Behaviour
- SCIENCE 2P03 - Impactful Initiatives in Health

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- BIOLOGY 2C03 - Genetics

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 5* above.)

9 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

(See *Program Note 3* above.)

3 units

- BIOLOGY 2L03 - The Scientific Method in Biology

(See *Program Note 4* above.)

3 units

from

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

12 units

from

- the *Biology Course List* (See *Program Notes 3* and *8* above.)

18 units

from

- Levels III, IV Biology, Molecular Biology courses

which must include one of

- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project

(See *Program Notes 8 and 9* above.)

3 units

from

- Level IV Biology, Molecular Biology courses

6 units

from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3R03 - Field Biology I /BIOLOGY 3RF0 - Field Work I
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3XL3 - Comparative Vertebrate Anatomy & Physiology
- BIOLOGY 4J03 - Field Biology II /BIOLOGY 4JF0 - Field Work II
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- MOLBIOL 3V03 - Techniques in Molecular Genetics

(See *Program Note 8* above.)

30 units

- Electives (See *Program Note 2* above.)

HONOURS MOLECULAR BIOLOGY AND GENETICS CORE (B.SC.)

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
2. One of PHYSICS 1A03, 1C03 or 1V03 is required for admission. Completion of PHYSICS 1AA3 or 1CC3 by the end of Level II is also recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development

- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note* 2 above.)

6 UNITS

from

- the *Science I Course List* (See *Admission Note 2* above.)

Program Notes

1. The Honours Molecular Biology and Genetics Core program allows students to choose Biology courses that reflect their own Molecular Biology-related interests. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. BIOLOGY 2B03, 2EE3 and MOLBIOL 2C03 must be completed in Level II.
3. Six units of BIOLOGY 2A03, 2D03, 2F03, 3FF3 are required. However, completion of at least nine units is recommended.
4. Completion of STATS 2B03 is required for admission to the Honours Molecular Biology and Genetics Research Specialization (Co-op) program and therefore, students intending to apply for the Co-op option must complete STATS 2B03 in Level II.
5. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 4PP3, MOLBIOL 4P03.

Molecular Biology and Genetics Course List I

- MOLBIOL 3A03
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3M03 - Fundamental Concepts of Development
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4DD3 - Molecular Evolution
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4H03 - Molecular Biology of Cancer
- MOLBIOL 4K03 - Research Advances in Biology of Aging
- MOLBIOL 4P03 - Medical Microbiology
- MOLBIOL 4RR3 - Human Genetics

Molecular Biology and Genetics Course List II

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 4EE3
- BIOLOGY 4MH3 - Microbiome-Host Interactions
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3G03 - Modelling Life
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology

Experiential Learning Course List

- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3IR3 A/B S - Independent Research Project
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 3R03 - Field Biology I
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 4A03 - Advanced Topics in Ecology
- BIOLOGY 4C12 A/B S - Senior Thesis
- BIOLOGY 4F06 A/B S - Senior Project
- BIOLOGY 4IR3 - Advanced Independent Research Project
- BIOLOGY 4J03 - Field Biology II
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- MOLBIOL 3A03
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3V03 - Techniques in Molecular Genetics
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4G12 A/B S - Senior Thesis

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology

- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3FF3 - Evolution

(See *Program Note 3* above.)

21 units

- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- MOLBIOL 2C03 - Genetics
- MOLBIOL 3B03 - Advanced Cell Biology
- MOLBIOL 3II3 - Molecular Genetics of Eukaryotes
- MOLBIOL 3O03 - Microbial Genetics

(See *Program Note 2* above.)

3 units

from

- the *Experiential Learning Course List*

9 units

from

- the *Molecular Biology and Genetics Course List I*, which must include at least three units of Level IV

12 units

from

- the M*olecular Biology and Genetics Course List I* or *II*

30 units

- Electives (See *Program Note 3* above.)

HONOURS MOLECULAR BIOLOGY AND GENETICS RESEARCH SPECIALIZATION (B.SC.)

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
2. One of PHYSICS 1A03, 1C03 or 1V03 is required for admission. Completion of PHYSICS 1AA3 or 1CC3 by the end of Level II is also recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 2* above.)

6 UNITS

from

- the Science I Course List (See *Admission Note 2* above.)

Program Notes

1. The Honours Molecular Biology and Genetics Research Specialization program allows students to choose Biology courses which reflect their own Molecular Biology-related interests and includes additional lab and/or field and research experience. Students are encouraged to discuss their course selections with a Biology academic program advisor.
2. BIOLOGY 2B03, 2EE3 and MOLBIOL 2C03 must be completed in Level II.
3. Six units of BIOLOGY 2A03, 2D03, 2F03, 3FF3 are required. However, completion of at least nine units is recommended.
4. Completion of STATS 2B03 is required for admission to the Honours Molecular Biology and Genetics Research Specialization (Co-op) program and therefore, students intending to apply for the Co-op option must complete STATS 2B03 in Level II.
5. Students interested in microbiology and biotechnology and especially those considering postgraduate studies in this area should take the following courses: BIOLOGY 4PP3, MOLBIOL 4P03.
6. BIOLOGY 2L03, MOLBIOL 3I03 A/B S, 4CT3 (or 3A03) are recommended as preparatory courses for MOLBIOL 4G12 A/B S.
7. Completion of MOLBIOL 4G12 A/B S is required in Level IV. Students who entered the program prior to September 2021, will have the choice to complete BIOLOGY 4C12 A/B S or 4F06 A/B S to meet this requirement. Students who have not obtained the minimum Grade Point Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and must apply to transfer to the Honours Molecular Biology and Genetics Core program.
8. Students who are not interested in completing MOLBIOL 4G12 A/B S may apply to transfer to the Honours Molecular Biology and Genetics Core program.

Molecular Biology and Genetics Course List I

- MOLBIOL 3A03
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3M03 - Fundamental Concepts of Development
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4DD3 - Molecular Evolution
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4H03 - Molecular Biology of Cancer
- MOLBIOL 4K03 - Research Advances in Biology of Aging
- MOLBIOL 4P03 - Medical Microbiology
- MOLBIOL 4RR3 - Human Genetics

Molecular Biology and Genetics Course List II

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry

- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 4EE3
- BIOLOGY 4MH3 - Microbiome-Host Interactions
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3G03 - Modelling Life
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3FF3 - Evolution

(See *Program Note 3* above.)

24 units

- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- MOLBIOL 2C03 - Genetics
- MOLBIOL 3B03 - Advanced Cell Biology
- MOLBIOL 3II3 - Molecular Genetics of Eukaryotes
- MOLBIOL 3O03 - Microbial Genetics
- MOLBIOL 3V03 - Techniques in Molecular Genetics

(See *Program Note 2* above.)

6 units

from

- the *Molecular Biology and Genetics Course List I*

12 units

- MOLBIOL 4G12 A/B S - Senior Thesis

(See *Program Note 7* above.)

3 units

from

- Level IV courses from the *Molecular Biology and Genetics Course List I*

6 units

from

- the *Molecular Biology and Genetics Course List I or II*

24 units

- Electives (See *Program Note 3* above.)

HONOURS MOLECULAR BIOLOGY AND GENETICS RESEARCH SPECIALIZATION CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, completion of Level II of an Honours Molecular Biology and Genetics program with a Grade Point Average of at least 5.0 and completion of the following courses:

9 UNITS

- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- MOLBIOL 2C03 - Genetics

6 UNITS

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3FF3 - Evolution

6 UNITS

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 UNITS

- STATS 2B03 - Statistical Methods for Science

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences

1 COURSE

- SCIENCE 2C00 - Skills for Career Success in Science

NOTES

- Admission is by selection, and possession of the published minimum requirements does not guarantee admission. (It is anticipated that a Grade Point Average of at least 8.0 will be required.) Information about this program and the selection procedure can be obtained from Science Career and Cooperation Education Office.
- BIOLOGY 2A03 is only available as a Winter Term offering and, therefore, completion in Level II (prior to admission to the Co-op program) is strongly recommended for students who intend to complete this course.

Program Notes

1. This is a five-level (year) co-op program, which includes two eight-month work terms which must be spent in molecular biology and genetics related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students should seek academic advising for this program in the Department of Biology.
5. Completion of BIOLOGY 2B03 and MOLBIOL 2C03 is required prior to admission to this program.
6. STATS 2B03 is required for admission.
7. Completion of MOLBIOL 4G12 A/B S is required for this program.

Students should consult the MOLBIOL 4G12 A/B S Course Coordinator regarding supervision arrangements. Students are strongly encouraged to carry out their thesis in an academic lab. Students who have not obtained the minimum Grade Point Average as stated in the prerequisite, may request a requisite waiver from the Undergraduate Associate Chair. Students denied permission may not continue in the program and must apply to transfer to the Honours Molecular Biology and Genetics Core program. Students who are not interested in completing MOLBIOL 4G12 A/B S may apply to transfer to the Honours Molecular Biology and Genetics Core program.

8. Students must take a minimum of 15 units from the *Molecular Biology and Genetics Co-op Course Lists I* and *II*, at least 12 of these units must be from *Course List I*, and at least 3 of these units must be at Level IV.
9. Six units from BIOLOGY 2A03, 2D03, 2F03, 3FF3 are required for admission, however, students are encouraged to complete each of these courses. When more than six units are completed, these will count toward the *Molecular Biology and Genetics Co-op Course List II* program requirement.

Molecular Biology and Genetics Co-op Course List I

- MOLBIOL 3A03
- MOLBIOL 3CC3
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3I03 A/B S - Independent Research Project
- MOLBIOL 3M03 - Fundamental Concepts of Development
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4BB3 - Plant Metabolism and Molecular Biology
- MOLBIOL 4CT3 - Current Topics in Molecular Biology and Genetics
- MOLBIOL 4DD3 - Molecular Evolution
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4H03 - Molecular Biology of Cancer
- MOLBIOL 4K03 - Research Advances in Biology of Aging
- MOLBIOL 4P03 - Medical Microbiology
- MOLBIOL 4RR3 - Human Genetics

Molecular Biology and Genetics Co-op Course List II

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 2L03 - The Scientific Method in Biology
- BIOLOGY 3FF3 - Evolution
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 4EE3
- BIOLOGY 4MH3 - Microbiome-Host Interactions
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 3G03 - Modelling Life
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMENG 3BK3 - Bio-Reaction Engineering
- CHEMENG 3BM3 - Bioseparations Engineering
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

Completion of Level II Honours Molecular Biology and Genetics program, including:

9 units

- BIOLOGY 2B03 - Cell Biology
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- MOLBIOL 2C03 - Genetics

6 units

from

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3FF3 - Evolution

(See *Program Note 9* above.)

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 6* above.)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See Program Note 3 above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

9 units

- BIOLOGY 3S03 - An Introduction to Bioinformatics
- MOLBIOL 3O03 - Microbial Genetics
- MOLBIOL 3V03 - Techniques in Molecular Genetics

3 units

from

- the *Molecular Biology and Genetics Co-op Course Lists I and II* (See *Program Notes 8 and 9* above.)

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

(See Program Note 3 above.)

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

6 units

- MOLBIOL 3B03 - Advanced Cell Biology

- MOLBIOL 3II3 - Molecular Genetics of Eukaryotes

3 units

from

- the *Molecular Biology and Genetics Co-op Course Lists I and II* (See *Program Note 8* above.)

12 units

- MOLBIOL 4G12 A/B S - Senior Thesis

(See *Program Note 7* above.)

9 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

9 units

from

- the *Molecular Biology and Genetics Co-op Course Lists I and II* (See *Program Note 8* above.)

6 units

- Electives

CO-OP PROGRAM CHART

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Level III including MOLBIOL 4G12 A/B S	15 units from Academic Level IV including MOLBIOL 4G12 A/B S	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Minor(s):

MINOR IN BIOLOGY

Notes

1. ISCI 1A24 A/B is a substitution for BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and 1M03.
2. ISCI 2A18 A/B is a substitution for 3 units of Level II Biology toward the Minor in Biology.
3. In order to obtain a Minor in Biology at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

18 UNITS

from

- Levels II, III, IV Biology or Molecular Biology courses including at least six units from Levels III, IV Biology or Molecular Biology

Department of Chemistry and Chemical Biology

http://www.chemistry.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Giuseppe Melacini

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Ryan Wylie *(Chemical Biology Graduate Studies)* (ACTING)

Peter Kruse *(Chemistry Graduate Studies)*

Paul J. Berti (Undergraduate *Studies)*

Saman Sadeghi *(Research)* (ACTING)

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Jose M. Moran-Mirabal/B.Sc., M.Sc. *(ITESM-Monterrey, Mexico)*, Ph.D. *(Cornell)*/Canada Research Chair in Micro- and Nanostructured Materials

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Ignacio Vargas-Baca/B.Sc., M.Sc. *(UNAM)*, Ph.D. *(Calgary)*

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Gregory Chass/B.Sc. *(Toronto)*, Ph.D. *(Szeged)*

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Sarah Styler/B.Sc., Ph.D. *(Toronto)*/Canada Research Chair in Atmospheric Chemistry
Rodrigo Vargas-Hernandez/B.Sc. *(National Autonomous University of Mexico)*, Ph.D. *(British Columbia)*

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Karl Jobst/B.Sc., Ph.D. *(McMaster)*
Artem Lebedev/M.Sc. *(Higher Chemical College)*, Ph.D. *(Moscow State)*
Yu-Chih Tseng/B.A.Sc. *(Toronto)*, M.Sc., Ph.D. *(Berkeley)*

ASSOCIATE MEMBERS

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Anthony F. Rullo/*(Pathology)* B.Sc. *(McMaster)*, M.Sc. *(Guelph)*, Ph.D. *(Toronto)*
Greg Slater/*(Earth, Environment & Society)* B.Sc., M.Sc., Ph.D. *(Toronto)*

Notes Applicable to all Honours Programs in the Department of Chemistry and Chemical Biology

1. The Honours programs consist of a specified set of basic requirements and a wide choice of electives, allowing for interdisciplinary studies or the opportunity to complete a Minor. Five year co-op programs are available in Honours Chemistry, Honours Chemical Biology and Honours Sustainable Chemistry, with entry beginning at Level III.
2. In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
3. Students are encouraged to seek academic advising from the Departmental Undergraduate Advisor (email: chemadv@mcmaster.ca).
4. Certain Level IV courses are offered in alternate years. Students are advised to consider course offerings carefully in planning their course selection for Levels III and IV.
5. The Honours Chemistry, Honours Chemistry Co-op, Honours Chemical Biology and Honours Chemical Biology Co-op programs fulfill the academic requirements of the Canadian Society for Chemistry.
6. CHEM 3RP3 and CHEMBIO 3RP3 provide the opportunity for students to integrate a one term work/research experience into an elective course. CHEM 3EP3 A/B S and CHEMBIO 3EP3 A/B S allow students to participate in an experiential placement. Further details may be obtained from the Undergraduate Advisor, in the Department of Chemistry and Chemical Biology (email: chemadv@mcmaster.ca).
7. CHEM 4G12 A/B and CHEMBIO 4G12 A/B offer a senior thesis research experience. CHEM 4RP6 A/B S and CHEMBIO 4RP6 A/B S offer a more limited research experience, without a presentation or formal thesis.

Notes Applicable to all Honours Chemistry

Programs

1. McMaster's Honours Chemistry program is structured such that part of the laboratory experience in the conventional sub-disciplines of organic, inorganic, physical, and analytical chemistry is obtained through two integrated laboratory courses that are distinct from the lecture courses - CHEM 2LB3 in Level II and CHEM 3LA3 in Level III. This program provides in excess of 55 hours of "Organic Chemistry" laboratory experience. The Level III course focuses on more advanced skills.
2. For those considering postgraduate studies in Chemistry, it should be noted that 18 units of Level IV Chemistry or related subjects are required for consideration for admission at McMaster and most graduate schools in Canada. CHEM 4G12 A/B is strongly recommended.
3. BIOCHEM 2EE3 or any Biochemistry course that has a Biology course as the prerequisite are an acceptable alternative to BIOCHEM 3G03. CHEM 4IB3 or a Level III or IV Chemical Biology course are also acceptable substitutes providing these units are taken as elective to the Honours Chemistry program requirements.
4. CHEM 3PC3 is recommended for all Chemistry students, but not required for students who complete MATH 1B03 (or 1ZC3) in either Level I or II and who complete one of MATH 1AA3, 1LT3, 1XX3 (or 1ZB3) in Level I.
5. CHEM 4G12 A/B cannot be taken concurrently with CHEM 3LA3 or CHEM 3RP3 given the time commitment required for the Senior Undergraduate Thesis.

B.Sc. Three-Level Degree

A three-level program with a Chemistry orientation is available through the B.Sc. in Chemical and Physical Sciences.
For Honours Arts & Science and Sustainable Chemistry (B.Arts.Sc.) see *Arts & Science Program*

Bachelor of Applied Science

HONOURS SUSTAINABLE CHEMISTRY (B.A.SC.)

Admission Note

Students intending to complete CHEM 3PA3 are required to complete one of PHYSICS 1A03, 1C03 or 1V03 in Level I. Completion of PHYSICS 1AA3 or 1CC3 is recommended.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 6.0 (between the courses) is required

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II
- CHEM 1E03 - General Chemistry for Engineering I

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1M03
- MATH 1MM3 - Applied Calculus
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

6 UNITS

from

- the *Science I Course List* (See *Admission Note* above.)

Program Notes

1. In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
2. Students are encouraged to seek academic advising from the Departmental Undergraduate Advisor (email: chemadv@mcmaster.ca).
3. Certain Level IV courses are offered in alternate years. Students are advised to consider course offerings carefully in planning their course selection for Levels III and IV.

Course List 1

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 2Q03 - Inquiry for Chemistry
- CHEM 3AA3 - Instrumental Analysis
- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEM 3EQ3 - Experiential Sustainable Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEM 3II3 - Introduction to Transition Metal Chemistry
- CHEM 3LA3 - Strategies for Chemical Discovery
- CHEM 3OA3 - Organic Synthesis
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEM 3PC3 - Mathematical Tools for Chemical Problems
- CHEM 3RC3 - Radioisotopes in Medicine
- CHEM 3RP3 - Research Practicum in Chemistry
- CHEM 4AA3 - Recent Advances in Analytical Chemistry
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4G12 A/B - Senior Thesis
- CHEM 4IA3 - Physical and Spectroscopic Methods for Inorganic Structure Determination
- CHEM 4IB3 - Bio-Inorganic Chemistry
- CHEM 4IC3 - Solid State Inorganic Materials: Structures, Properties, Characterization and Applications
- CHEM 4II3 - Transition Metal Organometallic Chemistry and Catalysis
- CHEM 4OA3 - Natural Products
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4PB3 - Computational Models for Electronic Structure and Chemical Bonding
- CHEM 4Q03 - Peer Tutoring in Chemistry
- CHEM 4RP6 A/B S - Research Project in Chemistry
- CHEM 4W03 - Natural and Synthetic Materials
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics
- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development

Course List 2

- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3ET3 - Ecotoxicology
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 4MS3 - The Social Lives of Molecules
- LIFESCI 2X03 - Environmental Change and Human Health
- POLSCI 3GC3 - Politics of a Dying Planet
- SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science
- STATS 2B03 - Statistical Methods for Science
- STATS 2D03 - Introduction to Probability
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 3S03 - Implementing Sustainable Change

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

3 units

- CHEM 2SC3 - Sustainable Chemistry - Green Chemistry

12 units

from

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 2Q03 - Inquiry for Chemistry

6 units

from

- *Course List 2*

9 units

- Electives

LEVELS III-IV: 60 UNITS

6 units

- CHEM 3SC3 - Sustainable Chemistry: Natural Resources and Energy
- CHEM 4SC3 - Sustainable Chemistry - Analysis and Regulation

24 units

from

- *Course List 1*

which must include one of:

- CHEM 2LB3 - Tools for Chemical Discovery

- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEM 3EQ3 - Experiential Sustainable Chemistry
- CHEM 3RP3 - Research Practicum in Chemistry
- CHEM 4G12 A/B - Senior Thesis
- CHEM 4Q03 - Peer Tutoring in Chemistry
- CHEM 4RP6 A/B S - Research Project in Chemistry

12 units

from

- *Course List 2*

18 units

- Electives

HONOURS SUSTAINABLE CHEMISTRY CO-OP (B.A.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Sustainable Chemistry with a Grade Point Average of at least 5.0 including:

3 UNITS

- CHEM 2SC3 - Sustainable Chemistry - Green Chemistry

12 UNITS

from

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 2Q03 - Inquiry for Chemistry

6 UNITS

from

- *Course List 2*

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms that must be spent in appropriate chemistry-related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and by Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
5. Students considering postgraduate studies in Chemistry should note that 18 units of Level IV Chemistry or related subjects are required for consideration for admission at McMaster and most graduate schools in Canada.
6. CHEM 4G12 A/B or 4RP6 A/B S cannot be taken concurrently with CHEM 3LA3 or 3RP3.

Course List 1

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 2Q03 - Inquiry for Chemistry
- CHEM 3AA3 - Instrumental Analysis
- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEM 3EQ3 - Experiential Sustainable Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEM 3II3 - Introduction to Transition Metal Chemistry
- CHEM 3LA3 - Strategies for Chemical Discovery
- CHEM 3OA3 - Organic Synthesis
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEM 3PC3 - Mathematical Tools for Chemical Problems
- CHEM 3RC3 - Radioisotopes in Medicine
- CHEM 3RP3 - Research Practicum in Chemistry
- CHEM 4AA3 - Recent Advances in Analytical Chemistry
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4G12 A/B - Senior Thesis
- CHEM 4IA3 - Physical and Spectroscopic Methods for Inorganic Structure Determination
- CHEM 4IB3 - Bio-Inorganic Chemistry
- CHEM 4IC3 - Solid State Inorganic Materials: Structures, Properties, Characterization and Applications
- CHEM 4II3 - Transition Metal Organometallic Chemistry and Catalysis
- CHEM 4OA3 - Natural Products
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4PB3 - Computational Models for Electronic Structure and Chemical Bonding
- CHEM 4Q03 - Peer Tutoring in Chemistry
- CHEM 4RP6 A/B S - Research Project in Chemistry
- CHEM 4W03 - Natural and Synthetic Materials
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics
- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development

Course List 2

- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3ET3 - Ecotoxicology
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society

- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 4MS3 - The Social Lives of Molecules
- LIFESCI 2X03 - Environmental Change and Human Health
- POLSCI 3GC3 - Politics of a Dying Planet
- SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science
- STATS 2B03 - Statistical Methods for Science
- STATS 2D03 - Introduction to Probability
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 3S03 - Implementing Sustainable Change

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of any Level II Honours Sustainable Chemistry program

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

6 units

from

- *Course List 1*

3 units

from

- *Course List 2*

6 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

- CHEM 3SC3 - Sustainable Chemistry: Natural Resources and Energy
- CHEM 4SC3 - Sustainable Chemistry - Analysis and Regulation

12 units

from

- *Course List 1*

which must include one of:

- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEM 3EQ3 - Experiential Sustainable Chemistry
- CHEM 3RP3 - Research Practicum in Chemistry
- CHEM 4G12 A/B - Senior Thesis
- CHEM 4Q03 - Peer Tutoring in Chemistry
- CHEM 4RP6 A/B S - Research Project in Chemistry

6 units

from

- *Course List 2*

9 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

3 units

from

- CHEM 3SC3 - Sustainable Chemistry: Natural Resources and Energy
- CHEM 4SC3 - Sustainable Chemistry - Analysis and Regulation

6 units

from

- *Course List 1*

3 units

from

- *Course List 2*

3 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Level III	15 units from Academic Level IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Bachelor of Science (Honours)

HONOURS CHEMICAL BIOLOGY (B.SC.)

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

6 UNITS

from the following courses, with a grade of at least C+ in each

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

6 UNITS

from the following courses, with an average of at least 6.0

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6 UNITS

from

- the Science I Course List

Program Notes

1. Students are encouraged to seek academic advising from the Departmental Undergraduate Advisor (email chemadv@mcmaster.ca).
2. In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
3. Certain Level III and IV courses are offered in alternate years. Students are advised to consider course offerings carefully in planning their course selection for Levels III and IV.
4. Students are strongly advised not to take CHEMBIO 3L03 concurrently with CHEMBIO 4G12 A/B .
5. Students seeking admission to graduate school are strongly advised to complete CHEMBIO 3AA3 (or CHEM 3AA3) and 6 units from CHEMBIO 4A03, 4OA3, 4OB3. Completion of CHEMBIO 4G12 A/B is also strongly recommended.
6. One of CHEMBIO 3EP3 A/B S, or 3RP3 may be completed to satisfy units toward the Level III Chemical Biology or Chemistry requirement.
7. BIOCHEM 3G03 must be completed in Level II. The combination of both BIOCHEM 2B03 and 2BB3 may substitute for BIOCHEM 3G03 and, when completed, will reduce the elective requirement by three units.
8. BIOCHEM 3D03 is a prerequisite for several Level IV BIOCHEM courses; this should be considered when choosing Level III courses.
9. Students wishing to have more mathematical statistics may replace STATS 2B03 with STATS 2D03 and 2MB3.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

12 units

from

- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2AA3
- CHEMBIO 2L03 - Pharmaceutical Chemistry Laboratory I: Biomolecular Interactions
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 2Q03 - Inquiry for Chemical Biology

6 units

from

- CHEMBIO 2OA3
- CHEMBIO 2OB3
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 7* above.)

3 units

- BIOLOGY 2B03 - Cell Biology

6 units

- Electives

LEVELS III AND IV: 60 UNITS

6 units

- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics

3 units

from

- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 4IB3 - Bio-Inorganic Chemistry

(See *Program Note 3* above.)

6 units

from

- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology
- CHEM 3AA3 - Instrumental Analysis
- CHEM 3OA3 - Organic Synthesis

(See *Program Notes 2 and 3* above.)

3 units

- CHEMBIO 3L03 - Chemical Biology Laboratory II

(See *Program Note 4* above.)

6 units

from

- Levels II, III Biology courses
- BIOCHEM 3D03 - Metabolism and Regulation
- STATS 2B03 - Statistical Methods for Science

(See *Program Notes 8 and 9* above.)

6 units

from

- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- CHEMBIO 4Q03 - Peer Tutoring in Chemical Biology
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4W03 - Natural and Synthetic Materials

(See *Program Notes 3* and *5* above.)

3-12 units

from Levels III, IV Chemical Biology, Chemistry courses,

which may include one of
- CHEMBIO 4G12 A/B - Senior Thesis in Chemical Biology
- CHEMBIO 4RP6 A/B S - Research Project in Chemical Biology

(See *Program Notes 4, 5* and *6* above.)

18-27 units
- Electives

HONOURS CHEMICAL BIOLOGY CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Chemical Biology with a Grade Point Average of at least 5.0.

12 UNITS

from
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2L03 - Pharmaceutical Chemistry Laboratory I: Biomolecular Interactions
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- CHEMBIO 2Q03 - Inquiry for Chemical Biology

6 UNITS

from
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I

3 UNITS

from
- BIOCHEM 3G03 - Proteins and Nucleic Acids

3 UNITS

from
- BIOLOGY 2B03 - Cell Biology

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms that must be spent in chemical biology-related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and by Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
5. 6 units from CHEMBIO 4A03, 4OA3, 4OB3, 4Q03, CHEM 4D03, 4OB3, 4OP3, 4W03 must be completed by the end of Level V.
6. Certain Level III and IV courses are offered in alternate years. Students are advised to consider course offerings carefully in planning their course selection for Levels III and IV.
7. Students are strongly advised not to take CHEMBIO 3L03 concurrently with CHEMBIO 4G12 A/B or 4RP6 A/B S.
8. Students seeking admission to graduate school are strongly advised to complete CHEMBIO 3AA3 (or CHEM 3AA3) and 6 units from CHEMBIO 4A03, 4OA3, 4OB3. CHEMBIO 4G12 A/B or 4RP6 A/B S is also strongly recommended and must be completed in Level IV.
9. BIOCHEM 3D03 is a prerequisite for several Level IV BIOCHEM courses; this should be considered when choosing Level III courses.
10. Students wishing to have more mathematical statistics may replace STATS 2B03 with STATS 2D03 and STATS 2MB3.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units
- Completion of Level II Honours Chemical Biology program

1 course
- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

6 units
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics

3 units
- CHEM 3OA3 - Organic Synthesis

3 units

from
- Levels II, III Biology courses
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 10* above.)

3 units
- Electives

1 course
- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course
- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course
- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from
- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 4IB3 - Bio-Inorganic Chemistry

3 units

from
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology
- CHEM 3AA3 - Instrumental Analysis

6-12 units

from
- Levels III, IV Chemical Biology or Chemistry courses,

which must include one of
- CHEMBIO 3L03 - Chemical Biology Laboratory II
- CHEMBIO 4G12 A/B - Senior Thesis in Chemical Biology
- CHEMBIO 4RP6 A/B S - Research Project in Chemical Biology

(See *Program Notes 7 and 8* above.)

3 units
from
- BIOCHEM 3D03 - Metabolism and Regulation
- STATS 2B03 - Statistical Methods for Science

(See *Program Notes 9 and 10* above.)
3-6 units
from
- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- CHEMBIO 4Q03 - Peer Tutoring in Chemical Biology
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4W03 - Natural and Synthetic Materials

(See *Program Note 5* above.)
3-12 units
- Electives (See *Program Note 8* above.)

Spring/Summer Term:
Work Term
1 course
- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V
Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)
Fall Term:
Work Term
1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
0-3 units
from the following courses, if only three units completed in Level IV
- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- CHEMBIO 4Q03 - Peer Tutoring in Chemical Biology
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4W03 - Natural and Synthetic Materials

(See *Program Note 5* above.)
12-15 units
- Electives (See *Program Note 8* above.)

Co-op Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III & IV	15 units from Academic Levels III & IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Levels III & IV	

HONOURS CHEMISTRY (B.SC.)

Admission Notes

1. PHYSICS 1AA3 or 1CC3 must be completed by the end of Level II and is very strongly recommended in Level I.
2. Students with credit in MATH 1X03 or 1ZA3 may use either as a substitution for MATH 1A03 or 1LS3.
3. Students are strongly recommended to complete one of MATH 1AA3, 1LT3, 1XX3 (or 1ZB3) in Level I and MATH 1B03 (or 1ZC3) in either Level I or II.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS
from the following courses, where an average of at least 6.0 (between the courses) is required
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS
from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

(See *Admission Note 2* above.)

3 UNITS
from
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

12 UNITS
from
- the Science I Course List (See *Admissions Notes 1* and *3* above.)

Program Notes

1. In some cases there are Level II and III prerequisites for Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
2. BIOCHEM 2EE3 or any Biochemistry course that has a Biology course as the prerequisite are an acceptable alternative to BIOCHEM 3G03. CHEM 4IB3 or a Level III or IV Chemical Biology course are also acceptable substitutes providing these units are taken as elective to the Honours Chemistry program requirements.
3. CHEM 3PC3 is recommended for all Chemistry students, but not required for students who complete MATH 1B03 (or 1ZC3) in either Level I or II, and who complete one of MATH 1AA3, 1LT3, 1XX3 (or 1ZB3) in Level I.
4. One of PHYSICS 1AA3 or 1CC3 must be completed by the end of Level II and is very strongly recommended in Level I.
5. CHEM 4G12 A/B or 4RP6 A/B S cannot be taken concurrently with CHEM 3LA3 or 3RP3.
6. One of CHEM 3EP3 A/B S, 3RP3 may be completed to satisfy units toward the Level III Chemical Biology or Chemistry requirement.
7. Students wishing to have more mathematical statistics may replace STATS 2B03 with STATS 2D03 and 2MB3.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

3 units

from

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3

18 units

- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules (or CHEM 2OC3)
- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 2Q03 - Inquiry for Chemistry

0-3 units

from the following courses, if not completed in Level I

- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences

(See *Program Note 4* above.)

6-9 units

- Electives (See *Program Notes 3* and *4* above.)

LEVEL III: 30 UNITS

3 units

from

- CHEM 3AA3 - Instrumental Analysis
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology

9 units

- CHEM 3II3 - Introduction to Transition Metal Chemistry
- CHEM 3LA3 - Strategies for Chemical Discovery
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy

0-3 units

from

- CHEM 3PC3 - Mathematical Tools for Chemical Problems

(See *Program Note 3* above.)

6 units

from

- Levels III, IV Chemical Biology or Chemistry courses
- STATS 2B03 - Statistical Methods for Science

(See *Program Notes 6 and 7* above.)

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 2* above.)

6-9 units

- Electives

LEVEL IV: 30 UNITS

9-12 units

from

- Level IV Chemistry courses (See *Program Note 5* above.)

3 units

from

- Levels III, IV Chemical Biology or Chemistry courses
- STATS 2B03 - Statistical Methods for Science

(See *Program Notes 6 and 7* above.)

3 units

from

- Level IV Chemical Biology or Chemistry courses

12-15 units

- Electives

HONOURS CHEMISTRY CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Chemistry with a Grade Point Average of at least 5.0 including:

21 UNITS

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry (or 2PD3)
- CHEM 2Q03 - Inquiry for Chemistry

0-3 UNITS

from the following courses, if not completed in Level I

- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms that must be spent in chemistry-related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and by Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. There are Level II and III prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing your Level II and III courses.
5. Students considering postgraduate studies in Chemistry should note that 18 units of Level IV Chemistry or related subjects are required for consideration for admission at McMaster and most graduate schools in Canada.
6. BIOCHEM 2EE3 or any Biochemistry course that has a Biology course as a prerequisite are an acceptable alternative to BIOCHEM 3G03. CHEM 4IB3 or a Level III or IV Chemical Biology course are also acceptable substitutes providing these units are taken as elective to the Honours Chemistry program requirements.
7. CHEM 4G12 A/B or 4RP6 A/B S cannot be taken concurrently with CHEM 3LA3 or 3RP3.
8. CHEM 3PC3 is recommended for all Chemistry students, but not required for students who complete MATH 1B03 (or 1ZC3) in either Level I or II, and who complete one of MATH 1AA3, 1LT3, 1XX3 (or 1ZB3) in Level I.
9. Students wishing to have more mathematical statistics may replace STATS 2B03 with STATS 2D03 and 2MB3.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of any Level II Honours Chemistry program

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- CHEM 3PC3 - Mathematical Tools for Chemical Problems

(See *Program Note 8* above.)

6 units

- CHEM 3II3 - Introduction to Transition Metal Chemistry
- CHEM 3LA3 - Strategies for Chemical Discovery

6 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

6 units

from

- CHEM 3AA3 - Instrumental Analysis
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology

9-12 units

from Levels III, IV Chemistry courses,

which may include one of

- CHEM 4G12 A/B - Senior Thesis
- CHEM 4RP6 A/B S - Research Project in Chemistry

(See *Note 4* and *Program Note 7* above.)

3 units

from

- Levels III, IV Chemical Biology or Chemistry courses
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 9* above.)

9-12 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

3 units

from

- Levels III, IV Chemistry courses

3 units

from

- Level IV Chemical Biology or Chemistry courses
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 9* above.)

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 6* above.)

6 units

- Electives

Note

Students who entered the program prior to September 2020 may refer to their Academic Advisement report or contact an Academic Advisor in the Office of the Associate Dean of Science (Academic) for program requirements.

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Level III	15 units from Academic Level IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Minor(s):

MINOR IN CHEMICAL BIOLOGY

Notes

1. Students who wish to pursue a Minor in Chemical Biology are encouraged to select courses in consultation with the Undergraduate Advisor in the Department of Chemistry and Chemical Biology (email: chemadv@mcmaster.ca).
2. ISCI 1A24 A/B is a substitution for CHEM 1A03 (or 1E03) and 1AA3 and also for BIOLOGY 1A03 and 1M03.
3. ISCI 2A18 A/B may be used as a substitution for 3 units of Level II Chemical Biology and 3 units of equivalent credit for BIOCHEM 3G03 toward the Minor in Chemical Biology.
4. In order to declare a Minor in Chemical Biology, at least 12 units (above Level I) must be elective to degree.
5. CHEMBIO 2L03, 2Q03 and 3L03 are only open to students registered in Honours Chemical Biology.
6. Level II Biology courses require one or both of BIOLOGY 1A03, 1M03 as prerequisites.

7. Honours Chemistry students who have taken BIOCHEM 2EE3 or 3G03 towards their degree requirements may use the other course towards a Minor in Chemical Biology.
8. Completion of Level II Honours Chemistry may be used as a substitution for 6 units of Level II Chemical Biology toward the Minor in Chemical Biology.

Requirements

24 units total

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

3 UNITS

- CHEM 1AA3 - Introductory Chemistry II

6-12 UNITS

from

- Levels II, III, IV Chemical Biology courses
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II
- CHEM 2OC3
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2P03 - Applications of Physical Chemistry

0-6 UNITS

from

- Levels II, III Biology courses
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Notes 6* and *7* above.)

6 UNITS

from

- Levels III, IV Chemical Biology courses
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4OB3
- CHEM 4OP3 - Polymers and Organic Materials
- CHEM 4W03 - Natural and Synthetic Materials

MINOR IN CHEMISTRY

Notes

1. Students who wish to pursue a Minor in Chemistry are encouraged to select courses in consultation with the Undergraduate Advisor in the Department of Chemistry and Chemical Biology (email: chemadv@mcmaster.ca).
2. ISCI 1A24 A/B is a substitution for CHEM 1A03 (or 1E03) and 1AA3.
3. ISCI 2A18 A/B may be used as a substitution for 3 units of Level II Chemistry toward the Minor in Chemistry, except for students in Honours Integrated Science with a concentration in Chemical Biology.
4. In order to declare a Minor in Chemistry, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

3 UNITS

- CHEM 1AA3 - Introductory Chemistry II

12 UNITS

from

- Levels II, III, IV Chemistry courses
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2OA3
- CHEMBIO 2OB3
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology

6 UNITS

from

- Levels III, IV Chemistry courses
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology

MINOR IN SUSTAINABLE CHEMISTRY

Notes

1. Students who wish to pursue a Minor in Sustainable Chemistry are encouraged to select courses in consultation with the Undergraduate Advisor in the Department of Chemistry and Chemical Biology (email: chemadv@mcmaster.ca).
2. ISCI 1A24 A/B is a substitution for CHEM 1A03 and 1AA3 .
3. ISCI 2A18 A/B may be used as a substitution for 3 units of Level II Chemistry toward the Minor in Sustainable Chemistry, except for students in Honours Integrated Science with a concentration in Chemistry or Chemical Biology.
4. In order to declare a Minor in Sustainable Chemistry, at least 12 units (above Level I) must be elective to degree.

Course List 1

- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3ET3 - Ecotoxicology
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 4MS3 - The Social Lives of Molecules
- LIFESCI 2X03 - Environmental Change and Human Health
- POLSCI 3GC3 - Politics of a Dying Planet
- STATS 2B03 - Statistical Methods for Science
- STATS 2D03 - Introduction to Probability
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 3S03 - Implementing Sustainable Change

Requirements

24 units total

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

3 UNITS

- CHEM 1AA3 - Introductory Chemistry II

9 UNITS

from

- Levels II, III, IV Chemistry courses
- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2OA3
- CHEMBIO 2OB3
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology

6 UNITS

from

- CHEM 2SC3 - Sustainable Chemistry - Green Chemistry
- CHEM 3SC3 - Sustainable Chemistry: Natural Resources and Energy
- CHEM 4SC3 - Sustainable Chemistry - Analysis and Regulation

3 UNITS

from

- *Course List 1*

School of Earth, Environment & Society (Faculty of Science)

https://sees.mcmaster.ca/

Faculty as of January 15, 2025

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Lina Taing/B.A. *(UCLA)*, M.Sc. *(Queensland)*, Ph.D. *(UCT-S. Africa)*

Hernan Ugalde/M.Sc. *(Chile)*, Ph.D. *(Toronto)*

Kate Whalen/B.A., M.A., Ph.D. *(McMaster)*

Amin Yazdani/B.Sc. *(Iran)*, M.Sc. *(Putra Malaysia)*, Ph.D. *(Waterloo)*

ASSOCIATE MEMBERS

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Charles De Lannoy/*(Chemical Engineering)* B.Sc. *(McGill)*, Ph.D. *(Duke)*

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Ingrid Waldron/*(History)* B.A. *(McGill)*, M.A. *(London)*, Ph.D. *(Toronto)*

Bachelor of Science (Honours)

HONOURS EARTH AND ENVIRONMENTAL SCIENCES (B.SC.)

Admission Notes

1. Students who did not complete Grade 12 Chemistry U must complete CHEM 1R03 in Level I. Given this course is considered elective, an additional three units from the *Science I Course List* must be

completed. CHEM 1A03 must be completed by the end of Level II.
2. One of PHYSICS 1A03, 1C03 or 1V03 must be completed prior to graduation. Completion by the end of Level II is recommended. Students who did not complete Grade 12 Physics U must register in PHYSICS 1A03 or 1V03.
3. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses with an average of at least 6.0

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1R03 - General Chemistry

(See *Admission Note 1* above.)

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

12 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1AA3 - Calculus For Science II
- MATH 1B03 - Linear Algebra I
- MATH 1LT3 - Calculus for the Life Sciences II
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics
- SCIENCE 1A03 - Investigating Science: Opportunities & Experiences

(See *Admission Notes* above.)

Program Notes

1. Earth and Environmental Sciences at McMaster encompass five major themes: Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis. It should be noted that each thematic area has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). Students may elect to take some or all of the upper level courses from different areas. In addition, there is a set of courses encompassing research design, field work, internships, and the senior thesis or review paper.

AQUEOUS ENVIRONMENTAL GEOCHEMISTRY

EARTHSC 3CC3, 4CC3, 4N03, ENVIRSC 2Q03, 3O03

EARTH SCIENCES

EARTHSC 2E03, 2FE3, 2G03, 2K03, 2T03, 3E03, 3K03, 3P03, 3V03, 3Z03, 4G03, 4PA3, 4T03, 4V03, 4VV3, ENVSOCTY 3SR3

ENVIRONMENTAL HYDROLOGY AND CLIMATE

EARTHSC 3CC3, 3W03, 4CC3, 4WB3, ENVIRSC 2B03, 2C03, 2W03, 3B03, 4BB3, 4C03, 4W03

ENVIRONMENTAL POLICY

ENVIRSC 4EA3, ENVSOCTY 2EI3, 2EK3, 3EC3, 3EE3, 3EG3, 4ET3, 4HH3

GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND SPATIAL ANALYSIS

ENVSOCTY 2GI3, 3GI3, 3GV3, 3SR3, 4GA3, 4GS3, 4GT3, 4SR3

2. Students aiming to meet the academic requirements for professional registration of Geoscientists (PGeo) in Ontario can find additional information on these requirements on the website: https://www.science.mcmaster.ca/geo/undergraduate/undergrad-welcome.html. Students are encouraged to consult with the academic program advisor in the School of Earth, Environment & Society to ensure proper selection of courses for professional registration. The Honours programs offered by the School of Earth, Environment & Society may not fulfill professional registration requirements.
3. All students are strongly encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to discuss program requirements and course selections.
4. There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
5. The field components of EARTHSC 2FE3 and 3FE3, are normally taken outside of the normal term. Details are announced in December (EARTHSC 2FE3) or March (EARTHSC 3FE3).
6. A Minor in Earth Sciences, Environment & Society, Environmental Sciences or Geography and Earth Sciences is not permitted in the Honours Earth and Environmental Sciences program. However, Minors in Environmental Studies, Geographic Information Systems and Geography are permitted.
7. In order to meet the Compulsory Foundation Science and Geoscience requirements for the Professional Geoscientist Certification, completion of the following courses is required: CHEM 1A03, EARTHSC 2E03, 2K03, 3FE3, 3Z03, MATH 1A03 or 1LS3, and PHYSICS 1A03, 1C03 or 1V03. Additional requirements are posted on the website https://www.science.mcmaster.ca/geo/images/documents/APGO_Environmental_Geoscience_Stream.pdf.
8. ENVSOCTY 3MB3 (or EARTHSC 3MB3 or ENVIRSC 3MB3) or STATS 2B03 must be completed by the end of Level III.

Course List 1

- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology or
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2E03 - Introductory Organic Chemistry
- EARTHSC 2FE3 - Introduction to Field Methods in Earth Sciences
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- STATS 2B03 - Statistical Methods for Science

Course List 2

- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3DD3 - Communities and Ecosystems
- BIOLOGY 3SS3 - Population Ecology
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

- CHEM 2OC3
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- EARTHSC 2G03 - Earth Surface Process
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3K03 - Petrology
- EARTHSC 3P03 - Paleoecology
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 3W03 - Physical Hydrogeology
- EARTHSC 3Z03 - Structural Geology
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- EARTHSC 4FF3 - Topics of Field Research
- EARTHSC 4G03 - Glacial Sediments and Environments
- EARTHSC 4MT6 A/B - Senior Thesis
- EARTHSC 4PA3 - Paleoenvironmental Analysis
- EARTHSC 4T03 - Plate Tectonics and Resources
- EARTHSC 4V03 - Exploration Geophysics
- EARTHSC 4WB3 - Contaminant Hydrogeology
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4BB3 - Field Techniques in Hydrology
- ENVIRSC 4C03 - Advanced Physical Climatology
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVIRSC 4W03 - Hydrologic Modelling
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS
- ENVSOCTY 3MB3 - Data Analysis
- ENVSOCTY 3SR3 - Remote Sensing
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4GS3 - GIS Programming
- ENVSOCTY 4GT3 - Web GIS
- ENVSOCTY 4SR3 - Advanced Remote Sensing

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units

- EARTHSC 2E03 - Earth History
- EARTHSC 2K03 - Optical Crystallography and Mineralogy
- EARTHSC 2T03 - Geology of Canada
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology

3 units

from

- *Course List 1*

0-3 units

- CHEM 1A03 - Introductory Chemistry I (if not completed in Level I)

(See *Admission Note 1* above.)

6-9 units

- Electives

LEVEL III: 30 UNITS

12 units

- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3FE3 - Field Camp
- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- EARTHSC 3Z03 - Structural Geology

(See *Program Note 5* above.)

6 units

from

- *Course List 2*

0-3 units

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 8* above.)

9-12 units

- Electives

LEVEL IV: 30 UNITS

18 units

from *Course List 2*,

which must include one of

- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences

0-3 units

from the following courses, if not already completed

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

9-12 units

- Electives

HONOURS EARTH AND ENVIRONMENTAL SCIENCES CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Earth and Environmental Sciences with a Grade Point Average of at least 5.0 and completion of the following courses:

6 UNITS

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

3 UNITS

- CHEM 1A03 - Introductory Chemistry I

18 UNITS

- EARTHSC 2E03 - Earth History
- EARTHSC 2K03 - Optical Crystallography and Mineralogy
- EARTHSC 2T03 - Geology of Canada
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology

3 UNITS

from

- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2E03 - Introductory Organic Chemistry
- EARTHSC 2FE3 - Introduction to Field Methods in Earth Sciences
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- STATS 2B03 - Statistical Methods for Science

NOTE

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Program Director.

Program Notes

1. This is a five- level (year) co-op program which includes two eight-month work terms which must be spent in earth and environmental sciences related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Earth and Environmental Sciences at McMaster encompass five major themes: Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis. It should be noted that each thematic area has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). Students may elect to take some or all of the upper level courses from different areas. In addition, there is a set of courses encompassing research design, field work, internships, and the senior thesis or review paper.

AQUEOUS ENVIRONMENTAL GEOCHEMISTRY

EARTHSC 3CC3, 4CC3, 4N03, ENVIRSC 2Q03, 3O03

EARTH SCIENCES

EARTHSC 2E03, 2FE3, 2G03, 2K03, 2T03, 3E03, 3K03, 3P03, 3V03, 3Z03, 4G03, 4PA3, 4T03, 4V03, 4VV3, ENVSOCTY 3SR3

ENVIRONMENTAL HYDROLOGY AND CLIMATE

EARTHSC 3CC3, 3W03, 4CC3, 4WB3, ENVIRSC 2B03, 2C03, 2W03, 3B03, 4BB3, 4C03, 4W03

ENVIRONMENTAL POLICY

ENVIRSC 4EA3, ENVSOCTY 2EI3, 2EK3, 3EC3, 3EE3, 3EG3, 4ET3, 4HH3

GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND SPATIAL ANALYSIS

ENVSOCTY 2GI3, 3GI3, 3GV3, 3SR3, 4GA3, 4GS3, 4GT3, 4SR3

5. Students aiming to meet the academic requirements for professional registration of Geoscientists (P.Geo.) in Ontario can find additional information on these requirements on the website: https://www.science.mcmaster.ca/geo/undergraduate/undergrad-welcome.html. Students are encouraged to consult with the academic program advisor in the School of Earth, Environment & Society to ensure proper course selection for professional registration. The Honours programs offered by the School of Earth, Environment & Society may not fulfill professional registration requirements.
6. There are Level II prerequisites for many Level III courses; these should be considered when choosing Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the list of thematic areas applicable to all Honours Earth and Environmental Sciences programs.
7. Students should seek academic program advising from the School of Earth, Environment & Society to ensure that their choices are appropriate.
8. The field component of EARTHSC 2FE3 and 3FE3 are normally taken outside of the normal term. Details are announced in December (EARTHSC 2FE3) or March (EARTHSC 3FE3).
9. Students who did not complete Grade 12 Physics U must complete PHYSICS 1A03 or 1V03. One of PHYSICS 1A03, 1C03 or 1V03 must be completed prior to graduation.
10. ENVSOCTY 3MB3 or STATS 2B03 must be completed by the end of Level IV.
11. Co-op students interested in pursuing GIS-related work placements and/or a Minor or Concurrent Certificate in Geographic Information Systems must complete ENVSOCTY 2GI3 in Fall Term of Level II and one of ENVSOCTY 3GI3 or 3GV3 in Winter Term of Level II. Students are encouraged to consult with an academic advisor to ensure proper course selection.

Earth and Environmental Sciences Co-op Course List

- BIOLOGY 2D03 - Plant Biodiversity and Biotechnology
- BIOLOGY 2F03 - Fundamental and Applied Ecology
- BIOLOGY 3DD3 - Communities and Ecosystems
- BIOLOGY 3SS3 - Population Ecology
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2AA3
- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II
- CHEM 2OC3
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- EARTHSC 2G03 - Earth Surface Process
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3K03 - Petrology
- EARTHSC 3P03 - Paleoecology
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 3W03 - Physical Hydrogeology
- EARTHSC 3Z03 - Structural Geology
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- EARTHSC 4G03 - Glacial Sediments and Environments
- EARTHSC 4MT6 A/B - Senior Thesis
- EARTHSC 4PA3 - Paleoenvironmental Analysis
- EARTHSC 4T03 - Plate Tectonics and Resources
- EARTHSC 4V03 - Exploration Geophysics
- EARTHSC 4WB3 - Contaminant Hydrogeology
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4BB3 - Field Techniques in Hydrology
- ENVIRSC 4C03 - Advanced Physical Climatology
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVIRSC 4W03 - Hydrologic Modelling
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS
- ENVSOCTY 3MB3 - Data Analysis
- ENVSOCTY 3SR3 - Remote Sensing
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4GS3 - GIS Programming
- ENVSOCTY 4GT3 - Web GIS

- ENVSOCTY 4MS3 - Independent Study
- ENVSOCTY 4SR3 - Advanced Remote Sensing

Requirements

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Earth and Environmental Sciences (See *Admission* above.)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

12 units

- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3FE3 - Field Camp
- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- EARTHSC 3Z03 - Structural Geology

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

(See *Program Note 3* above.)

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

18 units

from the *Earth and Environmental Sciences Co-op Course List*,

which must include one of

- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences

0-3 units

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 10* above.)

0-3 units

from the following courses, if not already completed

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6-12 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

from the *Earth and Environmental Sciences Co-op Course List*,

which must include one of

- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences

(if none of EARTHSC 4MT6 A/B, ENVIRSC 4EA3 or 4MI3 were completed in Level IV)

9 units

- Electives

Requirements for Students Who Entered Prior to September 2023

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Earth and Environmental Sciences (See *Admission* above.)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

9 units

- EARTHSC 3FE3 - Field Camp
- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- EARTHSC 3Z03 - Structural Geology

3 units

from

- the *Earth and Environmental Sciences Co-op Course List*

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

(See *Program Note 3* above.)

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

18 units
from the *Earth and Environmental Sciences Co-op Course List*,
which must include one of
- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences

0-3 units
from
- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

(See *Program Note 10* above.)
0-3 units
from the following courses, if not already completed
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

6-12 units
- Electives

Spring/Summer Term:
Work Term
1 course
- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V
Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)
Fall Term:
Work Term
1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
6 units
from the *Earth and Environmental Sciences Co-op Course List*,
which must include one of
- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences

(if none of EARTHSC 4MT6 A/B, ENVIRSC 4EA3 or 4MI3 were completed in Level IV)
9 units
- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

HONOURS ENVIRONMENTAL SCIENCES (B.SC.)

Admission Note

EARTHSC 1G03 and ENVIRSC 1C03 must be completed by the end of Level II.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS
from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1M03
- MATH 1MM3 - Applied Calculus

6 UNITS
from the following courses, with an average of at least 6.0
- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

9 UNITS
from
- the *Science I Course List*

Program Notes

1. Environmental Sciences at McMaster encompass a number of major themes, including Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis, Health and Population, Economic Development and Urban Studies. Each thematic area has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to discuss course selection and program requirements.
2. This program is not intended to satisfy the academic requirements for professional registration of Geoscientists (PGeo) in Ontario. Students interested in PGeo professional registration are encouraged to view the requirements for the Honours Earth and Environmental Sciences (B.Sc.) program.
3. The Honours Environmental Sciences program requires students to take one research design course (EARTHSC 3RD3 or ENVSOCTY 3MA3) and one field methods course (ENVIRSC 3ME3 or ENVSOCTY 3MF3). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to decide which of these courses best fits their area of academic interest.
4. The field components of ENVIRSC 3ME3 and ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS
30 units
(See *Admission* above.)

LEVELS II-IV: 90 UNITS

6 units

- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems

3 units

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

3 units

from

- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- ENVSOCTY 3MA3 - Research Methods

(See *Program Note 3* above.)

3 units

from

- ENVIRSC 3ME3 - Environmental Field Camp
- ENVSOCTY 3MF3 - Urban Field Camp

(See *Program Notes 3* and *4* above.)

45 units

from

- Levels II, III, IV Earth Sciences, Environmental Sciences, Environment and Society courses, which must include 18 units from Levels III, IV

3-6 units

from

- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVIRSC 4MT6 A/B - Senior Thesis
- ENVSOCTY 4EA3 - Environmental Assessment
- ENVSOCTY 4ET3 - Environmental Ethics and Policy
- ENVSOCTY 4MS3 - Independent Study
- ENVSOCTY 4MT6 A/B - Senior Thesis

24-27 units

- Electives

Note

Students who entered the program prior to September 2020 may refer to their Academic Advisement report or contact an Academic Advisor in the Office of the Associate Dean of Science (Academic) for program requirements.

HONOURS ENVIRONMENTAL SCIENCES CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Environmental Sciences with a Grade Point Average of at least 5.0 and completion of the following courses:

6 UNITS

from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

6 UNITS

- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems

15 UNITS

from

- Level II, III, IV Earth Sciences, Environmental Sciences, Environment & Society courses

NOTE

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Program Director.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in environmental sciences related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Environmental Sciences at McMaster encompass a number of major themes, including Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis, Health and Population, Economic Development and Urban Studies. Each thematic area has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to discuss course selection and program requirements.
5. This program is not intended to satisfy the academic requirements for professional registration of Geoscientists (PGeo) in Ontario. Students interested in PGeo professional registration are encouraged to view the requirements for the Honours Earth and Environmental Sciences (B.Sc.) program.
6. The Honours Environmental Sciences program requires all students to take one research design course (EARTHSC 3RD3 or ENVSOCTY 3MA3) and one field methods course (ENVIRSC 3ME3 or ENVSOCTY 3MF3). All students are encouraged to meet with the School of Earth, Environment & Society's academic program advisor to decide which of these courses best fits their area of academic interest.
7. The field components of ENVIRSC 3ME3 and ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.
8. Co-op students interested in pursuing GIS-related work placements and/or a Minor or Concurrent Certificate in Geographic Information Systems must complete ENVSOCTY 2GI3 in Fall Term of Level II and one of ENVSOCTY 3GI3 or 3GV3 in Winter Term of Level II. Students should consult with the academic program advisor in the School of Earth, Environment & Society to ensure proper course selection.
9. Students who entered the program prior to September 2021, must complete a total of 27 units from the *Environmental Sciences Course List* during Levels III, IV and V, of which must include 18 units from Levels III, IV.

Requirements

120 units total (Levels I to V), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Environmental Sciences (See *Admission* above.)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- ENVIRSC 3ME3 - Environmental Field Camp
- ENVSOCTY 3MF3 - Urban Field Camp

(See *Program Note 7* above.)

3 units

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science

3 units

from

- EARTHSC 3RD3 - Research Design and Dissemination in Earth and Environmental Sciences
- ENVSOCTY 3MA3 - Research Methods

(See *Program Note 6* above.)

3 units

from

- Level II, III, IV Earth Sciences, Environmental Sciences, Environment & Society courses

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

(See *Program Note 3* above.)

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

18 units

from

- Levels III, IV Earth Sciences, Environmental Sciences, Environment & Society courses

3-6 units

from

- EARTHSC 4MT6 A/B - Senior Thesis
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVIRSC 4MT6 A/B - Senior Thesis
- ENVSOCTY 4EA3 - Environmental Assessment
- ENVSOCTY 4ET3 - Environmental Ethics and Policy
- ENVSOCTY 4MS3 - Independent Study
- ENVSOCTY 4MT6 A/B - Senior Thesis

6-9 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

9 units

from

- Levels II, III, IV Earth Sciences, Environmental Sciences, Environment & Society courses

6 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Bachelor of Science

ENVIRONMENTAL SCIENCES (B.SC.)

Admission Note

EARTHSC 1G03 and ENVIRSC 1C03 must be completed by the end of Level II.

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including:

3 UNITS

from the following courses, with a grade of at least C-

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

18 UNITS

from

- the Science I Course List (See *Admission Note* above.)

Program Notes

1. Earth and Environmental Sciences at McMaster encompass five major themes: Aqueous Environmental Geochemistry, Earth Sciences, Environmental Hydrology and Climate, Environmental Policy, GIS and Spatial Analysis. It should be noted that each thematic area has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). Students may elect to take some or all of the upper level courses from different areas. In addition, there is a set of courses encompassing research design, field work, internships, and the senior thesis or review paper.

AQUEOUS ENVIRONMENTAL GEOCHEMISTRY
EARTHSC 2L03, 3CC3, 4CC3, ENVIRSC 2Q03, 3O03, 4N03
EARTH SCIENCES
EARTHSC 2E03, 2FE3, 2G03, 2K03, 2T03, 3E03, 3K03, 3P03, 3V03, 3Z03, 4G03, 4PA3, 4T03, 4V03, 4VV3, ENVSOCTY 3SR3
ENVIRONMENTAL HYDROLOGY AND CLIMATE
EARTHSC 3CC3, 3W03, 4CC3, 4WB3, ENVIRSC 2B03, 2C03, 2W03, 3B03, 4BB3, 4C03, 4W03
ENVIRONMENTAL POLICY
ENVIRSC 4EA3, ENVSOCTY 2EI3, 2EK3, 3EC3, 3EE3, 3EG3, 4ET3, 4HH3
GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND SPATIAL ANALYSIS
ENVSOCTY 2GI3, 3GI3, 3GV3, 3SR3, 4GA3, 4GS3, 4GT3, 4SR3

2. Students aiming to meet the academic requirements for professional registration of Geoscientists (PGeo) in Ontario can find additional information on these requirements on the website: https://www.science.mcmaster.ca/geo/undergraduate/undergrad-welcome.html. Students are encouraged to consult with the academic program advisor in the School of Earth, Environment & Society to ensure proper selection of courses for professional registration. The Honours programs offered by the School of Earth, Environment & Society may not fulfill professional registration requirements.
3. There are Level II prerequisites for many Level III courses; these should be considered when choosing Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the list of thematic areas applicable to all Honours Earth and Environmental Sciences programs.
4. Students should seek academic program advising from the School of Earth, Environment & Society to ensure that their choices are appropriate.

Requirements

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-III: 60 UNITS

24 units

Levels II, III, IV courses from

- Earth Sciences, Environmental Science, or Environment & Society courses, of which at least 12 units must be Levels III, IV

9 units

from

- Faculty of Science courses

0-3 units

from the following courses, if only 3 units was completed in Level I

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

(See *Admission Note* above.)

24-27 units

- Electives

Minor(s):

MINOR IN EARTH SCIENCES

Notes

1. ISCI 1A24 A/B is a substitution for EARTHSC 1G03, ENVIRSC 1C03.
2. ISCI 2A18 A/B may be used as a substitution for 3 units of Level II Earth Sciences toward the Minor in Earth Sciences.
3. In order to declare a Minor in Earth Sciences, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6 UNITS

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

(See *Note 1* above.)

18 UNITS

from the following list, which must include at least six units from Levels III, IV Earth Sciences

- ASTRON 2E03 - Planetary Astronomy
- EARTHSC 2E03 - Earth History
- EARTHSC 2G03 - Earth Surface Process
- EARTHSC 2K03 - Optical Crystallography and Mineralogy
- EARTHSC 2T03 - Geology of Canada
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3K03 - Petrology
- EARTHSC 3P03 - Paleoecology
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 3W03 - Physical Hydrogeology
- EARTHSC 3Z03 - Structural Geology
- EARTHSC 4FF3 - Topics of Field Research
- EARTHSC 4G03 - Glacial Sediments and Environments
- EARTHSC 4PA3 - Paleoenvironmental Analysis
- EARTHSC 4T03 - Plate Tectonics and Resources
- EARTHSC 4V03 - Exploration Geophysics
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS

MINOR IN ENVIRONMENT AND SOCIETY

Notes

1. The Minor in Environment and Society is not open to students registered in any program in the School of Earth, Environment & Society.
2. In order to declare a Minor in Environment and Society, at least 12 units (above Level I) must be elective to degree.
3. Students interested in taking courses in Environmental Science and/or Earth Sciences subfields are encouraged to complete EARTHSC 1G03 and/or ENVIRSC 1C03.
4. Students are strongly encouraged to check the prerequisites of upper-level Earth Sciences, Environmental Science and Environment & Society courses and to speak with an Undergraduate Advisor in the School of Earth, Environment & Society regarding course selection.

Requirements

24 units total

3 UNITS

from

- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

3 UNITS

from

- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions

18 UNITS

from

- Levels II, III, IV Earth Sciences, Environmental Science, or Environment & Society, including at least six units from Levels III or IV (See *Notes 3* and *4* above.)

MINOR IN ENVIRONMENTAL SCIENCES

Notes

1. A Minor in Environmental Sciences is not permitted for students registered in any program in the School of Earth, Environment & Society.
2. ISCI 1A24 A/B is a substitution for EARTHSC 1G03, ENVIRSC 1C03.
3. ISCI 2A18 A/B may be used as a substitution for 3 units of Level II Earth Sciences toward the Minor in Environmental Sciences.
4. In order to declare a Minor in Environmental Sciences, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3 UNITS

from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment

(See *Note 2* above.)

21 UNITS

from

- Earth Sciences, Environmental Science or Environment & Society courses, including at least six units from Levels III or IV and no more than 3 units from Level I (See *Note 4* above.)

MINOR IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)

The Minor in Geographic Information Systems is being phased out. Graduation with this Minor will be last available to students graduating in 2026. Students who intended to complete this Minor should refer to the Concurrent Certificate in Geographic Information Science (GIS).

Notes

1. In order to declare a Minor in Geographic Information Systems (GIS), at least 12 units (above Level I) must be elective to degree.
2. ISCI 1A24 A/B is a substitute for EARTHSC 1G03, ENVIRSC 1C03.
3. Students are strongly encouraged to check the prerequisites of upper-level courses and to speak with an Undergraduate Advisor in the School of Earth, Environment & Society regarding course selection.
4. Co-op students interested in pursuing GIS-related work placements and/or a Minor in Geographic Information Systems must complete ENVSOCTY 2GI3 in Fall Term of Level II and one of ENVSOCTY 3GI3 or 3GV3 in Winter Term of Level II. Students are encouraged to consult with an academic advisor to ensure proper course selection.

Requirements

24 units total

6 UNITS

from

- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity
- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Note 2* above.)

3 UNITS

from

- ENVSOCTY 3MB3 - Data Analysis
- STATS 2B03 - Statistical Methods for Science
- STATS 3Y03 - Probability and Statistics for Engineering

9 UNITS

from

- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS

6 UNITS

from

- ENVSOCTY 3SR3 - Remote Sensing
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4GS3 - GIS Programming
- ENVSOCTY 4GT3 - Web GIS

School of Interdisciplinary Science (SIS)

https://sis.mcmaster.ca/undergraduate/isci/

Faculty as of January 15, 2025

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Ana R. Campos

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Chad Harvey (Integrated Science)
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Integrated Science Program

https://sis.mcmaster.ca/undergraduate/isci/

Notes Applicable to all Honours Integrated Science Programs

1. Beginning at Level II, Honours Integrated Science students may complete a concentration in one of the following areas:
    - Biology
    - Chemical Biology
    - Chemistry
    - Earth and Environmental Sciences
    - Environmental Sciences
    - Mathematics and Statistics
    - Medical & Biological Physics
    - Physics
    - Psychology, Neuroscience & Behaviour
    - Sustainable Chemistry
2. In addition to the content covered within the ISCI courses, completion of a concentration normally requires a minimum of 24 units in the other subject.
3. Level I Honours Integrated Science students are encouraged to review the specific program requirements of all concentrations they are considering in Level II in the programs section of the Academic Calendar.
4. Honours Integrated Science students, completing a concentration, are eligible to obtain a maximum of one minor, provided that the subject area is not integral to the requirements of the concentration. Honours Integrated Science students not completing a concentration may be eligible for up to two minors provided that, for each minor, at least 12 units (above Level I) are elective to the degree. All students should consult the Academic Program Advisor.
5. Honours Integrated Science students may not proceed to the next level unless a Grade Point Average of at least 5.0 has been achieved and all required courses for their current level have been successfully completed including:
    - Level I students must successfully complete all discipline-specific components of ISCI 1A24 A/B before proceeding to Level II and enrolment in ISCI 2A18 A/B.
    - Level I students who fail one or two discipline-specific components of ISCI 1A24 A/B may have the opportunity to successfully complete equivalent courses before proceeding to Level II and enrolment in ISCI 2A18 A/B.
    - Level I students who fail more than two discipline-specific components of ISCI 1A24 A/B may not continue in the program. Such students may apply to transfer to a program for which they qualify.
    - Level II students must successfully complete all discipline-specific components of ISCI 2A18 A/B or make up any failed course work prior to proceeding to Level III and enrolment in ISCI 3A12 A/B.
    - Level III students must successfully complete all discipline-specific components of ISCI 3A12 A/B prior to proceeding to Level IV and enrolment in ISCI 4A12 A/B.
6. Honours Integrated Science students who have successfully completed the required ISCI courses and whose Grade Point Average is between 4.5 and 4.9, may remain in the program but will be placed on Program Probation for one reviewing period. Students may be on Program Probation only once during the program.

Life Sciences

https://sis.mcmaster.ca/undergraduate/life-sciences/

Notes Applicable to all Honours Life Sciences Students

1. Honours Life Sciences students may not be eligible to complete a Minor in Biochemistry, Biology, Environmental Sciences or Psychology unless at least 12 of the required 18 units (above Level I) for the Minor are considered elective to the degree. Students wishing further information should consult with the Office of the Associate Dean, Undergraduate Studies.
2. Honours Life Sciences, as a second degree, may not be possible if the student's first undergraduate degree is in Biochemistry, Biology, Environmental Sciences, or Psychology, Neurosciences & Behaviour. Students wishing further information should consult with the Office of the Associate Dean, Undergraduate Studies.

Mohawk College of Applied Arts and Technology

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Vanessa Reis/ MRT *(R)*, CTIC

Medical Radiation Sciences

https://sis.mcmaster.ca/undergraduate/medical-radiation-sciences/
This program is offered jointly in partnership with Mohawk College of Applied Arts and Technology and McMaster University. Students pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.

Students enrolled in the Honours Medical Radiation Sciences programs, in addition to meeting the *General Academic Regulations* of the University, shall be subject to the following program regulations. Since the academic regulations are continually reviewed, the University reserves the right to change the regulations.
Registration in the Honours Medical Radiation Sciences program implies acceptance on the part of the student of the objectives of the program and the methods by which progress toward the achievement of those objectives is evaluated.

Regulations for License to Practice

A degree in medical radiation sciences does not in itself confer the right to practice in radiography, radiation therapy or sonography in Canada. Graduation from the Honours Medical Radiation Sciences program does not guarantee registration with the regulatory bodies of the respective professions or employment within Canada. All graduates who wish to engage in clinical practice in ultrasonography, radiography or radiation therapy are subject to any qualifying examinations and other requirements by the certifying and/or regulatory bodies for each of these professions. Regulatory requirements are subject to change. Students intending to practice outside Ontario are urged to consult the licensing body of that province regarding registration. Licensing requirements vary somewhat among the provinces.
The current Ontario requirements for registration are:

- In order to work as a medical radiation technologist and/or diagnostic medical sonographer in Ontario, you must be registered with the College of Medical Radiation and Imaging Technologists of Ontario (CMRITO) Council. Detailed information regarding the registration requirements for the College may be found in the Regulations section.
- Applicants must complete an approved training program in medical radiation technology in one of the specialties listed at https://www.cmrito.org/applicants/approved-training-programs/. Applicants trained in Ontario must successfully complete the examination set by the Canadian Association of Medical Radiation Technologists (CAMRT), for radiography and radiation therapy or Sonography Canada for ultrasonography. These are the examinations approved by the CMRITO.

Functional Demands

The Medical Radiation Science health professions are physically and emotionally demanding because they routinely involve interaction with patients. Since applicants will work in these professions, it is important that they become familiar with any functional demands before entering the program to ensure that they can perform at an acceptable standard for employment. A student's choice of specialization is not guaranteed in the program; applicants must be prepared to enter any specialization. The functional demands associated with the health professions represented by the specializations are listed below. The list is not exhaustive, but is meant to provide an indication of the minimum demands. By registering in the program, applicants acknowledge that they are able to meet all of the demands.

All professionals must demonstrate:

- Empathy when interacting with patients of all ages
- Manual dexterity and eye-hand coordination to manipulate equipment controls
- Physical strength to position patients and manipulate heavy equipment through a wide range of motions
- Acute hearing to respond to low voices and ambient alarms and buzzers
- Critical thinking to be able to prioritize and respond to emergency situations

The Radiographer must possess:

- Acute vision to view images and distinguish fine features in contrast and detail

The Ultrasonographer must possess:

- Acute vision to view images and distinguish fine features in contrast and detail including nuances in colour Doppler ultrasound images
- Acute hearing to assess auditory Doppler ultrasound signals
- The ability to apply 3-D spatial relationships

The Radiation Therapist must possess:

- Acute vision to view equipment readouts at a distance in darkened rooms
- The ability to apply 3-D spatial relationships

Program Specific Academic Regulations

English Language Proficiency

While the minimum English language requirements may gain admission to the Honours Medical Radiation Sciences I program, students will find a need for a high level of verbal proficiency. Students lacking these skills may be required to participate in additional ESL training. Lack of English proficiency may impact a student's ability to complete performance requirements in skills and clinical courses and, therefore, jeopardize the ability to attain a passing grade in these required courses.

Qualifying for Level II Programs

Enrolment in each of the Level II program specializations is limited. All Honours Medical Radiation Sciences I students who meet the admission requirements by the end of the previous Fall/Winter session will be guaranteed entry to a Level II program specialization. Level I students who, at the end of the review period, require the completion of additional academic work in order to meet the Level II admission requirements are not guaranteed admission to a Level II program specialization. Such students may be considered for admission after meeting the admission requirements, if space is available. Level I students whose Level I Fall/Winter Average (on at least 24 units) is less than 5.0 and/or whose Grade Point Average is less than 5.0 can no longer continue in the Honours Medical Radiation Sciences program without approval from the Reviewing Committee.

Continuation in the Program

Students may not proceed to the next level until they have completed all required courses for the current level, and have attained a Grade Point Average of at least 5.0.
In Level I, students are reviewed at the end of Winter Term. Beginning at Level II, students are reviewed at the end of each term to determine eligibility to continue.
To continue in the Honours Medical Radiation Sciences program, a student must maintain a minimum Grade Point Average of 5.0 and successfully complete all Medical Radiation Sciences courses. Failure to do so may prevent progression to the next term and/or level.
A student whose Grade Point Average is at least 4.5 may, at the discretion of the Reviewing Committee, proceed in the program but will be placed on Program Probation for one reviewing period of two consecutive terms. A student may be placed on Program Probation only once during the program.
A student may not continue in the program if any of the following criteria is met. The student:

1. Fails to obtain a Grade Point Average of at least 5.0 at the completion of the Program Probation;
2. Obtains a Grade Point Average of less than 5.0 and has not been granted Program Probation;
3. Fails any course that is required for completion of the level in which the student is registered;
4. Fails the second attempt at any required course following re-entry to the program;
5. Fails any skills or clinical course following re-entry to the program;
6. Fails to complete the program requirements for graduation within the

maximum allowable time (five years from the time of registration in Level II of the student's current specialization).

Level I students who may not continue in the program and whose Grade Point Average is between 3.5 and 4.4 may apply to transfer to a program for which they qualify. Level I students who may not continue in the program and whose Grade Point Average is between 3.0 and 3.4 may apply to transfer into Science on Academic Probation.

Upper level students who may not continue in the program may apply to transfer to a program for which they qualify.

Deferred Examinations/Incomplete Course Work

See the heading Deferred Examinations under Examinations in the *General Academic Regulations* section of the Calendar for application procedures for Deferred Exams.

Students who have not completed all prerequisites for a clinical practicum will not be permitted to commence the clinical practicum. Such students will be reviewed by the Reviewing Committee to determine if the minimum prerequisite knowledge and skills have been attained to begin the clinical practicum. Failure to begin clinical practicum at the scheduled time could result in an extension of the time required to complete the program.

Workload

Students are required to be registered in a full load of courses as prescribed by level and term for their program.

Students in Honours Medical Radiation Sciences I must complete at least 24 units during the Fall/Winter Terms. Transfer credit and credit earned during the Spring/Summer Term may not be used to reduce this minimum load requirement.

Repeated Courses

Any failed course must be repeated if it is a required course for the program, or must be repeated or replaced if it is not explicitly required.

Level of Registration

Students must register for all outstanding work of one level before attempting work for a higher level. Courses must be taken in the sequence specified by the program requirements.

Skills and Clinical Courses

All professional skills and clinical courses are graded on a pass/fail basis. The performance activities associated with each course are detailed in the course outline and manual, and must be successfully achieved for attainment of a passing grade in the course.

Clinical Practicum 1 (CP1), completed during the Spring/Summer Term after Level II is a minimum of 11 weeks. Clinical Practicum 2 (CP2) and Clinical Practicum 3 (CP3) are a minimum of 14 weeks in length. Students who are not meeting the conditions of their Learning Contract will be required to withdraw from the course, prior to the final assessment. A student must meet all the domains of practice, achieve all of the required Skills Assessments and Competencies and attendance requirements by the end of CP1, CP2 and CP3, in order to receive a passing grade. When deemed necessary by the Clinical Coordinator, to accommodate students who need to make up for missed time, require remediation or need to complete assigned competencies up to two weeks may be added to CP1 (to a maximum of 13 weeks), CP2 or CP3 (to a maximum of 16 weeks). Students who do not successfully complete CP1, CP2, CP3 may seek permission to re-enter in a subsequent session. Eligibility to complete the placement course in a subsequent session will be determined by the Review Committee.

Attendance is mandatory in all professional skills laboratory courses and clinical practica. Students are required to attend each clinical practicum on a full-time basis (i.e. 37.5 hours/week as scheduled by the clinical agency). Excessive absenteeism may jeopardize a student's ability to meet course performance requirements and result in a Fail grade for the course.

The Honours Medical Radiation Sciences program monitors and documents students' experience and performance in skills and clinical courses to provide evidence of the students' ability to meet program requirements and to meet the minimum practice requirements to be eligible for registration to practice.

Student Conduct in the Program

The University reserves the right to cancel the academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. The Honours Medical Radiation Sciences program reserves the right to remove a student from a skills-based course, clinical placement or laboratory setting at any point during the term if the student exhibits unsafe clinical practice or behaviour that places the patient or others at risk or is deemed a serious breach of professional behaviour. Such removal may result in the student receiving a grade of F in the course and may result in dismissal from the program.

Internal Re-entry to the Program

A student who becomes ineligible to continue in the program may apply for re-entry. Applications for Re-entry may be obtained through the School of Interdisciplinary Science (SIS). Request for re-entry may be made up to a maximum of two calendar years following the year in which the student becomes ineligible to continue. **Re-entry is neither automatic nor guaranteed.**

Graduation

A student is eligible for graduation when all of the following criteria are met. The student must:

- Complete all required courses, including electives, with a Grade Point Average of at least 5;
- Complete all skills and clinical courses with a Pass grade;
- Complete all required courses in Levels II - IV within five years of registration in Level II.

Leave of Absence from the Program

Students wishing to suspend their studies from the program must apply for a Leave of Absence (LOA). Approval is not guaranteed.

Students should note that the program requirements, including all required courses in Levels II - IV, must be completed within five years of first registration in Level II, and that the leave may jeopardize the student's ability to meet this requirement.

Application for a leave of absence must be made in writing normally within two months prior to the intended start of the leave. Forms are available through the School of Interdisciplinary Science (SIS).

Any student who returns from a leave of absence into a clinical practicum term will be required to complete an additional non-credit course (for which a fee is involved) to ensure the student's professional knowledge and skills meet the minimum requirements for entrance to that clinical practicum. This course must be completed in the term immediately preceding the clinical practicum.

Re-entry is not guaranteed for students who suspend their studies from the program without an approved Leave of Absence. Such students must contact the Director of the School of Interdisciplinary Science (SIS) to determine eligibility and appropriate procedures for re-entry. Students re-admitted to the program must adhere to the rules, regulations and program requirements of the Undergraduate Calendar in the year of re-entry into the program. Former Medical Radiation Sciences students who obtain permission for re-entry to a specialization will not be guaranteed protected status in the allotment process, regardless of their previous placement history.

Notes

1. The overall program comprises ten terms within four calendar years. Three full terms are spent in clinical placement.
2. Students apply for their Level II program selections during Winter Term of Level I. At the end of Level I, eligible Honours Medical Radiation Sciences students are streamed into one of three specializations: Radiography, Radiation Therapy, and Ultrasonography. Each have limited enrolment. Selection of students into Level II specializations is on the basis of academic achievement (for Level I students, the Fall/Winter Average, on at least 24 units of study). Depending on a student's relative academic ranking in the list of those applying to enter a specialization, they may or may not be placed in the specialization of their choosing.
3. **Transfer within Honours Medical Radiation Sciences:** Any Honours Medical Radiation Sciences student currently registered in one program specialization who wishes to transfer into another specialization must submit the transfer request in writing to the program by the end of April. As admission into Level II programs is a competitive process normally based on the Level I Fall/Winter Average, such transfer requests will be considered only after all eligible Level I students have been allocated into their specializations, and only if there is space remaining. Transfers are made into Level II only, and would result in an increase in the length of time required for the student to complete the program. Transfers may not be made into Level II from any other program. **Transfers are neither automatic nor guaranteed.**
4. Placements will be with agencies that have contracted in advance with Mohawk College to provide specific experiences and resources during the normal clinical semester schedule; therefore, placements are not available at any other agencies or during other times. The College, in accordance with established policy, will determine allocation of students to these clinical facilities. The final assignment of learning settings is constrained by the availability of site resources. Students may be required to attend clinical practica in a setting that is not of their choosing. The College cannot accommodate any student requests for special consideration. Students must prepare financially and personally to relocate and/or commute to their assigned clinical placements. Students are responsible for arranging their own travel to and from assigned placements and are responsible for covering any costs incurred.
5. All students will be required to attend full-time clinical practica at a minimum of two different clinical agencies that may be located across Ontario.
6. **Basic Cardiac Life Support Training:** All Level II students are required to have obtained a current certificate in Basic Cardiac Life Support - HCP (Health Care Provider) and First Aid Training prior to commencing Term 2 of Level II. Current certificates are also required for Clinical Practica 2 and 3 in Level IV.
7. All students will be required to act as simulated patients for their peers in skills course labs and during skills practice sessions.
8. **Immunization and Health Screening:** The Ontario Public Hospitals Act requires that all persons working or on educational placement in a hospital setting meets criteria regarding surveillance for infectious diseases. All Level II students will be required to provide evidence of compliance with completion of mandatory immunization requirements as well as completing pre-clinical disease screening. Updated screening may be required for Level IV clinical practica.
9. Mask fit testing and a satisfactory Police Records Check are required prior to the commencement of each clinical placement.
10. All costs associated with pre-clinical requirements are the responsibility of the student.
11. All students are required to submit pre-clinical requirements by dates specified by the program. Failure to meet required deadlines may result in delay or loss of the clinical placement.
12. Levels II through IV run consecutively from September of Level II to completion of the program at the end of April in Level IV. The pattern of semesters of clinical practicum and academic courses is shown in the chart below.

Bachelor of Medical Radiation Sciences (Honours)

HONOURS MEDICAL RADIATION SCIENCES - RADIATION THERAPY SPECIALIZATION (B.M.R.SC.)

Effective September 2023, the Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences - Radiation Therapy Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.

Program Notes

- Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.
- The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:

12 UNITS

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology

(See *Admission Note* above.)

6 UNITS

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements

150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II

Fall and Winter Terms: 30 units:

27 units

from

- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- MEDRADSC 2D03 - Relational Anatomy I
- MEDRADSC 2RA3 - Relational Anatomy II
- MEDRADSC 2S03 - Clinical Oncology I
- MEDRADSC 2T03 - Clinical Oncology II
- MEDRADSC 2U03 - Radiation Therapy Skills I
- MEDRADSC 2W03 - Physics and Instrumentation for Radiation Therapy
- MEDRADSC 2X03 - Radiobiology and Protection
- MEDRADSC 2Z03

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

15 units

- MEDRADSC 2V15 - Radiation Therapy Clinical Practicum I

LEVEL III

Fall and Winter Terms: 30 units:

21 units

from

- MEDRADSC 3DA3 - Advanced Studies in Computed Tomography
- MEDRADSC 3K03 - Computed Tomography
- MEDRADSC 3LA3 - Radiation Therapy Skills II
- MEDRADSC 3S03 - Treatment Planning I
- MEDRADSC 3V03 - Treatment Planning II
- MEDRADSC 3W03
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

9 units

- MEDRADSC 3AA3 - Interdisciplinary Health Care
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3BB3
- MEDRADSC 3LB3 - Radiation Therapy Skills III

6 units

- Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3Z06 - Research Project

LEVEL IV

Fall and Winter Terms: 30 units:

30 units

- MEDRADSC 4E15 - Radiation Therapy Clinical Practicum II
- MEDRADSC 4F15 - Radiation Therapy Clinical Practicum III

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		Clinical Practicum I
Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

HONOURS MEDICAL RADIATION SCIENCES - RADIOGRAPHY SPECIALIZATION (B.M.R.SC.)

Effective September 2023, the Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.

Program Notes

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:

12 UNITS

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology

(See *Admission Note* above.)

6 UNITS

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements

150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II

Fall and Winter Terms: 30 units:

27 units

from

- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- MEDRADSC 2BB3
- MEDRADSC 2D03 - Relational Anatomy I
- MEDRADSC 2G03 - Radiographic Skills I
- MEDRADSC 2H03 - Radiographic Skills II
- MEDRADSC 2I03 - Pathology and Procedures I
- MEDRADSC 2RA3 - Relational Anatomy II
- MEDRADSC 2X03 - Radiobiology and Protection
- MEDRADSC 2Y03 - Radiographic Imaging and Instrumentation I

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

15 units

- MEDRADSC 2J15 - Radiography Clinical Practicum I

LEVEL III

Fall and Winter Terms: 30 units:

21 units

- MEDRADSC 3DA3 - Advanced Studies in Computed Tomography
- MEDRADSC 3G03 - Radiographic Imaging and Instrumentation II
- MEDRADSC 3H03 - Quality Control in Radiography
- MEDRADSC 3J03 - Pathology and Procedures II
- MEDRADSC 3K03 - Computed Tomography
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

9 units

- MEDRADSC 3AA3 - Interdisciplinary Health Care
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3L03 - Radiographic Skills III

6 units

- Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3Z06 - Research Project

LEVEL IV

Fall and Winter Terms: 30 units:

30 units

- MEDRADSC 4A15 - Radiography Clinical Practicum II
- MEDRADSC 4B15 - Radiography Clinical Practicum III

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		Clinical Practicum I
Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

HONOURS MEDICAL RADIATION SCIENCES - ULTRASONOGRAPHY SPECIALIZATION (B.M.R.SC.)

Effective September 2023, the Bachelor of Medical Radiation Sciences - Ultrasonography Specialization (B.M.R.Sc.) degree has been replaced by an Honours Bachelor of Medical Radiation Sciences - Ultrasonography Specialization (B.M.R.Sc.) degree. All students previously registered in this program have been transferred to Honours Bachelor of Medical Radiation Sciences - Ultrasonography Specialization (B.M.R.Sc.) degree program and will graduate with the new degree designation.

Program Notes

1. Students in this program pursue two qualifications simultaneously, and graduates receive the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College and the McMaster Honours Bachelor of Medical Radiation Sciences degree.
2. The timing of the Spring/Summer and the Level III and IV Fall/Winter Terms may not adhere to the *Sessional Dates*, as published in this Calendar.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and admission is by selection but requires, as a minimum, completion of Level I Honours Medical Radiation Sciences with a Fall-Winter Average (on a minimum of 24 units) of at least 5.0 and a cumulative Grade Point Average of at least 5.0 including:

12 UNITS

- MEDRADSC 1B03 - Introduction to Pathology
- MEDRADSC 1C03 - Introduction to Physics for Medical Radiation Sciences
- MEDRADSC 1E03 - Inquiry in Medical Radiation Sciences
- MEDRADSC 1F03 - Professions in Medical Radiation Sciences

3 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology

(See *Admission Note* above.)

6 UNITS

- KINESIOL 1Y03 - Human Anatomy and Physiology I
- KINESIOL 1YY3 - Human Anatomy and Physiology II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1MM3 - Applied Calculus

Requirements

150 units total (Levels I to IV), 45 units of clinical practicum are interspersed with 75 units of academic courses in Levels II to IV

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II

Fall and Winter Terms: 30 units:

27 units

from

- MEDRADSC 2A03 - Patient Care
- MEDRADSC 2AA3 - Imaging Procedures in Health Care
- MEDRADSC 2BB3
- MEDRADSC 2K03 - Applied Sonographic Physics and Instrumentation I
- MEDRADSC 2L03 - Abdominal Ultrasonography I
- MEDRADSC 2M03 - Obstetrical and Gynecologic Ultrasonography I
- MEDRADSC 2N03 - Sonographic Skills I
- MEDRADSC 2O03 - Abdominal Ultrasonography II
- MEDRADSC 2P03 - Obstetrical and Gynecological Ultrasonography II
- MEDRADSC 2Q03 - Sonographic Skills II

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

15 units

- MEDRADSC 2R15 - Ultrasonography Clinical Practicum I

LEVEL III

Fall and Winter Terms: 30 units:

21 units

- MEDRADSC 3N03 - Vascular Ultrasonography
- MEDRADSC 3O03 - Sonographic Skills III
- MEDRADSC 3P03 - Obstetrical and Gynecologic Ultrasonography III
- MEDRADSC 3Q03 - Applied Sonographic Physics and Instrumentation II
- MEDRADSC 3R03 - Musculoskeletal Ultrasonography
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

3 units

- Electives

Spring/Summer Term: 15 units:

(See *Program Note 2* above.)

9 units

- MEDRADSC 3AA3 - Interdisciplinary Health Care
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3M03 - Abdominal Ultrasonography III

6 units

- Electives

which may include

- MEDRADSC 3DE3 - Introduction to Magnetic Resonance Imaging
- MEDRADSC 3DJ3 - Pediatric Sonography
- MEDRADSC 3Z06 - Research Project

LEVEL IV

Fall and Winter Terms: 30 units:

30 units

- MEDRADSC 4C15 - Ultrasonography Clinical Practicum II
- MEDRADSC 4D15 - Ultrasonography Clinical Practicum III

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		Clinical Practicum I
Level III	45 units from Academic Level III		
Level IV	Clinical Practicum II	Clinical Practicum III	

Bachelor of Science (Honours)

HONOURS INTEGRATED SCIENCE (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units

- ISCI 2A18 A/B - Integrated Science II

12 units

- Electives

LEVEL III: 30 UNITS

12 units

- ISCI 3A12 A/B - Integrated Science III

18 units

- Electives

LEVEL IV: 30 UNITS

12 units

- ISCI 4A12 A/B - Integrated Science IV

18 units

- Electives

HONOURS INTEGRATED SCIENCE - BIOCHEMISTRY CONCENTRATION (B.SC.)

The Honours Integrated Science - Biochemistry Concentration program is no longer available. Admission was last available in September 2022.

Program Notes

1. Students are required to complete BIOCHEM 2L06 in Level II.
2. MOLBIOL 3O03 is strongly recommended.
3. All students are strongly encouraged to meet with the academic advisor in the Department of Biochemistry & Biomedical Sciences to discuss program requirements and course selections.
4. Students are strongly encouraged to check prerequisites for upper-level BIOCHEM courses. The prerequisites should be considered when selecting your courses.
5. Both CHEMBIO 2A03 and 2P03 are highly recommended for students interested in pursuing an undergraduate thesis or graduate studies in biophysical chemistry.

Biochemistry Course List

Anthropology	ANTHROP 2U03, 3BD3
Biochemistry	BIOCHEM 3BP3, 3CB3, 3EE3, 3H03, 3MI3, 3Z03, 4H03,4J03, 4M03, 4N03, 4Q03, 4S03
Biology	BIOLOGY 2EE3
Biomedical Discovery and Commercialization	BIOMEDDC 2C03, 2W03, 3WR3
Chemistry	CHEM 2A03, 2AA3
Chemical Biology	CHEMBIO 2A03, 3OA3
Health Sciences	HTHSCI 3I03, 3K03
Molecular Biology	MOLBIOL 3O03

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

9 units

- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
- BIOCHEM 3D03 - Metabolism and Regulation

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

12 units

- Levels III, IV Biochem, Biology, Chemical Biology, Chemistry, or Molecular Biology
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4O03 - Principles of Virus Pathogenesis

3 units

- Level IV Biochemistry courses (Excluding BIOCHEM 4F09, 4T15, 4Z03)

3 units

- Biochemistry Course List

15 units

- Electives

HONOURS INTEGRATED SCIENCE - BIOLOGY CONCENTRATION (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Students are encouraged to consult with the departmental undergraduate advisor for advice on course selection prior to registration.
2. Students are strongly encouraged to check prerequisites for upper-level Biology & Molecular Biology courses. The prerequisites should be considered when selecting your courses.
3. ISCI 4A12 A/B has BIOLOGY 4C12 A/B and BIOLOGY 4F06 A/B as anti-requisites. As ISCI 4A12 A/B is a thesis course, it is strongly recommended the thesis work be performed in a research field associated with a student's concentration.

Biology Course List

Anthropology	ANTHROP 2U03, 3FA3
Arts & Science	ARTSSCI 4CF3
Biochemistry	Levels II, III, IV* (except BIOCHEM 2B03, 2BB3, 3G03)
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 3D03, 3G03
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Earth Sciences	EARTHSC 4FF3
Environmental Science	ENVIRSC 2B03, 2C03, 2Q03, 2W03, 3B03, 4C03, 4EA3
Environment & Society	ENVSOCTY 2EI3, 2GI3, 3GI3
Health Sciences	HTHSCI 3I03, 3K03, 4II3
Life Sciences	LIFESCI 2D03, 3AA3, 3K03
Medical Physics	MEDPHYS 4B03, 4U03
Molecular Biology	Levels II, III, IV*
Neuroscience	NEUROSCI 3SN3
Psychology	PSYCH 2E03, 2GG3, 3A03, 3F03, 3FA3, 3SE3, 3T03, 4R03

Science	SCIENCE 2P03

*All Levels II, III, IV courses for which prerequisites have been met are acceptable.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

3 units

- CHEM 2E03 - Introductory Organic Chemistry
- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

3 units

- BIOLOGY 2C03 - Genetics

12 units

- Levels III, IV Biology, Molecular Biology courses

6 units

- Biology Course List

24 units

- Electives

HONOURS INTEGRATED SCIENCE - CHEMICAL BIOLOGY CONCENTRATION (B.SC.)

Admission

Enrolment in this program is limited and possession of minimum requirements does not guarantee admission. Selection is based on academic achievement but requires as a minimum, completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Students are encouraged to consult with the departmental undergraduate advisor for Chemistry and Chemical Biology (chemadv@mcmaster.ca) for advice on course selection prior to registration.
2. Students are strongly advised to check prerequisites for upper-level Chemical Biology and Chemistry courses. The prerequisites should be considered when selecting your courses.
3. Students intending to seek admission to graduate school are strongly recommended to complete the following: CHEM 3AA3, and 6 units from CHEMBIO 4A03, 4OA3 or 4OB3. CHEMBIO 4OA3 has CHEM 3OA3 as a prerequisite.
4. ISCI 4A12 A/B has CHEMBIO 4GG9 A/B, CHEMBIO 4G12 A/B and CHEMBIO 4RP6 as an antirequisite.
5. Students are strongly recommended to take CHEMBIO 3L03 and ISCI 4A12 A/B in different years.
6. Certain Level III and IV Chemistry and Chemical Biology courses are offered in alternate years. Students are recommended to carefully consider course offerings in planning their course selection for Levels III and IV.
7. One of CHEMBIO 3EP3 A/B S, 3RP3 may be completed to satisfy units toward the Level III Chemical Biology requirement.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

21 units

- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2L03 - Pharmaceutical Chemistry Laboratory I: Biomolecular Interactions
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I
- CHEMBIO 3L03 - Chemical Biology Laboratory II
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics

(See Program *Note 5* above.)

3 units

- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 4IB3 - Bio-Inorganic Chemistry

3 units

- BIOCHEM 3G03 - Proteins and Nucleic Acids

9 units

- Levels III, IV Chemical Biology, Chemistry courses

(See *Program Notes 3 and 7* above.)

12 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

21 units

- CHEMBIO 2A03 - Introduction to Bio-Analytical Chemistry
- CHEMBIO 2L03 - Pharmaceutical Chemistry Laboratory I: Biomolecular Interactions
- CHEMBIO 2OD3 - Organic Chemistry II
- CHEMBIO 2OG3 - Organic Chemistry I
- CHEMBIO 3L03 - Chemical Biology Laboratory II
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics

(See *Program Note 5* above.)

3 units

- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 4IB3 - Bio-Inorganic Chemistry

9 units

- Levels III, IV Chemical Biology, Chemistry courses

(See *Program Notes 3 and 7* above.)

15 units
- Electives

HONOURS INTEGRATED SCIENCE - CHEMISTRY CONCENTRATION (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Given course scheduling, this concentration may take five years to complete.
2. Students are encouraged to consult with the departmental undergraduate advisor for Chemistry and Chemical Biology (chemadv@mcmaster.ca) for advice on course selection prior to registration.
3. Students are strongly advised to check prerequisites for upper-level Chemistry and Chemical Biology courses. The prerequisites should be considered when selecting your courses.
4. Students intending to seek admission to a graduate program in chemistry at McMaster should complete a minimum of 12 units of Level IV Chemistry.
5. ISCI 4A12 A/B has CHEM 4G12 A/B and CHEM 4RP6 as anti-requisites.
6. Certain Level IV courses are offered in alternate years. Students are recommended to carefully consider course offerings in planning their course selection for Levels III and IV or III, IV and V.
7. One of CHEM 3EP3 A/B S, 3RP3 may be completed to satisfy units toward the Level III Chemistry requirement.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

18 units
- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 3LA3 - Strategies for Chemical Discovery

(See *Program Note 4* above.)

15 units
- Levels III, IV Chemical Biology, Chemistry courses

(See *Program Note 7* above.)

15 units
- Electives

(See *Program Note 4* above.)

HONOURS INTEGRATED SCIENCE - EARTH & ENVIRONMENTAL SCIENCES CONCENTRATION (B.SC.)

Admission

Enrolment in this program is limited and possession of minimum requirements does not guarantee admission. Selection is based on academic achievement but requires as a minimum, completion of Honours Integrated Science I with a Grade Point Average of at least 5.0.

Program Notes

1. All students are strongly encouraged to meet with the Academic Program Advisor in the School of Earth, Environment & Society to discuss program requirements and course selections.
2. Students are strongly encouraged to check prerequisites for upper-level Earth Science or Environmental Science courses. The prerequisites should be considered when selecting your courses.
3. The field components of EARTHSC 3FE3, ENVIRSC 3ME3 are normally taken outside of the normal term. Details are announced in March.
4. Students intending to seek admission to graduate school are strongly recommended to complete EARTHSC 3FE3 or ENVIRSC 3ME3.
5. It is strongly recommended that thesis work performed in ISCI 4A12 A/B is in a research field associated with a student's concentration.
6. In order to meet the Compulsory Foundation Science and Geoscience requirements for the Professional Geoscientist Certification (P.Geo), students are encouraged to consult with the Academic Program Advisor in the School of Earth, Environment & Society to ensure proper selection of courses for professional registration. The Honours programs offered by the School of Earth, Environment & Society may not fulfill professional registration requirements.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

15 units
- EARTHSC 2K03 - Optical Crystallography and Mineralogy
- EARTHSC 2T03 - Geology of Canada
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology

12 units
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3FE3 - Field Camp
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 3Z03 - Structural Geology

21 units
- Electives

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

3 units
- ENVSOCTY 2GI3 - Geographic Information Systems
- GEOG 2GI3

3 units
- EARTHSC 2K03 - Optical Crystallography and Mineralogy
- EARTHSC 2T03 - Geology of Canada
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology

3 units
- STATS 2B03 - Statistical Methods for Science
- ENVSOCTY 3MB3 - Data Analysis
- GEOG 3MB3

9 units
- Levels II, III Earth Sciences, Environmental Science courses, excluding EARTHSC 2GG3, ENVIRSC 2WW3

9 units
- Levels III, IV Earth Sciences, Environmental Science courses

21 units
- Electives

HONOURS INTEGRATED SCIENCE - ENVIRONMENTAL SCIENCES CONCENTRATION (B.SC.)

Admission

Enrolment in this program is limited and possession of minimum requirements does not guarantee admission. Selection is based on academic achievement but requires as a minimum, completion of Honours Integrated Science I with a Grade Point Average of at least 5.0.

Program Notes

1. Effective September 2024, students entering the program must complete ENVIRSC 1C03 by the end of Level II.
2. Students who entered the program in September 2023 or prior must complete one of ENVIRSC 1C03, ENVSOCTY 1HA3 and ENVSOCTY 1HB3 by the end of Level II.
3. It is strongly recommended that students take either ENVSOCTY 1HA3 or ENVSOCTY 1HB3 by the end of Level II. The prerequisites should be considered when selecting your upper-level courses.
4. All students are strongly encouraged to meet with the Academic Program Advisor in the School of Earth, Environment & Society to discuss program requirements and course selections.
5. Students are strongly encouraged to check prerequisites for upper-level Environment & Society and Environmental Science courses. The prerequisites should be considered when selecting your courses.
6. The field components of ENVIRSC 3ME3, ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.
7. Students may enroll in additional Environment & Society or Environmental Science courses as electives.
8. It is strongly recommended that thesis work performed in ISCI 4A12 A/B is in a research field associated with a student's concentration.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

3 units
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions

0-3 units
- ENVIRSC 1C03 - Climate, Water and Environment

18 units
- Levels II, III, IV Earth Sciences, Environment & Society, Environmental Science courses, which must include 6 units from Level IV

24-27 units
- Electives

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

6 units
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems

0-6 units
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Program Notes 2* and *3* above.)

9 units
- Levels II, III Earth Sciences, Environment & Society, Environmental Science courses

9 units
- Levels III, IV Earth Sciences, Environment & Society, Environmental Science courses

18-24 units
- Electives

HONOURS INTEGRATED SCIENCE - MATHEMATICS AND STATISTICS CONCENTRATION (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Completion of MATH 1B03 is strongly recommended in Level I as this course is a prerequisite for a wide selection of upper year Mathematics and Physics courses. Completion of MATH 1B03 is required by the end of Level II.
2. Completion of MATH 1C03 is strongly recommended in Level I as this course is a prerequisite for a selection of upper year Mathematics

and Statistics courses. Students are encouraged to speak with a program advisor in the Mathematics and Statistics department concerning upper year pre-requisites that include MATH 1C03.
3. All students are strongly encouraged to meet with the academic program advisor in the Department of Mathematics & Statistics to discuss program requirements and course selections.
4. Students are strongly encouraged to check prerequisites for upper-level MATH courses. The prerequisites should be considered when selecting your courses.
5. ISCI 2A18 A/B is NOT a sufficient replacement for STATS 2D03. Students wishing to take upper-level courses where STATS 2D03 is a prerequisite should plan to take this class in Level II.
6. Students must satisfy a Scientific Computing requirement by completing one of: COMPSCI 1MD3, DATASCI 2G03, MATH 1MP3, PHYSICS 2G03.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

12 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 3IA3 - Introduction to Analysis
- MATH 3X03 - Complex Analysis I

3 units

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation

0-3 units

- MATH 1B03 - Linear Algebra I (if not completed in Level 1 - see Program Note 1 above)

12 units

- Levels II, III, IV, V Mathematics or Statistics (of which 6 units must be Levels III or IV)

15-18 units

- Electives

HONOURS INTEGRATED SCIENCE - MEDICAL AND BIOLOGICAL PHYSICS CONCENTRATION (B.SC.)

Admission Notes

1. Completion of MATH 1B03 is required by the end of Level II and is strongly recommended in Level I.
2. Completion of MEDPHYS 1A03 (or BIOPHYS 1S03 or MEDPHYS 1E03) is recommended in Level I.

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Given course scheduling, this concentration may take five years to complete.
2. Students are strongly encouraged to check prerequisites for upper level courses.
3. DATASCI 2G03 is required by the end of Level III and is recommended in Level II.
4. Students interested in medical physics or health physics, especially those considering postgraduate studies in these areas should take 9 units from Course List A - Medical Physics focus. These courses also contribute to the core knowledge and learning objectives required by the Commission on Accreditation of Medical Physics Education Programs.
5. Students interested in Biochemistry, especially those considering postgraduate studies in these areas should take 9 units from Course List B - Biochemistry focus.
6. Students interested in physics and soft matter physics, especially those considering postgraduate studies in these areas should take 9 units from Course List C - Physics of Soft Matter focus.
7. Completion of either BIOCHEM 2B03 and 2BB3 or BIOCHEM 2EE3 and 3G03 is required, however BIOCHEM 2EE3 and 3G03 are recommended.

Course List A - Medical Physics Focus

- KINESIOL 2XX3 - Human Anatomy and Physiology II
- KINESIOL 2YY3 - Human Anatomy and Physiology II
- MEDPHYS 3C03 - Operational Health Physics: Laboratory & Communication
- MEDPHYS 4D03 - Imaging in Medicine and Biology
- MEDPHYS 4F03 - Fundamentals of Health Physics
- MEDPHYS 4I03 - Introduction to Biophotonics
- MEDPHYS 4RB3
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine
- MEDPHYS 4U03 - Radiation Biology

Course List B - Biochemistry Focus

- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 4S03 - Introduction to Molecular Biophysics

Course List C - Experiential Learning

- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 3N03
- PHYSICS 3N04 - Physical Optics
- PHYSICS 4F03 - Quantum Mechanics II
- PHYSICS 4G03 - Computational Physics
- PHYSICS 4K03 - Physics of Quantum Matter

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

6 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 3C03 - Mathematical Physics I

15 units

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2C03 - Modern Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

(See *Program Note 3* above.)

6 units

from

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I

6 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 7* above.)

9 units

from

- Course Lists A, B, C

(See *Program Notes 4, 5* and *6* above.)

0-3 units

- MATH 1B03 - Linear Algebra I (if not completed in Level I)

(See *Admission Note 1* above.)

0-3 units

- Electives

(See *Program Note 2* above.)

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

6 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 3C03 - Mathematical Physics I

15 units

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2C03 - Modern Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

(See *Program Note 3* above.)

6 units

from

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I

9 units

from

- Course Lists A, B, C (See *Program Notes 4, 5* and *6* above.)

0-3 units

- MATH 1B03 - Linear Algebra I (if not completed in Level I)

(See *Admission Note 1* above.)

6-9 units

- Electives (See *Program Note 2* above.)

HONOURS INTEGRATED SCIENCE - PHYSICS CONCENTRATION (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. All students are strongly encouraged to meet with the academic program advisor in the Department of Physics & Astronomy to discuss program requirements and course selections.
2. Students are strongly encouraged to check prerequisites for upper-level Physics courses. The prerequisites should be considered when selecting your courses.
3. Students wishing to complete the concentration in a timely manner should plan to complete MATH 2C03 in Level II and PHYSICS 3MM3, MATH 3C03 and 3D03 in Level III.
4. DATASCI 2G03 is strongly recommended for students without good programming skills.
5. Completion of MATH 1B03 is strongly recommended in Level I as this course is a prerequisite for a wide selection of upper-level Math and Physics courses.
6. Completion of MATH 1B03 is required by the end of Level II.
7. Students interested in geophysics should consider taking EARTHSC 2E03 and 3V03.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

0-3 units

- MATH 1B03 - Linear Algebra I

(See *Program Note 6* above.)
9 units
- MATH 2C03 - Introduction to Differential Equations
- MATH 3C03 - Mathematical Physics I
- MATH 3D03 - Mathematical Physics II

(See *Program Note 3* above.)
3 units
- PHYSICS 2E03 - Mechanics

15 units
- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

6 units
- Levels III, IV, V Astronomy. Biophysics, Mathematics, or Physics

12-15 units
- Electives

(See *Program Notes 4* and *5* above.)

HONOURS INTEGRATED SCIENCE - PSYCHOLOGY, NEUROSCIENCE AND BEHAVIOUR CONCENTRATION (B.SC.)

Admission

Enrolment in this program is limited and possession of minimum requirements does not guarantee admission. Selection is based on academic achievement but requires as a minimum, completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Students must take one of PNB 3XE3, STATS 2MB3 or PSYCH 4KK3 in order to graduate. Students are urged to consult with a departmental advisor to determine which option is most appropriate.
2. Both PNB 2XD3, 2XF3 are recommended but not required. PNB 2XD3 is included in the Psychology, Neuroscience and Behaviour Course List.
3. PSYCH 3AB3, 3AC3, 3AG3, 3BA3, 3CB3, 3CD3 may only be used as electives.
4. All students are encouraged to meet with the academic program advisor in the Department of Psychology, Neuroscience & Behaviour to discuss program requirements and course selections.
5. Students are encouraged to check prerequisites for upper-level PNB and PSYCH courses. The prerequisites should be considered when selecting your courses.

Psychology, Neuroscience and Behaviour (PNB) Course List

Biology	BIOLOGY 3P03, 4T03
Health Sciences	HTHSCI 4BB3
Applied Psychology in Human Behaviour	HUMBEHV 3MD3
Life Sciences	LIFESCI 3BB3, 3E03, 3K03
Linguistics & Languages	LINGUIST 2PS3, 3C03, 3NL3
Music Cognition	MUSICCOG 2MP3, All Level III, IV MUSICCOG courses
Neuroscience	NEUROSCI 3J03, 3SN3
Psychology, Neuroscience and Behaviour	PNB 2A03, 2XD3, all Level III, IV PNB courses
Psychology	All Level III, IV PSYCH courses (except PSYCH 3AB3, 3AC3, 3AG3, 3BA3, 3CB3, 3CD3 which can only be taken as elective credit.)

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units
(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units
- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

6 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XC3 - Animal Behaviour & Evolution

3 units
from
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 4KK3 - Bayesian Inference
- STATS 2MB3 - Statistical Methods and Applications

(See *Program Note 1* above.)
15 units
- Psychology, Neuroscience and Behaviour Course List

(See *Program Note 2* above.)
24 units
- Electives

(See *Program Notes 2* and *3* above.)

HONOURS INTEGRATED SCIENCE - SUSTAINABLE CHEMISTRY CONCENTRATION (B.SC.)

Admission

Completion of Honours Integrated Science I with a Grade Point Average of at least 5.0 including ISCI 1A24 A/B.

Program Notes

1. Given course scheduling, this concentration may take five years to complete.
2. Students are encouraged to consult with the departmental undergraduate advisor for Chemistry and Chemical Biology (chemadv@mcmaster.ca) for advice on course selection prior to registration.
3. Students are strongly advised to check prerequisites for upper-level Chemistry and Chemical Biology courses. The prerequisites should be considered when selecting your courses.
4. Students intending to seek admission to a graduate program in chemistry at McMaster should complete a minimum of 12 units of Level IV Chemistry.
5. ISCI 4A12 A/B has CHEM 4G09 A/B, CHEM 4G12 A/B and CHEM 4RP6 as an antirequisite.
6. Certain Level IV courses are offered in alternate years. Students are advised to consider course offerings carefully in planning their course selection for Levels III and IV or Levels III, IV and V.

Course List 1

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 3AA3 - Instrumental Analysis
- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEM 3EQ3 - Experiential Sustainable Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEM 3II3 - Introduction to Transition Metal Chemistry
- CHEM 3LA3 - Strategies for Chemical Discovery
- CHEM 3OA3 - Organic Synthesis
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEM 3PC3 - Mathematical Tools for Chemical Problems
- CHEM 3RC3 - Radioisotopes in Medicine
- CHEM 3RP3 - Research Practicum in Chemistry
- CHEM 4AA3 - Recent Advances in Analytical Chemistry
- CHEM 4D03 - Organic Structure and Synthesis
- CHEM 4IA3 - Physical and Spectroscopic Methods for Inorganic Structure Determination
- CHEM 4IB3 - Bio-Inorganic Chemistry
- CHEM 4IC3 - Solid State Inorganic Materials: Structures, Properties, Characterization and Applications
- CHEM 4II3 - Transition Metal Organometallic Chemistry and Catalysis
- CHEM 4OA3 - Natural Products
- CHEM 4PB3 - Computational Models for Electronic Structure and Chemical Bonding
- CHEM 4W03 - Natural and Synthetic Materials
- CHEMBIO 3AA3 - Analytical Tools for Chemical Biology
- CHEMBIO 3BM3 - Implanted Biomaterials
- CHEMBIO 3OA3 - Organic Mechanistic Tools for Chemical Biology
- CHEMBIO 3OB3 - Structural Elucidation of Natural Products and Small Molecules
- CHEMBIO 3P03 - Biomolecular Interactions and Kinetics
- CHEMBIO 4A03 - Bio-Analytical Chemistry and Assay Development
- CHEMBIO 4OA3 - Natural Products
- CHEMBIO 4OB3 - Medicinal Chemistry: Drug Design and Development
- CHEMBIO 4Q03 - Peer Tutoring in Chemical Biology

Course List 2

- BIOLOGY 3EI3 - Ecological Indicators
- BIOLOGY 3ET3 - Ecotoxicology
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- ENVIRSC 2B03 - Soils and the Environment
- ENVIRSC 2C03 - Surface Climate Processes and Environmental Interactions
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3O03 - Contaminant Fate and Transport
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4N03 - Global Biogeochemical Cycles
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 4MS3 - The Social Lives of Molecules
- LIFESCI 2X03 - Environmental Change and Human Health
- POLSCI 3GC3 - Politics of a Dying Planet
- STATS 2B03 - Statistical Methods for Science
- STATS 2D03 - Introduction to Probability
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 3S03 - Implementing Sustainable Change

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

42 units

- ISCI 2A18 A/B - Integrated Science II
- ISCI 3A12 A/B - Integrated Science III
- ISCI 4A12 A/B - Integrated Science IV

12 units

- CHEM 2A03 - Quantitative Chemical Analysis
- CHEM 2II3 - Introductory Inorganic Chemistry: Structure and Bonding
- CHEM 2LB3 - Tools for Chemical Discovery
- CHEM 2OD3 - Synthesis and Function of Organic Molecules
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules
- CHEM 2Q03 - Inquiry for Chemistry

3 units

- CHEM 2SC3 - Sustainable Chemistry - Green Chemistry

3 units

- CHEM 3SC3 - Sustainable Chemistry: Natural Resources and Energy
- CHEM 4SC3 - Sustainable Chemistry - Analysis and Regulation

9 units

- Course List 1

6 units

- Course List 2

15 units

- Electives

(See *Program Note 4* above.)

HONOURS LIFE SCIENCES (B.SC.)

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

3 UNITS

- CHEM 1A03 - Introductory Chemistry I

3 UNITS

from

- MATH 1A03 - Calculus For Science I

- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

6 UNITS

from

- the Science I Course List

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students should check prerequisites carefully.
2. For students who previously completed LIFESCI 2G03, this course does not substitute for BIOLOGY 2C03 or MOLBIOL 2C03 for prerequisite purposes.
3. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
4. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
5. Level IV Research Seminar topics may change from year to year. Research Seminar topics and descriptions are available on the program web site (https://sis.mcmaster.ca/undergraduate/life-sciences/registered-students/). Honours Life Sciences students must complete at least 3 units from *Course List E*.
6. Students entering Level IV Honours Life Sciences (not including the Sensory Motor Systems Specialization) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses. Students fulfilling Course List E through eligible thesis or project courses can opt out of balloting for research seminar course topics.
7. One of LIFESCI 4CM3 or 4U03 is required for students completing the Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in the Honours Life Sciences - Origins of Disease Specialization (B.Sc.) will complete the pre-registration ballot process to indicate preference for either LIFESCI 4CM3 or 4U03. Students in this specialization will receive first priority in the pre-registration ballot for one of these courses.
8. LIFESCI 4XX3 is required for students completing the Honours Life Sciences - Sensory Motor Systems Specialization (B.Sc.) and is not included in the pre-registration ballot.
9. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.
10. Effective September 2025, students in Honours Life Sciences will have the choice to use LIFESCI 4CM3 toward *Course List C* or *Course List E*.
11. Students who entered the program in September 2023 or prior, will have the choice to use LIFESCI 3P03 toward either *Course List A* or *Course List C*.
12. Students who entered the program in September 2023 or prior, may use LIFESCI 3PP3 toward *Course List A*.
13. SUSTAIN 3SS3 is only offered in the Spring Term.
14. Students who entered the program in September 2023 or prior, will have the choice to use LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S toward *Course List E*.

Course Lists

COURSE LIST A - ADVANCED TOPICS IN LIFE SCIENCES

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

COURSE LIST B - LABORATORY AND DATA SKILLS

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

COURSE LIST C - EXPERIENTIAL LEARNING

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

COURSE LIST D - INTERDISCIPLINARY TOPICS

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.*

COURSE LIST E - CAPSTONE EXPERIENCE

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL 1: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

3 units

from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

6 units

from

- Course List A - Advanced Topics in the Life Sciences (See *Program Notes 11* and *12* above.)

3 units

from

- Course List B - Laboratory and Data Skills

3-15 units

from

- Course List C - Experiential Learning (See *Program Notes 3, 4, 11* and *12* above.)

18 units

from

- Course List D - Interdisciplinary Topics

3 units

from

- Course List E - Capstone Experience (See *Program Notes 5, 6, 7, 8* and *10* above.)

24-36 units

- Electives (See *Program Note 9* above.)

Course Lists for Students Who Entered in

September 2023 or Prior

COURSE LIST A - COMMUNICATION SKILLS

- ENGLISH 3NH3 - Narratives of Health
- ENVSOCTY 3TG3 - Geographies of Globalization
- ENVSOCTY 3UW3 - Cities of the Developing World
- HISTORY 3CH3 - Climate History
- HISTORY 3TC3 - Science, Technology in World History
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3E03 - Ethical Issues in Health and Aging
- HLTHAGE 3N03 - Aging and Mental Health
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3Z03 - Life Sciences Inquiry

COURSE LIST B - LABORATORY SKILLS

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

COURSE LIST C - EXPERIENTIAL LEARNING

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

COURSE LIST D - LIFE SCIENCES COURSE LIST

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03,
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.*

COURSE LIST E - KNOWLEDGE TRANSFER/SEMINAR EXPERIENCE

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar

- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

9 units

from

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

3 units

from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

6 units

from

- Course List A - Communication Skills (See *Program Notes 10* and *11* above.)

3 units

from

- Course List B - Laboratory Skills

3-15 units

from

- Course List C - Experiential Learning (See *Program Notes 10* and *11* above.)

18 units

from

- Course List D - Life Sciences Course List

3 units

from

- Course List E - Knowledge Transfer/Seminar Experience (See *Program Notes 5, 6, 7, 8, 10* and *14* above.)

27-39 units

- Electives (See *Program Note 9* above.)

HONOURS LIFE SCIENCES - ORIGINS OF DISEASE SPECIALIZATION (B.SC.)

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement, but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

6 UNITS

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

3 UNITS

from

- the Science I Course List

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students are advised to check prerequisites carefully.
2. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
3. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
4. LIFESCI 2G03 does not substitute for BIOLOGY 2C03 or MOLBIOL 2C03 for prerequisite purposes.
5. This program does not have a Co-op option.
6. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.
7. One of LIFESCI 4CM3 or 4U03 is required for students completing

Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in the Honours Life Sciences - Origins of Disease Specialization will complete the pre-registration ballot process to indicate preference for either LIFESCI 4CM3 or 4U03. Students considering admission to graduate studies are strongly encouraged to take LIFESCI 4CM3 .

8. Completion of LIFESCI 2BP3 is strongly recommended prior to registration in LIFESCI 3M03.
9. SUSTAIN 3SS3 is only offered in the Spring Term.
10. Students who entered the program prior to September 2022, can use MOLBIOL 3B03 to satisfy the LIFESCI 3M03 requirement.
11. Effective the 2023-24 academic year, the "Life Sciences Course List" has been renamed to be the "Interdisciplinary Topics Course List". Advisement reports may indicate either list name, depending on your year of entry into the program.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

***All Levels II, III, IV courses for which prerequisites have been met are acceptable.**

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL 1: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- BIOLOGY 2B03 - Cell Biology

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- KINESIOL 2Y03 - Human Anatomy and Physiology I
- LIFESCI 2BP3 - Biophysics of the Cell and Living Organisms

3 units

- CHEM 2OA3 - Organic Chemistry I

3 units

- LIFESCI 3M03 - Cellular Dynamics in Health and Disease

(See *Program Note 8* above.)

3 units

from

- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- CHEMBIO 3BM3 - Implanted Biomaterials
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BM3 - Implanted Biomaterials
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity

3 units

from

- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

3 units

from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

3-15 units

from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster

Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

15 units

from

- *Interdisciplinary Topics Course List*

3 units

from

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4U03 - Mechanisms of Disease

(See *Program Note 7* above.)

21-33 units

- Electives

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

6 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory

3 units

- BIOLOGY 2B03 - Cell Biology

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

6 units

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 2BP3 - Biophysics of the Cell and Living Organisms

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

0-3 units

- CHEM 1AA3 - Introductory Chemistry II (if not completed in Level I)

(See *Program Note 8* above.)

3 units

- LIFESCI 3M03 - Cellular Dynamics in Health and Disease

(See *Program Notes 8* and *10* above.)

3 units

from

- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- CHEMBIO 3BM3 - Implanted Biomaterials
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BM3 - Implanted Biomaterials

3-15 units

from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

15 units

from

- *Interdisciplinary Topics Course List*

3 units

from

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4U03 - Mechanisms of Disease

(See *Program Note 7* above.)

21-36 units

- Electives

HONOURS LIFE SCIENCES - SENSORY MOTOR SYSTEMS SPECIALIZATION (B.SC.)

The Honours Life Sciences - Sensory Motor Systems Specialization is being phased out. Last entry into Level II was September 2024. Students who had intended to register for this program should contact an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss other options.

Program Notes

1. Registration in an Honours Life Sciences program does not guarantee access to all courses. Some courses have program restrictions. Students are advised to check prerequisites carefully.
2. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
3. Students interested in graduate school may wish to consider completion of a thesis or independent study course (See LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
4. LIFESCI 2G03 does not substitute for BIOLOGY 2C03 or MOLBIOL 2C03 for prerequisite purposes.
5. This program does not have a Co-op option.
6. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.

7. Students in the Honours Life Sciences - Sensory Motor Systems Specialization are excluded from the pre-registration ballot process as LIFESCI 4XX3 is a program requirement and registration is guaranteed.
8. For students who entered in September 2023 or prior, CHEM 1AA3 must be completed by the end of Level II. Completion in Level I is strongly recommended.
9. SUSTAIN 3SS3 is only offered in the Spring Term.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, ENVIRSC 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

***All Levels II, III, IV courses for which the prerequisites have been met are acceptable.**

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed for admission to program

LEVELS II-IV: 90 UNITS

12 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

3 units

- PSYCH 2E03 - Sensory Processes

6 units

from

- KINESIOL 4TT3 - Neurorehabilitation and Robotics
- NEUROSCI 3J03 - Visual Neuroscience
- PSYCH 3A03 - Audition
- PSYCH 3BN3 - Cognitive Neuroscience
- PSYCH 3J03

3 units

from

- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement

3 units

- LIFESCI 3BB3 - Neurobiology of Disease

3 units

from

- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

3 units

from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

3-15 units

from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis

- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 3M03
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

12 units

from

- *Interdisciplinary Topics Course List*

3 units

- LIFESCI 4XX3 - The Synapse

18-30 units

- Electives

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed for admission to program

LEVELS II-IV: 90 UNITS

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2L03 - Living Systems Laboratory

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

3 units

- PSYCH 2E03 - Sensory Processes

0-3 units

- CHEM 1AA3 - Introductory Chemistry II (if not completed in Level I)

(See *Program Note 8* above.)

6 units

from

- KINESIOL 4TT3 - Neurorehabilitation and Robotics
- NEUROSCI 3J03 - Visual Neuroscience
- PSYCH 3A03 - Audition
- PSYCH 3BN3 - Cognitive Neuroscience
- PSYCH 3J03

3 units

from

- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement

3 units

- LIFESCI 3BB3 - Neurobiology of Disease

3 units

from

- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

3-15 units

from

- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- LIFESCI 3EP3 A/B S - Life Sciences Applied Placement
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3RP3 - Life Sciences Research Practicum
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4EP6 A/B S - Life Sciences Advanced Placement
- PSYCH 2NF3 - Clinical Neuropsychology
- SCICOMM 4A03 - Independent Project in Science Communication
- SCIENCE 2A03 - Peer Mentoring in Science
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability

12 units

from

- *Interdisciplinary Topics Course List*

3 units

- LIFESCI 4XX3 - The Synapse

21-36 units

- Electives

HONOURS LIFE SCIENCES CO-OP (B.SC.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline and completion of Level II Honours Life Sciences with a Grade Point Average of at least 5.0 and completion of the following courses:

9 UNITS

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 UNITS

- STATS 2B03 - Statistical Methods for Science

3 UNITS

- BIOLOGY 2C03 - Genetics

3 UNITS

from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

NOTE:

Information about this program and the selection procedure can be obtained from Science Career and Cooperative Education and the Academic Program Advisor.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in life sciences related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Registration in the Honours Life Sciences Co-op program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.
5. Students interested in completing a thesis or independent study course should consider completing LIFESCI 3RP3 in Level III.
6. Students interested in graduate school may wish to consider completion of a thesis or independent study course (see LIFESCI 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, SCICOMM 4A03).
7. Level IV Research Seminar topics may change from year to year. Research Seminar topics and descriptions are available on the program web site (https://sis.mcmaster.ca/undergraduate/life-sciences/registered-students/).
8. Students entering Level IV or V of Honours Life Sciences Co-op must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses. Co-op students will have access to the ballot only once during their undergraduate degree. Students fulfilling Course List E through eligible thesis or project courses can opt out of balloting for research seminar course topics.
9. One of LIFESCI 4CM3 or 4U03 is required for students completing the Honours Life Sciences - Origins of Disease Specialization (B.Sc.). Students in this specialization will receive first priority in the pre-registration ballot for one of these courses. Students in the Honours Life Sciences - Origins of Disease Specialization will complete the pre-registratino ballot process to indicate preference for either LIFESCI 4CM3 or 4U03.
10. LIFESCI 4XX3 is required for students completing the Honours Life Sciences - Sensory Motor Systems Specialization (B.Sc.) and is not included in the pre-registration ballot.
11. Students must complete at least one of EXPLORE 3IS3, LIFESCI 3EP3 A/B S, 3RP3, 3XX3, 4A03, 4B09 A/B S, 4C12 A/B S, 4D15 A/B S, 4EP6 A/B S, SCIENCE 2A03, 3A03, 3WT0.
12. The Co-op option is not available with either the Origins of Disease or Sensory Motor Systems Specializations.
13. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

*** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.**

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 UNITS

- Completed prior to admission to program

LEVEL II: 30 UNITS

30 units

- Completion of any Level II Honours Life Sciences program, including:

9 units

from

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

- BIOLOGY 2C03 - Genetics

3 units

from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units

from

- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences

6 units

from

- *Interdisciplinary Topics Course List*

3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units

from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

9 units

from

- *Interdisciplinary Topics Course List*

15 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

3 units

from

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar

- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

3 units

from

- *Interdisciplinary Topics Course List*

9 units

- Electives

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

- Completed prior to admission to program

LEVEL II: 30 UNITS

30 units

- Completion of any Level II Honours Life Sciences program, including:

9 units

- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 2L03 - Living Systems Laboratory
- SCICOMM 2A03 - Foundations in Science Communication

3 units

- STATS 2B03 - Statistical Methods for Science

3 units

from

- BIOLOGY 2C03 - Genetics
- LIFESCI 2G03

3 units

from

- BIOLOGY 2B03 - Cell Biology
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- LIFESCI 2D03 - Behavioural Processes
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

6 units

from

- *Interdisciplinary Topics Course List*

6 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BP3 - Modelling Life
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3G03 - Introduction to Epidemiology
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine
- LIFESCI 3W03 - Genetic and Epigenetic Determinants of Health: Role in Health Disparity
- LIFESCI 3Z03 - Life Sciences Inquiry

3 units

from

- BIOLOGY 3B03 - Plant Physiology
- BIOLOGY 3JJ3 - Field Methods In Ecology
- BIOLOGY 3U03 - Animal Physiology - Homeostasis
- BIOLOGY 3VV3
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LL3 - Living Systems Laboratory Practicum
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development

9 units

from

- *Interdisciplinary Topics Course List*

15 units

- Electives

Spring/Summer Term:
Work Term
1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)
Fall Term:
Work Term
1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
3 units
from

- LIFESCI 4A03 - Life Sciences Advanced Research Practicum
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4D15 A/B S - Independent Thesis
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4I03 - Research Seminar
- LIFESCI 4J03 - Science Communication in the Media
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4M03 - Research Seminar
- LIFESCI 4N03 - Research Seminar
- LIFESCI 4O03 - Research Seminar
- LIFESCI 4P03 - Ancient Scientific Literature
- LIFESCI 4Q03 - Research Seminar
- LIFESCI 4U03 - Mechanisms of Disease
- LIFESCI 4V03
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- LIFESCI 4XX3 - The Synapse
- LIFESCI 4Y03 - Applied Biomechanics
- LIFESCI 4Z03 - Advanced Inquiry in the Life Sciences

3 units
from

- *Interdisciplinary Topics Course List*

9 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Bachelor of Science

LIFE SCIENCES (B.SC.)

Note Applicable to B.Sc. in Life Sciences

The B.Sc. in Life Sciences, as a second degree, may not be possible if the student's first undergraduate degree is in Biochemistry, Biology, Environmental Sciences, or Psychology, Neurosciences & Behaviour. Students wishing further information should consult with the Office of the Associate Dean, Undergraduate Studies.

Admission Note

When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including:

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note* above.)

3 UNITS

- CHEM 1A03 - Introductory Chemistry I

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences

- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- EARTHSC 1G03 - Earth and the Environment
- ENVIRSC 1C03 - Climate, Water and Environment
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

6 UNITS

from

- the Science I Course List

Program Notes

1. Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology and Psychology courses must complete CHEM 1A03, 1AA3.
2. Registration in the B.Sc. Life Sciences program does not guarantee access to all courses. Some courses have program restrictions and students are responsible to read course prerequisites carefully.
3. Students registered in the B.Sc. Life Sciences program who are interested in transferring to Honours Life Sciences should meet with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies.

Interdisciplinary Topics Course List

Astronomy	ASTRON 2B03
Biochemistry	Levels II, III, IV*
Biology	Levels II, III, IV*
Biophysics	BIOPHYS 2A03, 2S03, 3D03, 3G03
Challenge	CHALLENG 2CC3
Chemistry	CHEM 2BC3, 2E03, 2OA3, 2OB3, 2P03, 3RC3
Chemical Biology	CHEMBIO 2A03, 2P03, 3BM3, 3OA3, 4OA3, 4OB3
Data Science	DATASCI 2G03
Earth Sciences	EARTHSC 2E03, 2GG3, 2G03, 3CC3, 3E03, 3P03, 4G03, 4PA3
English	ENGLISH 3NH3
Environmental Science	ENVIRSC 2B03, 2C03, 2WW3, 3B03
Environment & Society	ENVSOCTY 2EI3, 2GI3, 2HI3, 2LE3, 2OC3, 2RU3, 2RW3, 2TF3, 2TS3, 2UI3, 3EC3, 3EE3, 3ER3, 3GI3, 3GV3, 3HP3, 3LT3, 3RW3, 3SR3, 3TG3, 3UP3, 3UR3, 3UW3, 4HC3, 4HD3, 4HH3
Explore	EXPLORE 3IS3
Health & Aging	HLTHAGE 3D03, 3E03, 3N03
Health Sciences	HTHSCI 2G03, 3DD3, 3DD6 A/B, 3I03, 3K03, 3RS3, 3DM3, 4II3, 4O03
History	HISTORY 3CH3, 3TC3
Inspire	INSPIRE 3MP3
Kinesiology	KINESIOL 2X03, 2XX3, 2Y03, 2YY3
Life Sciences	Levels II, III, IV*
Mathematics	MATH 2UU3, 3MB3
Medical Physics	MEDPHYS 4B03, 4F03, 4U03
Medical Radiation Sciences	MEDRADSC 3X03
Molecular Biology	Levels III, IV*
Neuroscience	NEUROSCI 3J03, 3SN3
Nexus	NEXUS 2A03
Physics	PHYSICS 2G03
Psychology	PSYCH Levels II, III, IV*
Science	Levels II, III*
Science Communication	SCICOMM Levels II, III, IV

*** All Levels II, III, IV courses for which the prerequisites have been met are acceptable.**

Requirements

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-III: 60 UNITS

24 units

from

- the *Interdisciplinary Topics Course List* of which at least 12 units must be Levels III, IV courses (See *Note Applicable to B.Sc. in Life Sciences* and *Program Note 1* above.)

36 units

- Electives of which at least nine units must be selected from the Faculty of Science

Department of Kinesiology

http://www.science.mcmaster.ca/kinesiology

Faculty as of January 15, 2025

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Steven R. Bray

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Krista Howarth *(Undergraduate Studies)*

Peter J. Keir *(Graduate Studies)*

Dylan Kobsar *(Research)*(ACTING)

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Brian W. Timmons*/(Pediatrics)* H.B.K. *(Lakehead)*, Ph.D. *(McMaster)*

Bachelor of Science Kinesiology (Honours)

HONOURS KINESIOLOGY (B.SC.KIN.)

Admission

Completion of Level I Honours Kinesiology including, KINESIOL 1A03, 1AA3, 1ED3, 1F03, 1K03 with a cumulative Grade Point Average of at least 6.0.

Program Notes

1. Completion of MATH 1A03 or 1LS3 is a requirement for this program and must be completed by the end of Level II.
2. PHYSICS 1A03 serves as excellent preparation for KINESIOL 2A03, especially for students who did not complete Grade 12 Physics U.
3. Honours Kinesiology students must complete at least six units of electives chosen from the Faculty of Science.
4. Kinesiology courses may not be used toward the elective component of the degree.
5. A maximum of 18 units of Levels III, IV Kinesiology courses may be completed in Level III of the program.
6. Honours Kinesiology students who have a minimum Grade Point Average of 3.5 and successfully completed at least 90 units including all requirements up to the end of Level III of the Honours B.Sc. Kinesiology program may request permission from the Office of the Associate Dean, Undergraduate Studies to transfer to graduate with the Bachelor of Science Kinesiology (B.Sc.Kin.) degree.
7. Students interested in declaring an elective course as a Personal Interest Course (PIC) are encouraged to meet with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I: 30 UNITS
30 units
(See Admission above.)
LEVELS II-IV: 90 UNITS
18 units
- KINESIOL 2A03 - Biomechanics
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 2E03 - Musculoskeletal Anatomy
- KINESIOL 2G03 - Health Psychology
- KINESIOL 2MC3 - Motor Control and Learning

0-3 units
from the following courses, if not completed in Level I
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

(See Program Note 1 above.)
3 units
- STATS 2B03 - Statistical Methods for Science

36 units
from
- Levels III, IV Kinesiology courses including at least nine units of Level IV (See Program Note 5 above.)

30-33 units
- Electives

(See Program Notes 2, 3 and 4 above.)

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I
LEVEL I: 30 UNITS
30 units
(See *Admission* above.)
LEVELS II-IV: 90 UNITS
18 units
- KINESIOL 2A03 - Biomechanics
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 2E03 - Musculoskeletal Anatomy
- KINESIOL 2F03
- KINESIOL 2G03 - Health Psychology

0-3 units
from the following courses, if not completed in Level I
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

(See *Program Note 1* above.)
3 units
- STATS 2B03 - Statistical Methods for Science

36 units
from
- Levels III, IV Kinesiology courses including at least nine units of Level IV (See *Program Note 5* above.)

30-33 units
- Electives (See *Program Notes 2, 3* and *4* above.)

HONOURS KINESIOLOGY CO-OP (B.SC.KIN.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the online application by the stated deadline, and completion of Level II Honours Kinesiology with a cumulative

Grade Point Average of at least 6.0 including:

33 UNITS

- KINESIOL 1A03 - Human Anatomy and Physiology I
- KINESIOL 1AA3 - Human Anatomy and Physiology II
- KINESIOL 1F03 - Human Nutrition and Health
- KINESIOL 1K03 - Foundations in Kinesiology
- KINESIOL 2A03 - Biomechanics
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 2E03 - Musculoskeletal Anatomy
- KINESIOL 2F03
- KINESIOL 2G03 - Health Psychology

3 UNITS

from the following courses

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

- STATS 2B03 - Statistical Methods for Science

1 COURSE

- SCIENCE 2C00 - Skills for Career Success in Science

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Admission (Effective September 2026)

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the online application by the stated deadline, and completion of Level II Honours Kinesiology with a cumulative Grade Point Average of at least 6.0 including:

33 UNITS

- KINESIOL 1A03 - Human Anatomy and Physiology I
- KINESIOL 1AA3 - Human Anatomy and Physiology II
- KINESIOL 1ED3 - Equity, Diversity, and Inclusion in Physical Activity
- KINESIOL 1F03 - Human Nutrition and Health
- KINESIOL 1K03 - Foundations in Kinesiology
- KINESIOL 2A03 - Biomechanics
- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 2E03 - Musculoskeletal Anatomy
- KINESIOL 2G03 - Health Psychology
- KINESIOL 2MC3 - Motor Control and Learning

3 UNITS

from the following courses

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

3 UNITS

- STATS 2B03 - Statistical Methods for Science

1 COURSE

- SCIENCE 2C00 - Skills for Career Success in Science

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

Program Notes

1. This is a five-level (year) co-op program, which includes two eight-month work terms which must be spent in kinesiology related placements.
2. Students must be registered full-time and take a full academic workload as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to entry into the co-op program. Students are required to complete SCIENCE 3C00 in the Fall Term of entry into the co-op program.
4. Students should seek academic program advising in the Department of Kinesiology.
5. During Levels III - V of Honours Kinesiology Co-op, 36 units of Levels III, IV Kinesiology courses must be completed, including at least 9 units of Level IV. Students are encouraged to balance these units across all three years of this program, but this may not always be possible. Students are advised to consider course offerings and requisites carefully in planning their course selections for Levels III, IV Kinesiology courses.
6. Honours Kinesiology Co-op students must complete at least six units of electives chosen from the Faculty of Science.
7. Kinesiology courses may not be used toward the elective component of the degree.
8. Students interested in declaring an elective course as a Personal Interest Course (PIC) are encouraged to meet with an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

Completed prior to admission to the program.

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Kinesiology program

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

(See *Program Note 3* above.)

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

9 units

- Levels III, IV Kinesiology courses

(See *Program Note 5* above.)

6 units

- Electives

(See *Program Notes 6* and *7* above.)

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

(See *Program Note 3* above.)

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

18 units

- Levels III, IV Kinesiology courses including at least nine units of Level IV by the end of Level V

(See *Program Note 5* above.)

12 units

- Electives

(See *Program Notes 6* and *7* above.)

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

9 units

from

- Levels III, IV Kinesiology courses including at least nine units of Level IV by the end of Level V

(See *Program Note 5* above.)

6 units

- Electives

(See *Program Notes 6* and *7* above.)

Co-op Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/ SUMMER TERM (May to August)
Level III	15 units from Academic Level III SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	30 units from Academic Levels III and IV		Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Levels III and IV	

Department of Mathematics and Statistics

http://www.math.mcmaster.ca/

Faculty as of January 15, 2025

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Bartosz Protas

ASSOCIATE CHAIRS

Hari Kunduri/Graduate (ACTING)

Shui Feng/Statistics

Adam Van Tuyl/Undergraduate

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UNIVERSITY SCHOLAR

Paul D. McNicholas/B.A., M.Sc., Ph.D. *(Trinity College, Dublin)*/ Canada Research Chair

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Michael Li/B.Sc. *(Toronto)*, M.Sc., Ph.D. *(McMaster)*

Orla Murphy/B.Sc. *(St. Francis Xavier)*, M.Sc., Ph.D. *(McGill)*

Irena Papst/B.Arts Sc., M.Sc. *(McMaster)*, Ph.D. *(Cornell)*
Sabrina Streipert/B.Sc., M.Sc. *(Ulm)*, M.Sc., Ph.D. *(Missouri Institute of Science and Technology)*
ASSOCIATE MEMBERS
Antoine Deza/*(Computing and Software)* M.Sc. *(Ecole Nationale des Ponts et Chaussées)*, Ph.D. *(Tokyo Institute of Technology)*
Jonathan Dushoff/*(Biology)* B.A. *(Pennsylvania)*, Ph.D. *(Princeton)*
Timothy Field/*(Electrical and Computer Engineering)* B.A. *(Cambridge)*, D. Phil *(Oxford)*
Gregory Pond/*(Oncology)* B.Sc. *(Brock)*, M.Sc. *(Simon Fraser)*, Ph.D. *(Toronto)*

Notes Applicable to all Programs Offered by the Department of Mathematics and Statistics

1. The Department offers an Honours Mathematics and Statistics program, which may be complemented with a Specialization in Mathematics or Statistics, and an Honours Actuarial and Financial Mathematics program. Combined Honours programs are available with Arts and Science, Biology, Computer Science, Economics, English and Cultural Studies, French, History, Philosophy, and Physics.
2. Students considering graduate studies in Mathematics are encouraged to complete MATH 2XB3 (or MATH 2XX3), 3A03, 3CF3 (or MATH 3X03), 3F03, 3GR3, 4A03 or register in the Mathematics Specialization. Students considering graduate studies in Statistics are encouraged to complete STATS 3A03, 3D03, 3F03*, 3S03*, 3U03* or register in the Statistics Specialization. Students considering a career as an actuary are encouraged to complete MATH 2FM3, 3FM3, 4FM3, STATS 2D03, 2MB3, 3A03, 3D03, 3G03, 3H03, 4A03 or register in Honours Actuarial and Financial Mathematics.
3. Cooperative Education programs are available; see the requirements for Honours Mathematics and Statistics Co-op programs in this section of the Calendar. Admission to the co-op programs is in Level III.

Bachelor of Science (Honours)

HONOURS ACTUARIAL AND FINANCIAL MATHEMATICS (B.SC.)

Admission Notes

1. Completion of ECON 1B03 and 1BB3 is required by the end of Level II. Completion in Level I is strongly recommended.
2. Completion of COMMERCE 1AA3 is required by the end of Level II. Completion in Level I is strongly recommended.
3. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection and is based on completion of the supplementary application by the stated deadline (https://www.math.mcmaster.ca/undergraduate/useful-links/actuarial-and-financial-mathematics-supplementary-application.html) and academic achievement, but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS
from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 3* above.)

3 UNITS
from the following courses, with a grade of at least C+
- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 3* above.)

3 UNITS
from
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

Program Notes

1. Students interested in focusing on financial mathematics are strongly encouraged to complete MATH 2XB3 (or MATH 2XX3), 3FF3 and one of COMPSCI 1MD3, MATH 1MP3 or 3NA3. Students should note that MATH 2XA3 is a prerequisite for MATH 2XB3 and that MATH 2R03 or 2LA3 with a grade of at least B is a prerequisite for MATH 3FF3.
2. Students are strongly encouraged to complete COMMERCE 2FA3 by the end of Level II, especially if the Honours Actuarial and Financial Mathematics Co-op (B.Sc.) program is being considered for Level III.
3. Completion of MATH 1C03 is strongly recommended as it is a prerequisite for MATH 3A03 and MATH 3IA3.
4. Completion of COMMERCE 4FR3 is recommended for students interested in focusing on actuarial science and insurance.
5. Completion of STATS 3DS3 or 3DA3 is strongly recommended.
6. Students who entered the program prior to September 2023 may use COMMERCE 4FP3 towards the Course List.

Course List

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 4FL3 - Personal Financial Management
- COMMERCE 4FW3 - Finance for Entrepreneurs
- ECON 2H03
- ECON 2HH3
- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II
- All Level III, IV and V Mathematics or Statistics courses

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS
30 units
(See *Admission* above.)

LEVELS II-IV: 90 UNITS
12 units
- COMMERCE 2FA3 - Introduction to Finance (See *Program Note 2* above.)
- MATH 2FM3 - Introduction To Mathematical Finance
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

3 units

from
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units
from
- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

15 units
- MATH 3FM3 - Mathematics of Finance
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3G03 - Actuarial Mathematics I
- STATS 3ST3 - Actuarial Models in Non-Life Insurance

3 units
from
- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

6 units
from
- MATH 4FM3 - Financial Markets and Derivatives
- STATS 4G03 - Advanced Topics in Actuarial Science
- STATS 4H03 - Actuarial Mathematics II

3 units
from
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3FA3 - Managerial Finance
- STATS 4A03 - Time Series

9 units
from
- *Course List* (See *Program Notes 1, 4, 5 and 6* above.)

0-9 units
from the following courses, if not already completed
- COMMERCE 1AA3 - Introductory Financial Accounting
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

27-36 units
- Electives

Requirements for Students Who Entered September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units
(See *Admission* above.)

LEVELS II-IV: 90 UNITS

15 units
- COMMERCE 2FA3 - Introduction to Finance (See *Program Note 2* above.)
- MATH 2C03 - Introduction to Differential Equations
- MATH 2FM3 - Introduction To Mathematical Finance
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

3 units
from
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

15 units
- MATH 3FM3 - Mathematics of Finance
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3G03 - Actuarial Mathematics I
- STATS 3ST3 - Actuarial Models in Non-Life Insurance

3 units
from
- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

6 units
from
- MATH 4FM3 - Financial Markets and Derivatives
- STATS 4G03 - Advanced Topics in Actuarial Science
- STATS 4H03 - Actuarial Mathematics II

3 units
from
- COMMERCE 2FB3 - Managerial Finance
- COMMERCE 3FA3 - Managerial Finance
- STATS 4A03 - Time Series

9 units
from
- *Course List* (See *Program Notes 1, 4, 5 and 6* above.)

0-9 units
from the following courses, if not already completed
- COMMERCE 1AA3 - Introductory Financial Accounting
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

27-36 units
- Electives

HONOURS ACTUARIAL AND FINANCIAL MATHEMATICS CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Actuarial and Financial Mathematics (B.Sc.) with a Grade Point Average of at least 5.0.
Information about this program and the selection procedure can be obtained from the Science Career and Cooperative Education Office.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in actuarial and financial mathematics related placements.
2. Students must be registered full-time and take a full academic workload, as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students interested in focusing on financial mathematics are strongly encouraged to complete MATH 2XB3 (or MATH 2XX3), 3FF3 and one of COMPSCI 1MD3, MATH 1MP3 or 3NA3. Students should note that MATH 2XA3 (or MATH 2X03) is a prerequisite for MATH 2XB3 (or MATH 2XX3) and that MATH 2R03 or 2LA3 with a grade of at least B is a prerequisite for MATH 3FF3.
5. Students must complete STATS 4A03 or COMMERCE 2FB3 (or COMMERCE 3FA3).
6. Students should take COMMERCE 1AA3 and COMMERCE 2FA3 by the end of Level II, to enable completion of COMMERCE 2FB3 (or COMMERCE 3FA3) in a Fall Term of Level III or IV.
7. Alternatives for meeting the requirement of three units of STATS 4A03 or COMMERCE 2FB3 (or COMMERCE 3FA3) would include

distance learning courses accredited by the actuarial agencies for fulfillment of either the Applied Statistical Methods VEE, or the Corporate Finance VEE, respectively. Students considering this alternative must speak with a faculty advisor from the Department of Mathematics and Statistics.

8. Students who entered the program prior to September 2023 may use COMMERCE 4FP3 towards the Course List.
9. Students are recommended to complete STATS 3AT3 before their first co-op work term.

Course List

- COMMERCE 2AB3 - Managerial Accounting I
- COMMERCE 4FL3 - Personal Financial Management
- COMMERCE 4FW3 - Finance for Entrepreneurs
- ECON 2H03
- ECON 2HH3
- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II
- All Level III, IV and V Mathematics or Statistics courses

Requirements For Students Who Enter in September 2025 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

Completion of Level II Honours Actuarial and Financial Mathematics program including:

15 units

- COMMERCE 2FA3 - Introduction to Finance
- MATH 2C03 - Introduction to Differential Equations
- MATH 2FM3 - Introduction To Mathematical Finance
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

0-9 units

from the following courses, if not completed in Level I

- COMMERCE 1AA3 - Introductory Financial Accounting
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

9 units

- MATH 3FM3 - Mathematics of Finance
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics

0-3 units

- COMMERCE 2FB3 - Managerial Finance (or COMMERCE 3FA3) (if eligible)

(See *Program Notes 5, 6 and 7* above.)

0-3 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

6 units

- STATS 3G03 - Actuarial Mathematics I
- STATS 3ST3 - Actuarial Models in Non-Life Insurance

0-3 units

- COMMERCE 2FB3 - Managerial Finance (or COMMERCE 3FA3) (if not completed in Level III)

(See *Program Notes 5, 6 and 7* above.)

9 units

from

- *Course List* (See *Program Notes 4 and 8* above.)

12-15 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

from

- MATH 4FM3 - Financial Markets and Derivatives
- STATS 4G03 - Advanced Topics in Actuarial Science
- STATS 4H03 - Actuarial Mathematics II (formerly called STATS 3H03)

3 units

- STATS 4A03 - Time Series (if COMMERCE 2FB3 or 3FA3 not completed previously.)

(See *Program Notes 5, 6 and 7* above.)

6 units

- Electives

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

Completion of Level II Honours Actuarial and Financial Mathematics program including:

12 units
- COMMERCE 2FA3 - Introduction to Finance (See *Program Note 2* above.)
- MATH 2FM3 - Introduction To Mathematical Finance
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

3 units
from
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units
from
- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

0-9 units
from the following courses, if not completed in Level I
- COMMERCE 1AA3 - Introductory Financial Accounting
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

1 course
- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units
from
- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

9 units
- MATH 3FM3 - Mathematics of Finance
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics

0-3 units
- COMMERCE 2FB3 - Managerial Finance (or COMMERCE 3FA3) (if eligible)

(See *Program Notes 5, 6 and 7* above.)

0-3 units
- Electives

1 course
- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course
- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course
- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

6 units
- STATS 3G03 - Actuarial Mathematics I
- STATS 3ST3 - Actuarial Models in Non-Life Insurance

0-3 units
- COMMERCE 2FB3 - Managerial Finance (or COMMERCE 3FA3) (if not completed in Level III)

(See *Program Notes 5, 6 and 7* above.)

9 units
from
- *Course List* (See *Program Notes 4 and 8* above.)

12-15 units
- Electives

Spring/Summer Term:

Work Term

1 course
- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units
from
- MATH 4FM3 - Financial Markets and Derivatives
- STATS 4G03 - Advanced Topics in Actuarial Science
- STATS 4H03 - Actuarial Mathematics II

3 units
- STATS 4A03 - Time Series (if COMMERCE 2FB3 or 3FA3 not completed previously.)

(See *Program Notes 5, 6 and 7* above.)

6 units
- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III, IV	15 units from Academic Levels III, IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

HONOURS MATHEMATICS AND COMPUTER SCIENCE (B.SC.)

Admission Notes

1. Completion of MATH 1C03 is required by the end of Level II.
2. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

3. For students who enter in September 2025 or later, completion of COMPSCI 1JC3 is required by the end of Level II. Completion in Level I is recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Admission is by selection but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

3 UNITS

- COMPSCI 1DM3 - Discrete Mathematics for Computer Science

3 UNITS

from

- COMPSCI 1MD3 - Introduction to Programming
- MATH 1MP3 - Introduction to Mathematical Scientific Computation

3 UNITS

from

- COMPSCI 1XC3 - Computer Science Practice and Experience: Development Basics
- COMPSCI 1XD3 - Computer Science Practice and Experience: Introduction to Software Design Using Web Programming

Program Notes

1. To meet the prerequisites of required Level III Computer Science courses, students are strongly encouraged to take COMPSCI 2LC3 and one of COMPSCI 2AC3 or 2ME3 in Level II.
2. Completion of MATH 1C03 is required by the end of Level II.
3. Effective September 2025, completion of COMPSCI 1JC3 is required by the end of Level II. Completion in Level I is recommended.
4. Students interested in pursuing graduate school in mathematics or statistics are recommended to complete MATH 2XA3 and 2XB3.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 2XB3 - Vector Calculus II
- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3H03* - Number Theory
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3T03 - Inquiry in Topology
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

0-3 units

- COMPSCI 1JC3 - Introduction to Computational Thinking (if not completed in Level I)

(See *Admission Note 3* and *Program Note 3* above.)

3 units

from

- MATH 2X03
- MATH 2XX3
- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

3 units

from

- MATH 2LA3 - Applications of Linear Algebra

- MATH 2R03 - Theory of Linear Algebra

3 units

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3X03 - Complex Analysis I

6 units

from

- *Core Course List*

9 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

12 units

- COMPSCI 2AC3 - Automata and Computability
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development

6 units

from

- COMPSCI 3AC3 - Algorithms and Complexity
- COMPSCI 3MI3 - Principles of Programming Languages
- COMPSCI 3SH3 - Computer Science Practice and Experience: Operating Systems

12 units

from

- Levels II, III, IV Computer Science courses, including at least 6 units from Levels III, IV

27-30 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

6 units

- MATH 2X03
- MATH 2XX3

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units

from

- MATH 2C03 - Introduction to Differential Equations
- STATS 2D03 - Introduction to Probability

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

- MATH 3X03 - Complex Analysis I

3 units

from

- *Core Course List*

9 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

12 units

- COMPSCI 2AC3 - Automata and Computability
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development

6 units

from

- COMPSCI 3AC3 - Algorithms and Complexity
- COMPSCI 3DB3
- COMPSCI 3MI3 - Principles of Programming Languages
- COMPSCI 3SD3
- COMPSCI 3SH3 - Computer Science Practice and Experience: Operating Systems

12 units

from

- Levels II, III, IV Computer Science courses, including at least 6 units from Levels III, IV

27-30 units

- Electives

HONOURS MATHEMATICS AND PHYSICS (B.SC.)

Admission Notes

1. Completion of MATH 1C03 is required by the end of Level II.
2. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
3. Completion of either COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03) or MATH 1MP3 is required by the end of Level II, however, MATH 1MP3 is recommended in Level I.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 2* above.)

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 UNITS

from

- the Science I Course List (See *Admission Note 3* above.)

Program Notes

1. PHYSICS 3A03 and 3C03 are listed in Level III but are offered in alternate years and may be taken in Level IV.
2. A Minor in Astronomy or Statistics is not permitted in the Honours Mathematics and Physics program.
3. Students must complete 3 units from COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03) or MATH 1MP3. Students are strongly recommended to complete both DATASCI 2G03 (or PHYSICS 2G03) and one of COMPSCI 1MD3 and MATH 1MP3.
4. Completion of MATH 1C03 is required by the end of Level II.
5. Students who entered the program prior to September 2022 may choose to complete one of MATH 3ET3 A/B S, 4P06 A/B S, 4W03, STATS 4T06 A/B or 4W03 instead of PHYSICS 3ET3 A/B S, 4L03 A/B or 4P06 A/B. A total of 9 units of Level III, IV, V Physics or Astronomy courses will still be required.
6. For students entering the program as of September 2022, completion of 3-6 units from MATH 3ET3 A/B S, 4P06 A/B S, 4W03, PHYSICS 3ET3 A/B S, 4L03 A/B, STATS 4T06 A/B or 4W03 is required.

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

Level I: 30 Units

30 UNITS

(See *Admission* above.)

Level II: 30 Units

9 UNITS

from

- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03
- MATH 2XX3
- MATH 2XA3 - Vector Calculus I
- MATH 2XB3 - Vector Calculus II

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

12 UNITS

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics

0-3 UNITS

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

0-3 UNITS

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 3* above.)

0-6 UNITS

- Electives (See *Program Notes 3 and 4* above.)

Level III: 30 Units

3 UNITS

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 UNITS

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3X03 - Complex Analysis I

6 UNITS

- Levels II, III, IV Mathematics or Statistics courses

3 UNITS

from

- PHYSICS 3A03 - Relativity, Gravity and the Geometry of Spacetime
- PHYSICS 3C03 - Analytical Mechanics

9 UNITS

- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

6 UNITS

- Electives

Level IV: 30 Units

3-6 UNITS

from

- the *Scientific Communication Course List*

3 UNITS

- PHYSICS 4B03 - Electromagnetic Theory

18 UNITS

from

- Levels III, IV, V Astronomy, Data Science, Mathematics, Physics, Statistics courses including nine units from Mathematics or Statistics and nine units from Astronomy, Data Science or Physics (See *Program Note 6* above.)

WHICH MUST INCLUDE ONE OF:

- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- PHYSICS 3ET3 A/B S - Physics Teaching Placement
- PHYSICS 4L03 A/B - Literature Review
- PHYSICS 4P06 A/B - Senior Research Project
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

3-6 UNITS

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

9 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03
- MATH 2XX3

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

12 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 3* above.)

0-6 units

- Electives (See *Program Notes 3* and *4* above.)

LEVEL III: 30 UNITS

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

- MATH 3X03 - Complex Analysis I

6 units

- Levels II, III, IV Mathematics or Statistics courses

3 units

from

- PHYSICS 3A03 - Relativity, Gravity and the Geometry of Spacetime
- PHYSICS 3C03 - Analytical Mechanics

9 units

- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

6 units

- Electives

LEVEL IV: 30 UNITS

3-6 units

from

- the *Scientific Communication Course List*

3 units

- PHYSICS 4B03 - Electromagnetic Theory

18 units

from

- Levels III, IV, V Astronomy, Data Science, Mathematics, Physics, Statistics courses including nine units from Mathematics or Statistics and nine units from Astronomy, Data Science or Physics (see *Program Note 6* above.)

which must include one of:

- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- PHYSICS 3ET3 A/B S - Physics Teaching Placement
- PHYSICS 4L03 A/B - Literature Review
- PHYSICS 4P06 A/B - Senior Research Project
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

3-6 units

- Electives

HONOURS MATHEMATICS AND STATISTICS (B.SC.)

Admission Notes

1. Completion of MATH 1C03 is required by the end of Level II.
2. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 2* above.)

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

Program Notes

- Completion of MATH 1C03 is required by the end of Level II.
- Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3 .
- Students interested in pursuing graduate school in mathematics or statistics are recommended to take MATH 2XA3 and 2XB3 .

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 2XB3 - Vector Calculus II
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

3 units

- MATH 2C03 - Introduction to Differential Equations

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I

(See *Program Note 3* above.)

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3X03 - Complex Analysis I

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

- STATS 2D03 - Introduction to Probability

12 units

from

- the *Core Course List*

15 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 2* above.)

39-45 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

12 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03
- MATH 2XX3
- MATH 3X03 - Complex Analysis I

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

- STATS 2D03 - Introduction to Probability

9 units

from

- the *Core Course List*

15 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 2* above.)

39-45 units

- Electives

HONOURS MATHEMATICS AND STATISTICS - MATHEMATICS SPECIALIZATION (B.SC.)

Effective September 2023, this program was renamed Honours Mathematics and Statistics - Mathematics Specialization (B.Sc.). Students who enrolled prior to September 2023 will be given the choice to remain in Honours Mathematics and Statistics - Mathematics Sub-Plan or transfer into Honours Mathematics and Statistics - Mathematics Specialization.

Admission Notes

1. Completion of MATH 1C03 is required by the end of Level II.
2. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and MATH 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

Admission

Completion of any Level I program with a Grade Point Average of at least 8.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 2* above.)

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

Program Notes

- Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3.
- Completion of MATH 1C03 is required by the end of Level II.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics

- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

15 units

from

- MATH 2C03 - Introduction to Differential Equations
- MATH 2R03 - Theory of Linear Algebra
- MATH 2X03
- MATH 2XX3
- MATH 2XA3 - Vector Calculus I
- MATH 2XB3 - Vector Calculus II
- MATH 3A03 - Real Analysis I

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3X03 - Complex Analysis I

3 units

- STATS 2D03 - Introduction to Probability

15 units

from the *Core Course List*, which must include six units from:

- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology

3 units

- MATH 4A03 - Real Analysis II

3 units

from

- MATH 4B03* - Calculus on Manifolds
- MATH 4E03* - Galois Theory
- MATH 4GR3 - Groups and Rings
- MATH 4L03* - Introduction to Mathematical Logic
- MATH 4NA3* - Numerical Methods for Differential Equations
- MATH 4X03* - Complex Analysis II

15 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 1* above.)

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

27-33 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

18 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 2R03 - Theory of Linear Algebra
- MATH 2X03
- MATH 2XX3
- MATH 3A03 - Real Analysis I
- MATH 3X03 - Complex Analysis I

3 units

- STATS 2D03 - Introduction to Probability

15 units

from the *Core Course List*, which must include six units from:

- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3T03 - Inquiry in Topology

3 units

- MATH 4A03 - Real Analysis II

3 units

from

- MATH 4B03* - Calculus on Manifolds
- MATH 4E03* - Galois Theory
- MATH 4GR3 - Groups and Rings
- MATH 4L03* - Introduction to Mathematical Logic
- MATH 4NA3* - Numerical Methods for Differential Equations
- MATH 4X03* - Complex Analysis II

15 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 1* above.)

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

27-33 units

- Electives

HONOURS MATHEMATICS AND STATISTICS - MATHEMATICS SPECIALIZATION CO-OP (B.SC.)

Effective September 2023, this program was renamed Honours Mathematics and Statistics - Mathematics Specialization Co-op (B.Sc.). Students who enrolled prior to September 2023 will be given the choice to remain in Honours Mathematics and Statistics - Mathematics Sub-Plan Co-op or transfer into Honours Mathematics and Statistics - Mathematics Specialization Co-op.

Honours Mathematics and Statistics Co-op Programs

Co-op opportunities in Mathematics and Statistics are available in combination with the specializations. Enrolment in these programs is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of a Level II Honours Mathematics and Statistics program with a Grade Point Average of at least 5.0. Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

NOTES

1. These are five-level (year) co-op programs which include two eight-month work terms which must be spent in mathematics or statistics related placements.
2. Students must be registered in a full-load and take a full academic program as prescribed, by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3. It is recommended that students in the Mathematics Specialization (Co-op) complete this requirement prior to their first work term.

Admission

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Mathematics and Statistics - Mathematics Specialization (B.Sc.) with a Grade Point Average of at least 5.0.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Mathematics and Statistics (Mathematics Specialization)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

- MATH 3IA3 - Introduction to Analysis

3 units

from

- MATH 3F03 - Ordinary Differential Equations
- MATH 3GR3 - Abstract Algebra

6 units

from

- *Core Course List*

3 units

- Electives (See *Note 4* above.)

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

- MATH 3A03 - Real Analysis I

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3X03 - Complex Analysis I

3 units

from

- MATH 3FF3 - Partial Differential Equations
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology

9 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Note 4* above.)

9-12 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

3 units

- MATH 4A03 - Real Analysis II

6 units

from

- Levels III, IV, V Mathematics or Statistics courses

3 units

from

- Level IV Mathematics courses

3 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III, IV	15 units from Academic Levels III, IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

HONOURS MATHEMATICS AND STATISTICS - STATISTICS SPECIALIZATION (B.SC.)

Effective September 2023, this program was renamed Honours Mathematics and Statistics - Statistics Specialization (B.Sc.). Students who enrolled prior to September 2023 will be given the choice to remain in Honours Mathematics and Statistics - Statistics Sub-Plan or transfer into Honours Mathematics and Statistics - Statistics Specialization.

Admission Notes

1. Completion of MATH 1C03 is required by the end of Level II.
2. Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take MATH 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.

Admission

Completion of any Level I program with a Grade Point Average of at least 8.0 including:

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

(See *Admission Note 2* above.)

3 UNITS

from the following courses, with a grade of at least C+

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

(See *Admission Note 2* above.)

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

Program Notes

1. Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3 .
2. Completion of MATH 1C03 is required by the end of Level II.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

9 units

from

- MATH 2C03 - Introduction to Differential Equations
- MATH 2XA3 - Vector Calculus I
- MATH 2XB3 - Vector Calculus II
- MATH 1X03
- MATH 1XX3

3 units

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3X03 - Complex Analysis I

12 units

- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics

3 units

from

- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

9 units

from

- the *Core Course List*

9 units

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

6 units

- Level IV Statistics

0-3 units

from

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 1* above.)

0-3 units

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

27-33 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-IV: 90 UNITS

12 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03

- MATH 2XX3
- MATH 3X03 - Complex Analysis I

3 units
from
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

3 units
from
- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

12 units
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics

3 units
from
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

9 units
from
- the *Core Course List*

9 units
- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

6 units
- Level IV Statistics

0-3 units
from
- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Program Note 1* above.)

0-3 units
- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level I)

27-33 units
- Electives

HONOURS MATHEMATICS AND STATISTICS - STATISTICS SPECIALIZATION CO-OP (B.SC.)

Effective September 2023, this program was renamed Honours Mathematics and Statistics - Statistics Specialization Co-op (B.Sc.). Students who enrolled prior to September 2023 will be given the choice to remain in Honours Mathematics and Statistics - Statistics Sub-Plan Co-op or transfer into Honours Mathematics and Statistics - Statistics Specialization Co-op.

Honours Mathematics and Statistics Co-op Programs

Co-op opportunities in Mathematics and Statistics are available in combination with the specializations. Enrolment in these programs is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of a Level II Honours Mathematics and Statistics program with a Grade Point Average of at least 5.0. Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

NOTES

1. These are five-level (year) co-op programs which include two eight-month work terms which must be spent in mathematics or statistics related placements.
2. Students must be registered in a full-load and take a full academic program as prescribed, by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3. It is recommended that students in the Statistics Specialization (Co-op) complete this requirement prior to their first work term.

Admission

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Mathematics and Statistics - Statistics Specialization (B.Sc.) with a Grade Point Average of at least 5.0.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Mathematics and Statistics (Statistics Specialization)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

6 units

- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

6 units

from

- the *Core Course List*

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3X03 - Complex Analysis I

3 units

from the following courses, if not completed in Level III

- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

3 units

from

- Level IV Statistics courses

9 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

0-3 units

from the following courses, if not already completed for another requirement:

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Note 4* above.)

9-12 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

3 units

from

- Levels III, IV, V Mathematics or Statistics courses

3 units

from

- Level IV Statistics courses

9 units

- Electives

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III, IV	15 units from Academic Levels III, IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

HONOURS MATHEMATICS AND STATISTICS CO-OP (B.SC.)

Honours Mathematics and Statistics Co-op Programs

Co-op opportunities in Mathematics and Statistics are available in combination with the specializations. Enrolment in these programs is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of a Level II Honours Mathematics and Statistics program with a Grade Point Average of at least 5.0. Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education.

NOTES

1. These are five-level (year) co-op programs which include two eight-month work terms which must be spent in mathematics or statistics related placements.

2. Students must be registered in a full-load and take a full academic program as prescribed, by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students must satisfy a Scientific Computing requirement, by completing one of: COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03), or MATH 1MP3. It is recommended that students in the Mathematics Specialization (Co-op) complete this requirement prior to their first work term.

Admission

Enrolment in this program is limited. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Mathematics and Statistics (B.Sc.) with a Grade Point Average of at least 5.0.

Core Course List

- MATH 2ET3* - Theory and Practice of Teaching Mathematics
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra
- MATH 2XB3 - Vector Calculus II
- MATH 3B03 - Geometry
- MATH 3F03 - Ordinary Differential Equations
- MATH 3FF3 - Partial Differential Equations
- MATH 3GR3 - Abstract Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 3T03 - Inquiry in Topology
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

Scientific Communication Course List

- MATH 3CY3* - Cryptography
- MATH 3DC3* - Discrete Dynamical Systems and Chaos
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- MATH 3G03* - Problem Solving
- MATH 3MB3 - Introduction to Modelling
- MATH 3QC3* - Introduction to Quantum Computing
- MATH 3TP3* - Truth and Provability
- MATH 3U03* - Combinatorics
- MATH 3V03* - Graph Theory
- MATH 3Z03* - Inquiry: History of Mathematics
- MATH 4FM3 - Financial Markets and Derivatives
- MATH 4MB3 - Mathematical Biology
- MATH 4P06 A/B S - Senior Research Project
- MATH 4W03 - Reading in Mathematics
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 3DS3
- STATS 3PG3 - Probability and Games of Chance
- STATS 4A03 - Time Series
- STATS 4M03 - Multivariate Analysis
- STATS 4P03* - Advanced Applied Statistics
- STATS 4T06 A/B - Senior Research Project
- STATS 4W03 - Reading in Statistics

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

30 units

- Completion of Level II Honours Mathematics and Statistics

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis

6 units

from

- the *Core Course List*

6 units

- Electives

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

from

- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables
- MATH 3X03 - Complex Analysis I

0-3 units

from the following courses, if not already completed for another requirement:

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PHYSICS 2G03

(See *Note 4* above.)

9 units

from

- Levels III, IV, V Mathematics or Statistics courses including one course selected from the *Scientific Communication Course List*

15-18 units

- Electives

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:
Work Term
1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
6 units
from
- Levels III, IV, V Mathematics or Statistics courses

9 units
- Electives

Co-op Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Levels III, IV	15 units from Academic Levels III, IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Bachelor of Science

MATHEMATICAL SCIENCE (B.SC.)

Admission Note

Students should be aware that MATH 1B03 may be a prerequisite for upper level Computer Science and Mathematics courses.

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including:

6 UNITS
from the following courses, where an average of at least 4.0 (between the courses) is required
- MATH 1A03 - Calculus For Science I
- MATH 1AA3 - Calculus For Science II
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS
from
- COMPSCI 1MD3 - Introduction to Programming
- MATH 1B03 - Linear Algebra I
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Admission Note* above.)

6 UNITS
from
- *Faculty of Science* courses

Program Note

Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II.

Mathematical Science Course List

- All Level II, III, IV Computer Science courses
- DATASCI 2G03 - Scientific Computing
- MATH 2C03 - Introduction to Differential Equations
- MATH 2LA3 - Applications of Linear Algebra
- MATH 2MC3 - Multivariable Calculus
- MATH 2R03 - Theory of Linear Algebra
- MATH 2X03
- MATH 2XA3 - Vector Calculus I
- MATH 2XB3 - Vector Calculus II
- MATH 2XX3
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications
- All Level III and IV Mathematics or Statistics courses

Requirements

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I: 30 UNITS
30 units
(See *Admission* above.)

LEVEL II: 30 UNITS
12 units
from
- Level II courses from the *Mathematical Science Course List*

6 units
from
- *Faculty of Science* courses

12 units
- Electives (See *Admission Note* above.)

LEVEL III: 30 UNITS
12 units
from
- Level III courses from the *Mathematical Science Course List*

3 units
from
- *Faculty of Science* courses

15 units
- Electives

Minor(s):

MINOR IN MATHEMATICS

Notes

1. ISCI 1A24 A/B or ARTSSCI 1D06 A/B is a substitution for 6 units from MATH 1A03, 1AA3, 1LS3, 1LT3, 1X03, 1XX3.
2. MATH 2L03 and 2UU3 cannot be used for credit towards this Minor.
3. ISCI 2A18 A/B or ARTSSCI 2R03 is a substitution for 3 units of Level II Mathematics toward the Minor in Mathematics.
4. In order to complete a Minor in Mathematics, at least 12 units (above

Level I) must be elective to degree.
5. A Minor in Mathematics cannot be declared together with a Minor in Statistics.
6. A Minor in Mathematics is not permitted for students enrolled in any Honours program or joint program offered by the Department of Mathematics and Statistics.

Requirements

27 units total

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I

3 UNITS

from

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

18 UNITS

from

- Levels II, III, IV Mathematics or Statistics courses, including at least six units from Levels III, IV Mathematics or Statistics (See *Note 2* above.)

MINOR IN STATISTICS

Notes

1. ISCI 1A24 A/B or ARTSSCI 1D06 A/B is a substitution for 6 units from MATH 1A03, 1AA3, 1LS3, 1LT3, 1X03, 1XX3.
2. MATH 2L03 and 2UU3 cannot be used for credit towards this Minor.
3. ISCI 2A18 A/B or ARTSSCI 2R03 is a substitution for 3 units of Level II Mathematics toward the Minor in Statistics.
4. In order to complete a Minor in Statistics, at least 12 units (above Level I) must be elective to degree.
5. A Minor in Statistics cannot be declared together with a Minor in Mathematics.
6. A Minor in Statistics is not permitted for students enrolled in any Honours program or joint program offered by the Department of Mathematics and Statistics.

Requirements

27 units total

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1M03 (with a grade of at least B-)

3 UNITS

from

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS

from

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

9 UNITS

from

- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3D03 - Mathematical Statistics
- STATS 3S03* - Survey Sampling
- STATS 3U03* - Stochastic Processes

9 UNITS

from

- ARTSSCI 2R03 - Applied Statistical Inference
- PNB 3XE3 - Inferential Statistics and Research Methods
- Levels II, III, IV Mathematics or Statistics

(See Note 2 above.)

Department of Physics and Astronomy

http://www.physics.mcmaster.ca/#undergrads

Faculty as of January 15, 2025

CHAIR

Alison Sills

ASSOCIATE CHAIR (GRADUATE)

Laura C. Parker

ASSOCIATE CHAIR (UNDERGRADUATE)

Fiona E. McNeill

DISTINGUISHED UNIVERSITY PROFESSORS

Bruce D. Gaulin/B.Sc. *(McGill)*, Ph.D. *(McMaster)*, Brockhouse Chair in the Physics of Materials, F.R.S.C.

Christine D. Wilson/B.Sc. *(Toronto)*, Ph.D. *(California Institute of Technology)*, F.R.S.C.

PROFESSORS

Cliff Burgess/B.Sc. *(Waterloo)*, Ph.D. *(Texas)*, F.R.S.C.

Soo Hyun Byun/B.Sc., M.Sc., Ph.D. *(Seoul National University)*

Alan A. Chen/B.Sc. *(Toronto)*, Ph.D. *(Yale)*

Kari Dalnoki-Veress/B.Sc., M.Sc., Ph.D. *(Guelph)*

Cécile Fradin/B.Sc., M.Sc. *(Ecole Normale Supérieure)*, Ph.D. *(Paris VI)*

Paul G. Higgs/B.Sc., Ph.D. *(Cambridge)*

Takashi Imai/B.Sc., M.Sc., Ph.D. *(Tokyo)*

Sung-Sik Lee/B.Sc. *(Korea Advanced Institute of Science and Technology)*, M.Sc., Ph.D. *(Pohang)*

Graeme M. Luke/B.Sc. *(Queen's)*, Ph.D. *(British Columbia)*

Fiona E. McNeill/B.Sc. *(Edinburgh)*, Ph.D. *(Birmingham)*

Duncan O'Dell/B.Sc. *(Imperial)*, Ph.D. *(Bristol)*

Laura C. Parker/B.Sc. *(Mount Allison)*, Ph.D. *(Waterloo)*

Maikel Rheinstädter/B.Sc., M.Sc., Ph.D. *(Universität des Saarlandes)*

An-Chang Shi/B.Sc. *(Fudan)*, M.Sc., Ph.D. *(Illinois)*

Alison Sills/B.Sc. *(Western Ontario)*, Ph.D. *(Yale)*

Erik S. Sorensen/B.Sc., M.Sc. *(Århus)*, Ph.D. *(California-Santa Cruz)*

James Wadsley/B.Sc. *(Monash)*, M.Sc., Ph.D. *(Toronto)*

ADJUNCT PROFESSORS

David Fleming/B.Sc. *(Mount Alison)*, M.Sc., Ph.D. *(McMaster)*

James Forrest/ B.Sc. *(British Columbia)*, M.Sc., Ph.D. *(Guelph)*

Wytse Van Dijk/B.Sc., Ph.D. *(McMaster)*

Robert Wickham/B.Sc. *(Toronto)*, Ph.D. *(Chicago)*

Christopher Wiebe/ B.Sc. *(Winnipeg)*, M.Sc., Ph.D. *(McMaster)*

ASSOCIATE PROFESSORS

Robert Cockcroft/B.Sc. *(University College London)*, M.Sc., Ph.D. *(McMaster)*
Kevin Diamond/B.Sc. *(Waterloo)*, Ph.D. *(McMaster)*
Hari Kunduri/B.Sc. (Toronto), M.Math., Ph.D. *(Cambridge)*
Reza Nejat/B.Sc. *(Tehran)*, M.Sc., Ph.D. *(Missouri-Rolla)*
Sergey Sibiryakov/B.Sc. *(Moscow Institute of Physics and Technology)*, Ph.D. *(Institute of Nuclear Research of the Russian Academy of Sciences)*

ASSISTANT PROFESSORS

Patrick Clancy/B.Sc. *(St. Francis Xavier)*, M.Sc., Ph.D. *(McMaster)*
Ryan Cloutier/B.Sc., Ph.D. *(Toronto)*
Rajabi Fereshteh/B.Sc. *(Iran)*, M.Sc., Ph.D. *(Western)*
Wenjie Ji/B.Sc. *(Tsinghua)*, Ph.D. *(Massachusetts Institute of Technology)*
Christopher Rowley/B.Sc., Ph.D. *(McMaster)*
Miranda Schmidt/B.Sc., M.Sc., Ph.D. *(Guelph)*

ADJUNCT ASSISTANT PROFESSORS

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Priscilla Dreyer/B.Sc. *(McMaster)*, Ph.D. *(Toronto)*
Andrei R. Hanu/B.Sc., M.Sc., Ph.D. *(McMaster)*
Eric Johnston/B.Sc. *(Queens)*, Ph.D. *(McMaster)*
Annika Lennarz/B.Sc., Diploma, Ph.D. *(Münster)*
Baochang Liu/B.Sc. *(China)*, M.Sc. *(Brock)*, Ph.D. *(McMaster)*
Diana Moscu/B.Sc., M.Sc., Ph.D. *(McMaster)*
Karin Stephenson/B.Sc., Ph.D. *(McMaster)*
Ryan Studinski/B.Sc., Ph.D. *(McMaster)*
Christopher Thome/B.MSc. *(Western)*, M.Sc., Ph.D. *(McMaster)*
Jeroen Thompson/B.Sc.*(Michigan)*, M.Sc. *(Connecticut)*, Ph.D. *(McMaster)*
Zin Tun/B.Sc., M.Sc. *(Burma)*, Ph.D. *(McMaster)*

ASSOCIATE MEMBERS

Qiyin Fang/*(Engineering Physics)* M.Sc., Ph.D. *(East Carolina)*
Gitanjali Kolhatkar/*(Engineering Physics)* B.Sc., M.Sc. *(Ottawa)*, Ph.D. *(Sherbrooke)*
Maureen Lagos/*(Materials Science and Engineering)* B.Sc., M.Sc., Ph.D. *(Campinas)*
Jose M. Moran-Mirabal/*(Chemistry and Chemical Biology)* B.Sc., M.Sc. *(ITESM-Monterrey, Mexico)*, Ph.D. *(Cornell)*
Mike Noseworthy/*(Electrical and Computer Engineering)* B.Sc., M.Sc., Ph.D. *(Guelph)*
Muhammed Simsek/*(Biology)* B.Sc. *(Middle Eastern Technical, Turkey)*, M.Sc. *(Rutgers)*, Ph.D. *(SUNY)*
Sarah Symons/*(Interdisciplinary Science)* B.Sc., Ph.D. *(Leicester)*
Robin Zhao/*(Civil Engineering)* B.Sc. *(Waterloo)*, M.Sc., Ph.D. *(Massachusetts Institute of Technology)*

Notes Applicable to all Programs Offered by the Department of Physics and Astronomy

1. The Department offers the following programs:
    - Honours Astrophysics
    - Honours Medical and Biological Physics
    - Honours Physics
2. These programs consist of a specified set of basic requirements and a wide choice of electives (including those from outside the Faculty of Science), allowing for interdisciplinary studies or the opportunity to complete a Minor in another subject. Students are encouraged to read the Program Notes of each program for a list of additional sets of courses which are appropriate preparation for graduate studies in Physics, Astronomy, Medical Physics or Biophysics.
3. Transfer between options may be possible at any time, subject to satisfying the admission requirements.
4. Admission to Honours Medical and Biological Physics Co-op and Honours Physics Co-op is in Level III.
5. A Minor in Astronomy or a Minor in Astrophysics is not permitted in the Honours Medical and Biological Physics or Honours Physics programs.
6. Students with an interest in physics theory or wishing to take additional Level III, IV Mathematics courses should consider MATH 2XA3, 2XB3.

B.Sc. Three-Level Degree

A three-level program with a Physics orientation is available through the B.Sc. in Chemical and Physical Sciences.

Bachelor of Science (Honours)

HONOURS ASTROPHYSICS (B.SC.)

Admission Notes

1. Completion of ASTRON 1F03 is required by the end of Level II and is strongly recommended in Level I.
2. Completion of MATH 1B03 or 1ZC3 is required by the end of Level II and is strongly recommended in Level I.
3. Completion of PHYSICS 1C03 and 1CC3 is recommended in Level I.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1AA3 - Calculus For Science II
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

9 UNITS

from

- the Science I Course List (See *Admission Notes 1* and *2* above.)

Program Notes

1. Completion of DATASCI 2G03 (or PHYSICS 2G03) is required by the end of Level III and is strongly recommended in Level II.
2. Completion of BIOPHYS 3D03 and PHYSICS 3A03 are recommended.
3. Completion of PHYSICS 4G03 is recommended.

4. Students who are interested in pursuing graduate school in astrophysics are encouraged to take PHYSICS 4B03 and 4F03 in Level IV.
5. ASTRON 3X03, 3Y03 and 4X03 are offered in alternate years and may be taken in either Level III or IV.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

15 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics
- PHYSICS 2P03 - Introductory Laboratory

3 units

- MATH 2C03 - Introduction to Differential Equations

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

3 units

- ASTRON 2E03 - Planetary Astronomy

0-3 units

- ASTRON 1F03 - Introduction to Astronomy and Astrophysics (if not completed in Level I)

(See *Admission Note 1* above.)

0-3 units

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Admission Note 2* above.)

0-6 units

- Electives (See *Program Note 1* above.)

LEVEL III: 30 UNITS

6 units

- ASTRON 3X03 - Galaxies and Cosmology
- ASTRON 4X03 - Data Analysis Project Course

6 units

- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3MM3 - Quantum Mechanics I

3 units

from the following courses, if not completed in Level II

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 1* above.)

6 units

- MATH 3C03 - Mathematical Physics I
- MATH 3D03 - Mathematical Physics II

9 units

- Electives (See *Program Note 2* above.)

LEVEL IV: 30 UNITS

6 units

- ASTRON 3Y03 - Stellar Structure
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics

12 units

from

- Levels III, IV, V Astronomy, Biophysics, Mathematics, Physics courses
- EARTHSC 3V03 - Environmental Geophysics
- MEDPHYS 4D03 - Imaging in Medicine and Biology
- MEDPHYS 4F03 - Fundamentals of Health Physics

including, one of

- PHYSICS 3ET3 A/B S - Physics Teaching Placement
- PHYSICS 4L03 A/B - Literature Review
- PHYSICS 4P06 A/B - Senior Research Project
- PHYSICS 4PQ6 A/B - Senior Research Project - Quantum

12 units

- Electives (See *Program Notes 3* and *4* above.)

HONOURS MEDICAL AND BIOLOGICAL PHYSICS (B.SC.)

Admission Notes

1. Completion of BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), CHEM 1AA3 and MATH 1B03 (or 1ZC3) is required by the end of Level II. Completion in Level I is strongly recommended. BIOLOGY 1M03 is also recommended.
2. Completion of MEDPHYS 1A03, PHYSICS 1CC3 is recommended in Level I.
3. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1AA3 - Calculus For Science II
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- MEDPHYS 1A03 - Physics in Medicine and Biology
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

3 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular

Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Admission Note 3* above.)

6 UNITS

from

- The Science I Course List (See Admission Notes 1 and 2 above.)

Program Notes

1. Students may take any combination of courses from *Course List A - Medical Physics Focus*, *Course List B - Biological Physics Focus* or *Course List C - Soft Matter Focus* based on their area of interest.
2. Students interested in medical physics or health physics, especially those considering postgraduate studies in these areas, should take 12 units from *Course List A - Medical Physics Focus*. These courses also contribute to the core knowledge and learning objectives required by the Commission on Accreditation of Medical Physics Education Programs.
3. Students interested in biochemistry, in particular those interested in postgraduate studies in this area, should take 12 units from the *Course List B - Biological Physics Focus*.
4. Students interested in physics and soft matter physics, especially those considering postgraduate studies in these areas, should take 12 units from *Course List C - Physics of Soft Matter Focus*.
5. Completion of either BIOCHEM 2B03 and 2BB3 or BIOCHEM 2EE3 and 3G03 is required, however, BIOCHEM 2EE3 and 3G03 are recommended.
6. Completion of KINESIOL 2X03 or 2Y03 is required by graduation, however, students are encouraged to complete the course in Level II or III.

Course List A - Medical Physics Focus

- CHEM 3RC3 - Radioisotopes in Medicine
- KINESIOL 2XX3 - Human Anatomy and Physiology II
- KINESIOL 2YY3 - Human Anatomy and Physiology II
- MEDPHYS 3C03 - Operational Health Physics: Laboratory & Communication
- MEDPHYS 4D03 - Imaging in Medicine and Biology
- MEDPHYS 4F03 - Fundamentals of Health Physics
- MEDPHYS 4I03 - Introduction to Biophotonics
- MEDPHYS 4RB3
- MEDPHYS 4U03 - Radiation Biology
- MEDPHYS 4Y06 A/B
- PHYSICS 4E03 - Particle and Nuclear Physics
- PHYSICS 4P06 A/B - Senior Research Project

Course List B - Biological Physics Focus

- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3D03 - Metabolism and Regulation
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4LL3
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOLOGY 2B03 - Cell Biology
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 3G03 - Modelling Life

Course List C - Physics of Soft Matter Focus

- BIOPHYS 4P06 A/B
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3N04 - Physical Optics
- PHYSICS 3P03 - Advanced Laboratory
- PHYSICS 4F03 - Quantum Mechanics II
- PHYSICS 4G03 - Computational Physics
- PHYSICS 4K03 - Physics of Quantum Matter

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

6 units
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2P03 - Introductory Laboratory

3 units

from
- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

3 units
- MATH 2C03 - Introduction to Differential Equations

3 units

from
- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

3 units
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics

3 units

from
- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 5* above.)

0-3 units

from the following courses, if not completed in Level I
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Admission Notes 1* and *3* above.)

0-3 units

from
- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 6* above.)

3-9 units
- Electives

LEVEL III: 30 UNITS

6 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics

3 units

- MATH 3C03 - Mathematical Physics I

3 units

- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter

3 units

- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 5* above.)

3 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 1*, *2*, *3* and *4* above.)

0-3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 6* above.)

6-9 units

- Electives

LEVEL IV: 30 UNITS

12 units

- BIOPHYS 4S03 - Introduction to Molecular Biophysics
- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine
- PHYSICS 3MM3 - Quantum Mechanics I

9 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 1*, *2*, *3*, and *4* above.)

0-3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 6* above.)

6-9 units

- Electives

Requirements for Students Who Entered in September 2022 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

9 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2P03 - Introductory Laboratory

3 units

from

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

6 units

- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03

3 units

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics

3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 5* above.)

0-3 units

from the following courses, if not completed in Level I

- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

0-3 units

- Electives

LEVEL III: 30 UNITS

6 units

- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

3 units

- MATH 3C03 - Mathematical Physics I

3 units

- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter

3 units

- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 5* above.)

3 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 1*, *2*, *3*, and *4* above.)

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- BIOPHYS 4S03 - Introduction to Molecular Biophysics
- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine

9 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 1*, *2*, *3*, and *4* above.)

12 units

- Electives

HONOURS MEDICAL AND BIOLOGICAL PHYSICS CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II Honours Medical and Biological Physics (B.Sc.) with a Grade Point Average of at least 5.0 including:

15 UNITS

from

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- DATASCI 2G03 - Scientific Computing
- MATH 2C03 - Introduction to Differential Equations
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2G03
- PHYSICS 2P03 - Introductory Laboratory

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

3 UNITS

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 8* below.)

0-3 UNITS

from the following courses, if not completed in Level I

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Program Note 10* below.)

0-3 UNITS

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 9* below.)

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education and the Chair of the Committee of Instruction.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in medical physics or biophysics related placements.
2. Students must be registered full-time and take a full academic work load as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required to complete SCIENCE 3C00 before the first work placement.
4. Students may take any combination of courses from *Course List A - Medical Physics Focus*, *Course List B - Biological Physics Focus* or *Course List C - Soft Matter Focus*.
5. Students interested in medical physics or health physics, especially those considering postgraduate studies in these areas, should take 12 units from *Course List A - Medical Physics Focus*. These courses also contribute to the core knowledge and learning objectives required by the Commission on Accreditation of Medical Physics Education Programs.
6. Students interested in biochemistry, in particular those interested in postgraduate studies in this area, should take 12 units from *Course List B - Biological Physics Focus*.
7. Students interested in physics and soft matter physics, especially those considering postgraduate studies in these areas, should take 12 units from *Course List C - Physics of Soft Matter Focus*.
8. Completion of either BIOCHEM 2B03 and 2BB3 or BIOCHEM 2EE3 and 3G03 is required, however, BIOCHEM 2EE3 and 3G03 are recommended.
9. Completion of KINESIOL 2X03 or 2Y03 is required by graduation, however, students are encouraged to complete the course in Level II or III.
10. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Course List A - Medical Physics Focus

- CHEM 3RC3 - Radioisotopes in Medicine
- KINESIOL 2XX3 - Human Anatomy and Physiology II
- KINESIOL 2YY3 - Human Anatomy and Physiology II
- MEDPHYS 3C03 - Operational Health Physics: Laboratory & Communication
- MEDPHYS 4D03 - Imaging in Medicine and Biology
- MEDPHYS 4F03 - Fundamentals of Health Physics
- MEDPHYS 4I03 - Introduction to Biophotonics
- MEDPHYS 4RB3
- MEDPHYS 4U03 - Radiation Biology
- MEDPHYS 4Y06 A/B
- PHYSICS 4E03 - Particle and Nuclear Physics
- PHYSICS 4P06 A/B - Senior Research Project

Course List B - Biological Physics Focus

- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3D03 - Metabolism and Regulation
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4LL3
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOLOGY 2B03 - Cell Biology
- BIOPHYS 3D03 - Origin of Life
- BIOPHYS 3G03 - Modelling Life

Course List C - Physics of Soft Matter Focus

- PHYSICS 2BB3 - Electricity and Magnetism II

- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3N04 - Physical Optics
- PHYSICS 3P03 - Advanced Laboratory
- PHYSICS 4F03 - Quantum Mechanics II
- PHYSICS 4G03 - Computational Physics
- PHYSICS 4K03 - Physics of Quantum Matter

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program.

LEVEL II: 30 UNITS

- Completion of Level II Honours Medical and Biological Physics including:

15 units

from

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- DATASCI 2G03 - Scientific Computing
- MATH 2C03 - Introduction to Differential Equations
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2P03 - Introductory Laboratory

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 8* above.)

0-3 units

from the following courses, if not completed in Level I

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Program Note 10* above.)

0-3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 9* above.)

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

12 units

- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter
- MATH 3C03 - Mathematical Physics I
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- PHYSICS 2B03 - Electricity and Magnetism I

0-3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 9* above.)

0-3 units

- Electives (See *Program Notes* above.)

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

6 units

- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 8* above.)

3 units

- BIOPHYS 4S03 - Introduction to Molecular Biophysics

6 units

- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine

0-3 units

from

- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I

(See *Program Note 9* above.)

6 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 4, 5, 6* and *7* above.)

3-6 units

- Electives (See *Program Notes* above.)

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 4, 5, 6* and *7* above.)

9 units

- Electives (See *Program Notes* above.)

Requirements for Students Who Entered in September 2023 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

- Completion of Level II Honours Medical and Biological Physics including:

24 units

from

- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- DATASCI 2G03 - Scientific Computing
- KINESIOL 2X03 - Human Anatomy and Physiology I
- KINESIOL 2Y03 - Human Anatomy and Physiology I
- MATH 2C03 - Introduction to Differential Equations
- MATH 2X03
- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2G03
- PHYSICS 2P03 - Introductory Laboratory

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 8* above.)

0-3 units

from the following courses, if not completed in Level I

- BIOLOGY 1A03 - Cellular and Molecular Biology
- CHEM 1AA3 - Introductory Chemistry II
- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

12 units

- BIOPHYS 3S03 - 'Squishy Physics': Physics of Soft Matter
- MATH 3C03 - Mathematical Physics I
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- PHYSICS 3MM3 - Quantum Mechanics I

3 units

- Electives (See *Program Notes* above.)

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:

Work Term

1 course

- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:

3 units

- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics

3 units

from

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOCHEM 2EE3 - Metabolism and Physiological Chemistry
- BIOCHEM 3G03 - Proteins and Nucleic Acids

(See *Program Note 8* above.)

3 units

- BIOPHYS 4S03 - Introduction to Molecular Biophysics

6 units

- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine

6 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 4*, *5*, *6*, and *7* above.)

9 units

- Electives (See *Program Notes* above.)

Spring/Summer Term:

Work Term

1 course

- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:

Work Term

1 course

- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:

6 units

from

- *Course List A, Course List B, Course List C*

(See *Program Notes 4*, *5*, *6*, and *7* above.)

9 units

- Electives (See *Program Notes* above.)

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Level III	15 units from Academic Level IV	Work Term SCIENCE 4WT0

Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

HONOURS PHYSICS (B.SC.)

Admission Notes

1. Completion of MATH 1B03 or 1ZC3 is required by the end of Level II and is strongly recommended in Level I.
2. Completion of PHYSICS 1C03 and 1CC3 is recommended in Level I.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1AA3 - Calculus For Science II
- MATH 1LS3 - Calculus for the Life Sciences I
- MATH 1LT3 - Calculus for the Life Sciences II
- MATH 1X03 - Calculus for Math and Stats I
- MATH 1XX3 - Calculus for Math and Stats II
- MATH 1ZA3 - Engineering Mathematics I
- MATH 1ZB3 - Engineering Mathematics II-A

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 UNITS

from

- CHEM 1A03 - Introductory Chemistry I
- CHEM 1E03 - General Chemistry for Engineering I

9 UNITS

from

- the Science I Course List (See *Admission Note 1* above.)

Program Notes

1. Students interested in computational and theoretical physics and especially those considering postgraduate studies in this area should take the following courses: DATASCI 3ML3, MATH 2LA3 (or MATH 2R03 if they plan to take Level III Mathematics courses for which it is a prerequisite), 2T03, PHYSICS 3A03, 3C03, 4B03, 4F03, 4G03, plus six additional units from Levels III, IV, V Astronomy, Mathematics, Physics.
2. Students interested in experimental physics and especially those considering postgraduate studies in this area should take the following courses: DATASCI 4X03, ENGPHYS 3BA4, 3BB4, PHYSICS 3N04.
3. Students interested in geophysics should consider taking EARTHSC 2E03, 3V03 and 4V03.
4. Completion of DATASCI 2G03 (or PHYSICS 2G03) is required by the end of Level III and is strongly recommended in Level II.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

15 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics
- PHYSICS 2P03 - Introductory Laboratory

0-3 units

from

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 4* above.)

3 units

- MATH 2C03 - Introduction to Differential Equations

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

0-3 units

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

(See *Admission Note 1* above.)

3-9 units

- Electives (See *Program Notes* above.)

LEVEL III: 30 UNITS

12 units

- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3MM3 - Quantum Mechanics I
- PHYSICS 3P03 - Advanced Laboratory

6 units

- MATH 3C03 - Mathematical Physics I
- MATH 3D03 - Mathematical Physics II

0-3 units

from the following courses, if not completed in Level II

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 4* above.)

9-12 units

- Electives (See *Program Notes* above.)

LEVEL IV: 30 UNITS

6 units

from

- Level IV Astronomy, Biophysics, Physics

9 units

from

- Levels III, IV, V Astronomy, Biophysics, Mathematics, Medical Physics, Physics courses
- EARTHSC 2E03 - Earth History
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 4V03 - Exploration Geophysics

including one of

- PHYSICS 3ET3 A/B S - Physics Teaching Placement

- PHYSICS 4L03 A/B - Literature Review
- PHYSICS 4P06 A/B - Senior Research Project
- PHYSICS 4PQ6 A/B - Senior Research Project - Quantum

15 units

- Electives (See *Program Notes* above.)

Note

Students who entered the program prior to September 2020 may refer to their Academic Advisement report or contact an Academic Advisor in the Office of the Associate Dean of Science (Academic) for program requirements.

HONOURS PHYSICS CO-OP (B.SC.)

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, submission of the on-line application by the stated deadline, and completion of Level II of an Honours program offered by the Department of Physics and Astronomy with a Grade Point Average of at least 5.0 including:

15 UNITS

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics
- PHYSICS 2P03 - Introductory Laboratory

0-3 UNITS

from

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 7* below.)

3 UNITS

- MATH 2C03 - Introduction to Differential Equations

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

0-3 UNITS

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

NOTE:

Information about the program and the selection procedure may be obtained from Science Career and Cooperative Education and the Chair of the Committee of Instruction.

Program Notes

1. This is a five-level (year) co-op program which includes two eight-month work terms which must be spent in physics related placements.
2. Students must be registered full-time and take a full academic work load as prescribed by Level and Term.
3. Students are required to complete SCIENCE 2C00 prior to the Fall Term of Level III. Students are required complete SCIENCE 3C00 before the first work placement.
4. Students interested in computational and theoretical physics and especially those considering postgraduate studies in this area should take the following courses: DATASCI 3ML3, MATH 2LA3 (or MATH 2R03 if they plan to take Level III Mathematics courses for which it is a prerequisite), 2T03, PHYSICS 3A03, 3C03, 4B03, 4F03, 4G03, plus six additional units from Levels III, IV, V Astronomy, Mathematics, Physics.
5. Students interested in experimental physics and especially those considering postgraduate studies in this area should take the following courses: DATASCI 4X03, ENGPHYS 3BA4, 3BB4, PHYSICS 3N04.
6. Students interested in geophysics should consider taking EARTHSC 2E03, 3V03 and 4V03.
7. Completion of DATASCI 2G03 (or PHYSICS 2G03) is required by the end of Level III and is strongly recommended in Level II.

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

Completed prior to admission to the program

LEVEL II: 30 UNITS

- Completion of any Level II Honours Physics program including:

15 units

- PHYSICS 2B03 - Electricity and Magnetism I
- PHYSICS 2BB3 - Electricity and Magnetism II
- PHYSICS 2C03 - Modern Physics
- PHYSICS 2E03 - Mechanics
- PHYSICS 2P03 - Introductory Laboratory

0-3 units

from

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 7* above.)

3 units

- MATH 2C03 - Introduction to Differential Equations

3 units

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2XA3 - Vector Calculus I

0-3 units

from the following courses, if not completed in Level I

- MATH 1B03 - Linear Algebra I
- MATH 1ZC3 - Engineering Mathematics II-B

3-9 units

- Electives

1 course

- SCIENCE 2C00 - Skills for Career Success in Science

LEVEL III

Consists of academic studies (Fall Term), Co-op Work Term (Winter Term), and Co-op Work Term (Spring/Summer Term)

Fall Term: 15 units:

3 units

- MATH 3C03 - Mathematical Physics I

3 units

- PHYSICS 3MM3 - Quantum Mechanics I

0-3 units

from the following courses, if not completed in Level II

- DATASCI 2G03 - Scientific Computing
- PHYSICS 2G03

(See *Program Note 7* above.)

6-9 units

- Electives (See *Program Notes 4* and *5* above.)

1 course

- SCIENCE 3C00 - Advanced Job Search Skills For Science Co-op Students

Winter Term:

Work Term
1 course
- SCIENCE 3WT0 - Science Co-op Work Term

Spring/Summer Term:
Work Term
1 course
- SCIENCE 3WT0 - Science Co-op Work Term

LEVEL IV

Consists of academic studies (Fall and Winter Terms) and Co-op Work Term (Spring/Summer Term)

Fall and Winter Terms: 30 units:
3 units
- MATH 3D03 - Mathematical Physics II

9 units
- PHYSICS 3D03 - Inquiry in Physics
- PHYSICS 3K03 - Thermodynamics and Statistical Mechanics
- PHYSICS 3P03 - Advanced Laboratory

9 units
from
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 4V03 - Exploration Geophysics
- EARTHSC 4Z03
- Levels III, IV, V Astronomy, Biophysics, Mathematics, Medical Physics, Physics courses

including one of
- PHYSICS 3ET3 A/B S - Physics Teaching Placement
- PHYSICS 4L03 A/B - Literature Review
- PHYSICS 4P06 A/B - Senior Research Project
- PHYSICS 4PQ6 A/B - Senior Research Project - Quantum

9 units
- Electives (See *Program Notes 4* and *5* above.)

Spring/Summer Term:
Work Term
1 course
- SCIENCE 4WT0 - Science Co-op Work Term

LEVEL V

Consists of Co-op Work Term (Fall Term) and academic studies (Winter Term)

Fall Term:
Work Term
1 course
- SCIENCE 5WT0 - Science Co-op Work Term

Winter Term: 15 units:
6 units
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 4V03 - Exploration Geophysics
- EARTHSC 4Z03
- Levels III, IV, V Astronomy, Biophysics, Mathematics, Medical Physics, Physics courses

9 units
- Electives (See *Program Notes 4* and *5* above.)

Co-op Program Chart

	FALL TERM (September to December)	**WINTER TERM (January to April)**	**SPRING/ SUMMER TERM (May to August)**
Level III	15 units from Academic Level III + SCIENCE 3C00	Work Term SCIENCE 3WT0	Work Term SCIENCE 3WT0
Level IV	15 units from Academic Level III	15 units from Academic Level IV	Work Term SCIENCE 4WT0
Level V	Work Term SCIENCE 5WT0	15 units from Academic Level IV	

Bachelor of Science

CHEMICAL AND PHYSICAL SCIENCES (B.SC.)

Formerly B.Sc. in Physical Sciences

This program is administered by the Department of Physics and Astronomy.

Admission Note

Prior to registration, students should carefully review the prerequisites of courses they anticipate taking in subsequent sessions as well as the admission requirements of programs they may seek transfer to.

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including:

3 UNITS

from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

9 UNITS

from the following courses, where an average of at least 4.0 (between the courses) is required:
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II
- CHEM 1E03 - General Chemistry for Engineering I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields
- PHYSICS 1V03 - Introductory Physics

12 UNITS

from
- the Science I Course List (See *Admission Note* above.)

Program Notes

1. Registration in the *B.Sc. Chemical and Physical Sciences* program does not guarantee access to all courses. Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II.
2. Students should seek academic advising to ensure that their choices are appropriate, especially if transfer to a program offered by the following Departments is being considered: Chemistry and Chemical Biology, School of Interdisciplinary Science, Physics and Astronomy.

B.Sc. Chemical and Physical Sciences Course List

- Levels II, III, IV Astronomy, Biophysics, Chemical Biology, Chemistry, Medical Physics and Physics courses
- EARTHSC 2E03 - Earth History
- EARTHSC 3V03 - Environmental Geophysics
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology
- MATH 3C03 - Mathematical Physics I
- MATH 3D03 - Mathematical Physics II

Requirements

90 units total (Levels I to III), of which no more than 42 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVELS II-III: 60 UNITS

24 units

- Levels II, III, IV courses from *B.Sc. Chemical and Physical Sciences Course List*, of which at least 12 units must be Levels III, IV (See *Program Notes* above.)

36 units

- Electives, of which at least nine units must be selected from the Faculty of Science

Minor(s):

MINOR IN ASTRONOMY

The Minor in Astronomy is being phased out. Graduation with this Minor will be last available to students graduating in 2025. Students who intended to complete this Minor should refer to the Minor in Astrophysics.

Notes

1. A Minor in Astronomy is not permitted for students enrolled in an Honours Medical and Biological Physics or Honours Physics program.
2. In order to complete a Minor in Astronomy, at least 12 units (above Level I) must be elective to degree.
3. ISCI 1A24 A/B is a substitution for PHYSICS 1C03 (or PHYSICS 1A03 or 1V03).
4. ARTSSCI 2D06 A/B is a substitution for PHYSICS 1C03 (or PHYSICS 1A03 or 1V03).
5. ISCI 2A18 A/B is a substitution for 3 units of Level II Physics toward the Minor in Astronomy.

Requirements

24 units total

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

12 UNITS

from

- ASTRON 1F03 - Introduction to Astronomy and Astrophysics
- ASTRON 2E03 - Planetary Astronomy
- ASTRON 3X03 - Galaxies and Cosmology
- ASTRON 3Y03 - Stellar Structure
- ASTRON 4X03 - Data Analysis Project Course

9 UNITS

from

- Levels II, III, IV, V Astronomy, Biophysics, Data Science, Medical Physics, Physics

MINOR IN ASTROPHYSICS

Notes

1. A Minor in Astrophysics is not permitted for students enrolled in an Honours Medical and Biological Physics or Honours Physics program.
2. In order to complete a Minor in Astrophysics, at least 12 units (above Level I) must be elective to degree.
3. ISCI 1A24 A/B is a substitution for PHYSICS 1C03 (or PHYSICS 1A03 or 1V03).
4. ARTSSCI 2D06 A/B is a substitution for PHYSICS 1C03 (or PHYSICS 1A03 or 1V03).
5. ISCI 1A24 A/B is a substitution for 3 units of Level II Physics toward the Minor in Astrophysics.

Requirements

24 units total

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

12 UNITS

from

- ASTRON 1F03 - Introduction to Astronomy and Astrophysics
- ASTRON 2E03 - Planetary Astronomy
- ASTRON 3X03 - Galaxies and Cosmology
- ASTRON 3Y03 - Stellar Structure
- ASTRON 4X03 - Data Analysis Project Course

9 UNITS

from

- Levels II, III, IV, V Astronomy, Biophysics, Data Science, Medical Physics, Physics

MINOR IN MEDICAL AND BIOLOGICAL PHYSICS

Notes

1. A Minor in Medical and Biological Physics is not permitted for students enrolled in an Honours Medical and Biological Physics program.
2. In order to complete a Minor in Medical and Biological Physics, at least 12 units (above Level I) must be elective to degree.
3. MATH 1A03 is the minimum mathematics required in order to complete a Minor in Medical and Biological Physics. However, more flexibility is possible if MATH 1AA3, 1B03, 2C03 and 2X03 are also

completed.

4. ISCI 1A24 A/B is a substitution for PHYSICS 1A03 (or PHYSICS 1C03 or 1V03).
5. ARTSSCI 2D06 A/B is a substitution for PHYSICS 1A03 (or PHYSICS 1C03 or 1V03).

Requirements

24 units total

3 UNITS

from

- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1D03 - Introductory Mechanics
- PHYSICS 1V03 - Introductory Physics

3 UNITS

from

- BIOPHYS 1S03
- LIFESCI 1D03 - Medical Imaging Physics
- MEDPHYS 1A03 - Physics in Medicine and Biology
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1E03 - Waves, Electricity and Magnetic Fields

3 UNITS

from

- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- LIFESCI 2BP3 - Biophysics of the Cell and Living Organisms

3 UNITS

- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics

12 UNITS

from

- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics
- ENGPHYS 4I03 - Introduction to Biophotonics
- LIFESCI 3BP3 - Modelling Life
- Levels II, III, IV Biophysics, Medical Physics

MINOR IN PHYSICS

Notes

1. More flexibility in course choice is possible for a Minor in Physics if MATH 2C03 and 2X03 are completed.
2. ISCI 1A24 A/B is a substitution for PHYSICS 1C03 (or PHYSICS 1A03 or 1V03) and PHYSICS 1CC3 (or PHYSICS 1AA3).
3. ISCI 2A18 A/B is a substitution for 3 units of Level II Physics toward the Minor in Physics.
4. In order to complete a Minor in Physics, at least 12 units (above Level I) must be elective to degree.
5. Students who completed course requirements for the Minor in Physics prior to September 2022 should consult the undergraduate calendar for the year(s) in which the coursework was completed.
6. In order to complete a Minor in Physics, at least 6 units must be from Level III, IV or V.

Requirements

24 units total

6 UNITS

from

- ARTSSCI 2D06 A/B - Physics
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

9 UNITS

from

- Levels II, III, IV, V Physics

(See *Program Note 6* above)

9 UNITS

from

- CHEM 2P03 - Applications of Physical Chemistry
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEM 4PB3 - Computational Models for Electronic Structure and Chemical Bonding
- DATASCI 2G03 - Scientific Computing
- EARTHSC 2E03 - Earth History
- EARTHSC 3V03 - Environmental Geophysics
- EARTHSC 4V03 - Exploration Geophysics
- ENVIRSC 2Q03 - Introduction to Environmental Geochemistry
- ENVIRSC 2W03 - Physical Hydrology
- Levels II, III, IV, V Astronomy, Biophysics, Data Science, Medical Physics, Physics including at least six units from Levels III, IV, V

(See *Program Note 6* above)

Department of Psychology, Neuroscience & Behaviour (Faculty of Science)

http://www.science.mcmaster.ca/pnb/

Faculty as of January 15, 2025

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Mel D. Rutherford

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Sigal Balshine/Research

Gabriel (Naiqi) Xiao/Graduate Studies

Nikol Piskuric/Undergraduate Studies

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Mohawk College of Applied Arts and Technology

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COORDINATOR, AUTISM & BEHAVIOURAL SCIENCES GRADUATE CERTIFICATE PROGRAM
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COORDINATOR, EARLY CHILDHOOD EDUCATION ACADEMIC PROGRAM
Karen Davis/B.A. *(Waterloo)*, Dipl. R ECE *(Mohawk)*

B.Sc. Degree

A three-level program with a general Life Sciences orientation is available through the B.Sc. in Life Sciences.

B.A. Degrees in Psychology, Neuroscience & Behaviour

For B.A. Degrees in Psychology, Neuroscience & Behaviour, see the Department of Psychology, Neuroscience & Behaviour (Faculty of Social Sciences).

Biology and Psychology

For the Honours Biology and Psychology program (B.Sc.), see Honours Biology and Psychology, Neuroscience & Behaviour (B.Sc.).

Bachelor of Applied Science

HONOURS APPLIED PSYCHOLOGY IN HUMAN BEHAVIOUR (B.A.SC.)

Program offered by the Department of Psychology, Neuroscience & Behaviour.

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 5.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Admission (Effective September 2026)

Completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 7.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Program Notes

1. The Bachelor of Arts in Psychology is considered the equivalent of the three-level degree in the same subject for students wishing to pursue Honours Applied Psychology in Human Behaviour (B.A.Sc.) as a second degree.
2. Students who enter Level II of the program in September 2023 or later can take a maximum of 6 units from HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3 and HUMBEHV 4SC6 A/B.
3. Students who entered the program prior to September 2023 can use HUMBEHV 4HB3, 4HC3 and 4HD3 towards the *Human Behaviour Course List*.
4. Students entering Level IV Honours Applied Psychology in Human Behaviour (including Autism and Behavioural Science or Early Childhood Studies Specialization students interested in using a seminar course to fulfil their Human Behaviour Course List requirement) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Applied Psychology in Human Behaviour programs during the Winter Term. Students wishing to take these courses must complete and submit a ballot by the **end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar, though completion of the ballot does not guarantee enrolment in a preferred seminar. The Applied Psychology in Human Behaviour program pre-registration ballot will include all Level IV Human Behaviour research seminar courses (HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3).

Human Behaviour Course List

- HUMBEHV 3IP3 A/B S - Inquiry Project
- HUMBEHV 4IP3 A/B S - Senior Inquiry Project
- HUMBEHV 4RP6 A/B S - Independent Research Project
- LINGUIST 3C03 - Child Language Acquisition
- MUSICCOG 2MP3 - Introduction to Music Cognition
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music
- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 2E03 - Sensory Processes
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2H03 - Human Learning and Cognition
- PSYCH 2MP3 - Introduction to Music Cognition
- PSYCH 2NF3 - Clinical Neuropsychology
- PSYCH 3A03 - Audition
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3B03 - Special Populations
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3BN3 - Cognitive Neuroscience
- PSYCH 3C03 - Child Language Acquisition
- PSYCH 3CB3 - Attitudes and Persuasion
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3D03 - The Multisensory Mind
- PSYCH 3EV3 - Evolution and Mental Health
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3MT3 - Psychometrics
- PSYCH 3SP3 - The Science of Performance
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3UU3
- PSYCH 3VV3 - Human Memory
- PSYCH 3WA3 - The Mind as a Work of Art
- PSYCH 4MP3 - Neuroscience of Music
- SOCPSY 3M03 - Counselling & Psychotherapy

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

3 units

- HUMBEHV 2AP3 - Introduction to Applied Psychology

6 units

from

- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2C03 - Social Psychology

6 units

from

- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2H03 - Human Learning and Cognition
- PSYCH 2NF3 - Clinical Neuropsychology

15 units

- Electives

LEVEL III: 30 UNITS

6 units

- HUMBEHV 3AP3 - Advanced Applied Psychology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour

3 units

from

- HUMBEHV 3HB3
- HUMBEHV 3ST3 - Statistics for Applied Psychology in Human Behaviour
- STATS 2B03 - Statistical Methods for Science

6 units

from

- the *Human Behaviour Course List (See Program Notes 2, 3 and 4 above.)*

15 units

- Electives

LEVEL IV: 30 UNITS

9 units

from

- the *Human Behaviour Course List*, which must be Level III, IV (See *Program Notes 2, 3* and *4* above.)

6 units

from

- HUMBEHV 4HB3 - Seminar in Applied Psychology
- HUMBEHV 4HC3 - Seminar in Applied Psychology
- HUMBEHV 4HD3 - Advanced Seminar in Personality Development
- HUMBEHV 4HE3 - Advanced Seminar in Applied Lifespan & Developmental Psychology
- HUMBEHV 4HF3 - Advanced Seminar in Applied Social Psychology
- HUMBEHV 4HG3 - Advanced Seminar in Mental Health
- HUMBEHV 4IP3 A/B S - Senior Inquiry Project
- HUMBEHV 4RP6 A/B S - Independent Research Project

- HUMBEHV 4SC6 A/B - Science Communication in the Behavioural Sciences

(See *Program Notes 2, 3* and *4* above.)

15 units

- Electives

HONOURS APPLIED PSYCHOLOGY IN HUMAN BEHAVIOUR - AUTISM AND BEHAVIOURAL SCIENCE SPECIALIZATION (B.A.SC.)

The program is offered jointly in partnership by Mohawk College of Applied Arts and Technology and the Department of Psychology, Neuroscience & Behaviour, McMaster University. Students pursue two qualifications simultaneously, and graduates receive the Ontario College Graduate Certificate from Mohawk and the McMaster Honours Bachelor of Applied Science degree.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 5.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Admission (Effective September 2026)

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 7.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Program Notes

1. The timing of the Spring/Summer sessions may not adhere to the Sessional Dates as published in this Calendar.
2. Students interested in pursuing post-graduate studies are encouraged to take HUMBEHV 3MD3 in Level III or IV.
3. Effective for students who entered Level II of this program in September 2023, students can complete a maximum of 3 units from HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3, 4SC6 A/B towards the Human Behaviour (Autism and Behavioural Science) Course List.
4. Students entering Level IV Honours Applied Psychology in Human Behaviour (including Autism and Behavioural Science or Early Childhood Studies Specialization students interested in using a seminar course to fulfil their Human Behaviour Course List requirement) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Applied Psychology in Human Behaviour during the Winter Term. Students wishing to take these courses must complete and submit a ballot by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar, though completion of the ballot does not guarantee enrolment in a preferred seminar. The Applied Psychology in Human Behaviour program pre-registration ballot will include all Level IV Human Behaviour research seminar courses (HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3).

Field Placement Notes

- Applying for Placements - Prior to the start date of a placement, students are required to submit a completed Field Placement Request Form to the Program Coordinator.
- Placements will be with agencies that have contracted in advance with Mohawk College. The College cannot accommodate any student requests for special consideration.
- Students are responsible for arranging their own travel to and from assigned placements.
- Eligibility for Placements - All students must meet academic, social, and health requirements before they can attend a site for field placement.
- Non-Violent Crisis Intervention - All Level II students are required to have obtained a current certificate in Non-Violent Crisis Intervention in order to attend their placements. Failure to meet this requirement will result in loss of placement. Additionally, students will be required to complete a refresher half-day workshop in Non-Violent Crisis Intervention prior to their Spring/Summer placement between Levels III and IV.
- Health Requirements - In the interest of the student and the placement, students are required to submit documentation (e.g., Health Record Form) that they have had a satisfactory physical examination including many routine vaccinations. All students must submit this documentation prior to placement or the student will not start the placement. Students should refer to their field placement coordinator to determine health requirements specific to their college and placement agency.
- Police Reference Check - All students are required to have a Police

Reference Check prior to the commencement of their field placement. Registered students who have been convicted of an offense under the Criminal Code of Conduct for which they have not been pardoned may be denied the opportunity for placement at the discretion of the agency.
- All costs associated with pre-placement requirements are the responsibility of the student.

Student Conduct in the Program

The University reserves the right to cancel the academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. The Honours Applied Psychology in Human Behaviour - Autism and Behavioural Science Specialization (B.A.Sc.) program reserves the right to remove a student from a placement at any point during the term if the student exhibits unsafe practice or behaviour that places others at risk or is deemed a serious breach of professional behaviour. Such removal may result in the student receiving a grade of F in the course and may result in dismissal from the program.

Human Behaviour (Autism and Behavioural Science) Course List

- HUMBEHV 2AP3 - Introduction to Applied Psychology
- HUMBEHV 3AP3 - Advanced Applied Psychology
- HUMBEHV 3IP3 A/B S - Inquiry Project
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- HUMBEHV 4HB3 - Seminar in Applied Psychology
- HUMBEHV 4HC3 - Seminar in Applied Psychology
- HUMBEHV 4HD3 - Advanced Seminar in Personality Development
- HUMBEHV 4HE3 - Advanced Seminar in Applied Lifespan & Developmental Psychology
- HUMBEHV 4HF3 - Advanced Seminar in Applied Social Psychology
- HUMBEHV 4HG3 - Advanced Seminar in Mental Health
- HUMBEHV 4IP3 A/B S - Senior Inquiry Project
- HUMBEHV 4RP6 A/B S - Independent Research Project
- HUMBEHV 4SC6 A/B - Science Communication in the Behavioural Sciences
- LINGUIST 3C03 - Child Language Acquisition
- MUSICCOG 2MP3 - Introduction to Music Cognition
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 2E03 - Sensory Processes
- PSYCH 2MP3 - Introduction to Music Cognition
- PSYCH 2NF3 - Clinical Neuropsychology
- PSYCH 3A03 - Audition
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3C03 - Child Language Acquisition
- PSYCH 3CB3 - Attitudes and Persuasion
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3D03 - The Multisensory Mind
- PSYCH 3EV3 - Evolution and Mental Health
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3MT3 - Psychometrics
- PSYCH 3SP3 - The Science of Performance
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3UU3
- PSYCH 3VV3 - Human Memory
- PSYCH 3WA3 - The Mind as a Work of Art
- PSYCH 4MP3 - Neuroscience of Music
- SOCPSY 3M03 - Counselling & Psychotherapy

Requirements

150 units total (Levels I to IV), of which no more than 48 units may be Level I, plus two Field Placements in Spring/Summer Term between Level II and III and Level III and IV

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II

Fall and Winter Terms: 30 units:

12 units
- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2H03 - Human Learning and Cognition

15 units
- HUMBEHV 2A06 A/B - Introduction to Autism Spectrum Disorder (ASD)
- HUMBEHV 2B06 A/B - Introduction to Applied Behaviour Analysis (ABA) I
- HUMBEHV 2C03 - Specialized Instructional Strategies (SIS) I

3 units
- Electives

Spring/Summer Term: 15 units:

(See *Field Placement Note 4* above.)

12 units
- HUMBEHV 2FP6 A/B S - Field Placement I
- HUMBEHV 2FS3 A/B S - Field Placement I Seminar
- HUMBEHV 3F03 - Ethics and Professionalism

3 units
- Electives

LEVEL III

Fall and Winter Terms: 30 units:

3 units
- PSYCH 3B03 - Special Populations

6 units

from
- the *Human Behaviour (Autism and Behavioural Science) Course List*

(See *Program Notes 2, 3 and 4* above.)

3 units

from
- HUMBEHV 3ST3 - Statistics for Applied Psychology in Human Behaviour
- STATS 2B03 - Statistical Methods for Science

15 units
- HUMBEHV 3CB3 - Treating Challenging Behaviour I
- HUMBEHV 3E06 A/B - Behavioural Skill Building
- HUMBEHV 3G03 - Specialized Instructional Strategies (SIS) II
- HUMBEHV 3RS3 - ABA Research Designs

3 units
- Electives

Spring/Summer Term: 15 units:

(See *Field Placement Note 4* above.)

12 units
- HUMBEHV 3FP9 A/B S - Field Placement II
- HUMBEHV 3FS3 A/B S - Field Placement II Seminar

3 units
- Electives

LEVEL IV: 30 UNITS

15 units

- HUMBEHV 3D03 - Applied Behavioural Analysis (ABA) II
- HUMBEHV 3H03 - Working with Families and Teams
- HUMBEHV 4CB3 - Treating Challenging Behaviour II
- HUMBEHV 4I03 - Parent and Staff Training
- HUMBEHV 4J03 - Transition Planning and Implementation

9 units

from

- the *Human Behaviour (Autism and Behavioural Science) Course List*

(See *Program Notes 2, 3 and 4* above.)

6 units

- Electives

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		15 units Field Placement I
Level III	30 units from Academic Level III		15 units Field Placement II
Level IV	30 units from Academic Level IV		

HONOURS APPLIED PSYCHOLOGY IN HUMAN BEHAVIOUR - EARLY CHILDHOOD STUDIES SPECIALIZATION (B.A.SC.)

The program is offered jointly in partnership by Mohawk College of Applied Arts and Technology and the Department of Psychology, Neuroscience & Behaviour, McMaster University. Students pursue two qualifications simultaneously, and graduates receive the Ontario College Diploma from Mohawk and the McMaster Honours Bachelor of Applied Science degree.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 5.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Admission (Effective September 2026)

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS

from the following courses, where an average of at least 7.0 (between the courses) is required:

- PSYCH 1F03 - Survey of Psychology

or

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

AND

- PSYCH 1FF3 - Survey of Biological Basis of Psychology

or

- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

0-3 UNITS

- BIOLOGY 1P03 - Introductory Biology

(or SBI4U - Biology)

0-3 UNITS

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1L03
- STATS 1LL3 - Introduction to Probability and Statistics

(or one of MHF4U - Advanced Functions, MCV4U - Calculus and Vectors, MDM4U - Data Management)

Program Notes

1. The timing of the Spring/Summer sessions may not adhere to the Sessional Dates as published in this Calendar.
2. Students interested in pursuing post-graduate studies are encouraged to take HUMBEHV 3MD3 in Level III or IV.
3. Effective for students who entered Level II of this program in September 2023, students can complete a maximum of 3 units from HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3, 4SC6 A/B towards the Human Behaviour (Early Childhood Studies) Course List.
4. Students entering Level IV Honours Applied Psychology in Human Behaviour (including Autism and Behavioural Science or Early Childhood Studies Specialization students interested in using a seminar course to fulfil their Human Behaviour Course List requirement) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Applied Psychology in Human Behaviour during the Winter Term. Students wishing to take these courses must complete and submit a ballot by the end of March. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar, though completion of the ballot does not guarantee enrolment in a preferred seminar. The Applied Psychology in Human Behaviour program pre-registration ballot will include all Level IV Human Behaviour research seminar courses (HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3).

Early Childhood Studies (ECS) Practicum Notes

- Applying for Practica - Prior to the start date of a practicum, students are required to submit a completed Practicum Request Form to the Program Coordinator.
- The Practica will be with agencies that have contracted in advance with Mohawk College. The College cannot accommodate any student requests for special consideration.
- Students are responsible for arranging their own travel to and from assigned practica.
- Eligibility for Practica - All students must meet academic, social, and health requirements before they can attend a site for their practicum.
- Health Requirements - In the interest of the student and the practica, students are required to submit documentation (e.g., Health Record Form) that they have had a satisfactory physical examination including many routine vaccinations. All students must submit this documentation prior to the practicum or the student will not start the practicum. Students should refer to their professional practice coordinator to determine health requirements specific to their college and practicum agency.
- Police Reference Check - All students are required to have a Police Reference Check prior to the commencement of their practicum. Registered students who have been convicted of an offense under the Criminal Code of Conduct for which they have not been pardoned may be denied the opportunity for a practicum at the discretion of the agency.
- All costs associated with pre-practicum requirements are the responsibility of the student.

Student Conduct in the Program

The University reserves the right to cancel the academic privileges of a student at any time should the student's scholastic record or conduct warrant so doing. The Honours Applied Psychology in Human Behaviour - Early Childhood Studies Specialization (B.A.Sc.) program reserves the right to remove a student from a practicum at any point during the term if the student exhibits unsafe practice or behaviour that places others at risk or is deemed a serious breach of professional behaviour. Such removal may result in the student receiving a grade of F in the course and may result in dismissal from this program.

Human Behaviour (Early Childhood Studies) Course List

- HUMBEHV 2AP3 - Introduction to Applied Psychology
- HUMBEHV 3AP3 - Advanced Applied Psychology
- HUMBEHV 3IP3 A/B S - Inquiry Project
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- HUMBEHV 4HB3 - Seminar in Applied Psychology
- HUMBEHV 4HC3 - Seminar in Applied Psychology
- HUMBEHV 4HD3 - Advanced Seminar in Personality Development
- HUMBEHV 4HE3 - Advanced Seminar in Applied Lifespan & Developmental Psychology
- HUMBEHV 4HF3 - Advanced Seminar in Applied Social Psychology
- HUMBEHV 4HG3 - Advanced Seminar in Mental Health
- HUMBEHV 4IP3 A/B S - Senior Inquiry Project
- HUMBEHV 4RP6 A/B S - Independent Research Project
- HUMBEHV 4SC6 A/B - Science Communication in the Behavioural Sciences
- LINGUIST 3C03 - Child Language Acquisition
- MUSICCOG 2MP3 - Introduction to Music Cognition
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 2E03 - Sensory Processes
- PSYCH 2MP3 - Introduction to Music Cognition
- PSYCH 2NF3 - Clinical Neuropsychology
- PSYCH 3A03 - Audition
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3C03 - Child Language Acquisition
- PSYCH 3CB3 - Attitudes and Persuasion
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3D03 - The Multisensory Mind
- PSYCH 3EV3 - Evolution and Mental Health
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3MT3 - Psychometrics
- PSYCH 3SP3 - The Science of Performance
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3UU3
- PSYCH 3VV3 - Human Memory
- PSYCH 3WA3 - The Mind as a Work of Art
- PSYCH 4MP3 - Neuroscience of Music
- SOCPSY 3M03 - Counselling & Psychotherapy

Requirements

150 units total (Levels I to IV), of which no more than 48 units may be Level I, plus three Professional Practices in Spring/Summer Term between Level II and III and Level III and IV

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II

Fall and Winter Terms: 30 units:

15 units

- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2C03 - Social Psychology
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2H03 - Human Learning and Cognition

9 units

- HUMBEHV 2L03 - Philosophy and Curriculum Design
- HUMBEHV 2M03 - Learning Environment I
- HUMBEHV 2TL3 - Responsive Care for Infants and Toddlers

6 units

- Electives

Spring/Summer Term: 15 units:

15 units

- HUMBEHV 2XP6 A/B S - ECS Practicum I
- HUMBEHV 3XP6 A/B S - ECS Practicum II
- HUMBEHV 3XS3 A/B S - Theory to Practice I and II

LEVEL III

Fall and Winter Terms: 30 units:

6 units

from

- PSYCH 3B03 - Special Populations
- PSYCH 3JJ3 - Socio-Emotional Development

3 units

from

- HUMBEHV 3HB3
- HUMBEHV 3ST3 - Statistics for Applied Psychology in Human Behaviour
- STATS 2B03 - Statistical Methods for Science

3 units
from
- the *Human Behaviour (Early Childhood Studies) Course List*

(See *Program Notes 2, 3 and 4* above.)
9 units
- HUMBEHV 3O03 - Curriculum Theory and Approaches
- HUMBEHV 3P03 - Learning Environment II
- HUMBEHV 3Q03 - Health, Safety & Nutrition

9 units
- Electives

Spring/Summer Term: 15 units:
15 units
- HUMBEHV 4V12 A/B S - ECS Practicum III
- HUMBEHV 4VS3 A/B S - Theory to Practice III

LEVEL IV: 30 UNITS
9 units
- HUMBEHV 4N03 - Principles of Ethical Practice
- HUMBEHV 4U03 - Inclusion in the ECE Classroom
- HUMBEHV 4W03 - Supervision for Leadership and Quality

9 units
from
- the *Human Behaviour (Early Childhood Studies) Course List*

(See *Program Notes 2, 3 and 4* above.)
12 units
- Electives

Program Chart

	FALL TERM (September to December)	WINTER TERM (January to April)	SPRING/SUMMER TERM (May to August)
Level II	30 units from Academic Level II		15 units ECS Practicum I & II
Level III	30 units from Academic Level III		15 units ECS Practicum III
Level IV	30 units from Academic Level IV		

Bachelor of Science (Honours)

HONOURS NEUROSCIENCE (B.SC.)

Program offered jointly by the Departments of Biology and Psychology, Neuroscience & Behaviour.

Admission Notes

1. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
2. Completion of one of MATH 1AA3 or 1LT3 and one of COMPSCI 1MD3 or MATH 1MP3 is required by the end of Level II. Completion in Level I is strongly recommended.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

6 UNITS
from
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 1* above.)

6 UNITS
- CHEM 1A03 - Introductory Chemistry I
- CHEM 1AA3 - Introductory Chemistry II

3 UNITS
from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

(See *Admission Note 2* above.)

3 UNITS
from
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

3 UNITS
from
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

3 UNITS
from
- the *Science I Course List* (See *Admission Notes* above.)

6 UNITS
- Electives (See *Program Note 2* below.)

Program Notes

1. This program is jointly administered by Biology and Psychology, Neuroscience & Behaviour; students may seek academic advising from either Department.
2. Completion of one of MATH 1AA3 or 1LT3 as well as one of COMPSCI 1MD3 or MATH 1MP3 is required by the end of Level II. Completion in Level I is strongly recommended. Please note: DATASCI 2G03 or PNB 2A03 serves as an appropriate substitute for COMPSCI 1MD3 or MATH 1MP3.
3. Advanced courses in Biochemistry, Biology, Biophysics, Chemical Biology, Chemistry, Computer Science, Mathematics, Medical Physics, Molecular Biology and Physics may be considered as units towards *Course Lists 2, 3* or *4* by request to the Neuroscience Program Director.
4. PNB 2XB3, NEUROSCI 2XN0 A/B and STATS 2B03 must be completed in Level II.
5. NEUROSCI 3E03 must be taken in Level III.
6. PHYSICS 2B03 can be taken in Level III by students who did not complete MATH 1AA3 or 1LT3 in Level I.
7. Students interested in computational neuroscience may wish to consider completion of MATH 1B03.

8. Students who entered the program in September 2024 or prior, will have the choice to use MATH 1B03 toward *Course List 1*.

Course List 1 - Other Foundational Courses

- BIOCHEM 2B03 - Nucleic Acid Structure and Function
- BIOCHEM 2BB3 - Protein Structure and Enzyme Function
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOPHYS 1S03
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics
- BIOPHYS 3G03 - Modelling Life
- CHALLENG 2CC3 - Critical Challenges for Humanity
- CHEM 2OB3 - Organic Chemistry II
- CHEMBIO 2P03 - Physical Chemistry Tools for Chemical Biology
- KINESIOL 2Y03 - Human Anatomy and Physiology I
- KINESIOL 2YY3 - Human Anatomy and Physiology II
- LIFESCI 2D03 - Behavioural Processes
- MATH 1B03 - Linear Algebra I
- MATH 2C03 - Introduction to Differential Equations
- MATH 2MC3 - Multivariable Calculus
- MATH 2X03
- MATH 2X03
- MATH 2XA3 - Vector Calculus I
- MEDPHYS 1A03 - Physics in Medicine and Biology
- MEDPHYS 2B03
- MEDPHYS 2D03
- PHYSICS 1AA3 - Introduction To Modern Physics
- PHYSICS 1CC3 - Modern Physics for the Chemical and Physical Sciences
- PNB 2A03 - Python for PNB
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PSYCH 2H03 - Human Learning and Cognition
- STATS 2D03 - Introduction to Probability

Course List 2 - Cellular/Molecular Courses

- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOLOGY 3AA3 - Fundamental Concepts of Pharmacology
- BIOLOGY 3VV3
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- BIOPHYS 4S03 - Introduction to Molecular Biophysics
- HTHSCI 4BB3 - Neuroimmunology
- LIFESCI 4XX3 - The Synapse
- MOLBIOL 3B03 - Advanced Cell Biology
- MOLBIOL 3D03 - Experimental Approaches in Cell Biology
- MOLBIOL 3M03 - Fundamental Concepts of Development
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- MOLBIOL 4RR3 - Human Genetics
- NEUROSCI 2BB3 A/B S - Research Practicum in Cellular/Molecular Neuroscience
- NEUROSCI 3BB3 A/B S - Individual Lab Study in Cellular/Molecular Neuroscience
- NEUROSCI 3BB6 A/B - Individual Lab Study in Cellular/Molecular Neuroscience

Course List 3 - Systems/Circuits Courses

- BIOLOGY 3UU3 - Animal Physiology - Regulatory Systems
- DATASCI 3ML3 - Introduction to Neural Networks and Machine Learning
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- NEUROSCI 2CC3 A/B S - Research Practicum in Systems/Circuits Neuroscience
- NEUROSCI 3CC3 A/B S - Individual Lab Study in Systems/Circuits Neuroscience
- NEUROSCI 3CC6 A/B - Individual Lab Study in Systems/Circuits Neuroscience
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PHYSICS 3G03
- PNB 3A03 - Neuroimaging
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PSYCH 3A03 - Audition
- PSYCH 3FA3 - Neuroscience of Learning and Memory

Course List 4 - Behavioural/Cognitive Courses

- KINESIOL 4TT3 - Neurorehabilitation and Robotics
- NEUROSCI 2DD3 A/B S - Research Practicum in Behavioural/Cognitive Neuroscience
- NEUROSCI 3DD3 A/B S - Individual Lab Study in Behavioural/Cognitive Neuroscience
- NEUROSCI 3DD6 A/B - Individual Lab Study Behavioural/Cognitive Neuroscience
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 4E03 - Topics in Social Diversity
- PSYCH 3BN3 - Cognitive Neuroscience
- PSYCH 3D03 - The Multisensory Mind
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3NL3 - Cognitive Neuroscience of Language
- PSYCH 3VV3 - Human Memory
- PSYCH 3WA3 - The Mind as a Work of Art
- PSYCH 4BN3
- PSYCH 4KK3 - Bayesian Inference
- PSYCH 4MP3 - Neuroscience of Music

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

6 units

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology

3 units

from

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OG3 - Structure and Reactivity of Organic Molecules

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

1 course

- NEUROSCI 2XN0 A/B - Neuroscience Tutorial

(See *Program Note 4* above.)

0-3 units

- PHYSICS 2B03 - Electricity and Magnetism I

(See *Program Note 6* above.)

3 units

- PNB 2XB3 - Neuroanatomy & Neurophysiology

(See *Program Note 4* above.)

0-3 units

from the following courses, if not completed in Level I

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II

(See *Admission Note 2* and *Program Note 2* above.)

0-3 units

from the following courses, if not completed in Level I

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PNB 2A03 - Python for PNB

(See *Admission Note 2* and *Program Note 2* above.)

3 units

from

- *Course List 1* (See *Program Note 8* above.)

3-12 units

- Electives

LEVEL III: 30 UNITS

3 units

from

- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics

(See *Program Note 3* above.)

6 units

- BIOLOGY 2C03 - Genetics
- BIOLOGY 3P03 - Cell Physiology

6 units

- NEUROSCI 3E03 - Neuroscience Lab (See *Program Note 5* above.)
- NEUROSCI 3SN3 - Neural Circuits

6 units

from

- *Course Lists 1, 2, 3, 4* (See *Program Note 3* above.)

0-3 units

- PHYSICS 2B03 - Electricity and Magnetism I

(See *Program Note 6* above.)

6-9 units

- Electives

LEVEL IV: 30 UNITS

3 units

- NEUROSCI 4S03 A/B - Neuroscience Seminar

3 units

from

- *Course List 2* (See *Program Note 3* above.)

3 units

from

- *Course List 3* (See *Program Note 3* above.)

3 units

from

- *Course List 4* (See *Program Note 3* above.)

12 units

- NEUROSCI 4L12 A/B - Neuroscience Senior Thesis

OR

- NEUROSCI 4L09 A/B - Neuroscience Thesis and 3 units from *Course Lists 2, 3, 4*

OR

6 units from *Course Lists 2, 3, 4* and one of

- BIOLOGY 4F06 A/B S - Senior Project
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences

(See *Program Note 3* above.)

0-6 units

- Electives

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

6 units

- BIOLOGY 2A03 - Integrative Physiology of Animals
- BIOLOGY 2B03 - Cell Biology

6 units

- CHEM 2OA3 - Organic Chemistry I
- CHEM 2OB3 - Organic Chemistry II

1 course

- NEUROSCI 2XN0 A/B - Neuroscience Tutorial

(See *Program Note 4* above.)

0-3 units

- PHYSICS 2B03 - Electricity and Magnetism I

(See *Program Note 6* above.)

3 units

- PNB 2XB3 - Neuroanatomy & Neurophysiology

(See *Program Note 4* above.)

0-3 units

from the following courses, if not completed in Level I

- MATH 1AA3 - Calculus For Science II
- MATH 1LT3 - Calculus for the Life Sciences II

(See *Admission Note 2* and *Program Note 2* above.)

0-3 units

- MATH 1B03 - Linear Algebra I (if not completed in Level I)

(See *Program Note 8* above.)

0-3 units

from the following courses, if not completed in Level I

- COMPSCI 1MD3 - Introduction to Programming
- DATASCI 2G03 - Scientific Computing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- PNB 2A03 - Python for PNB

(See *Admission Note 2* and *Program Note 2* above.)

3-15 units

- Electives

LEVEL III: 30 UNITS

3 units

from

- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOPHYS 2A03 - Biophysics of the Cell and Living Organisms
- BIOPHYS 2S03 - Explorations in Medical and Biological Physics

(See *Program Note 3* above.)

6 units

- BIOLOGY 2C03 - Genetics
- BIOLOGY 3P03 - Cell Physiology

6 units

- NEUROSCI 3E03 - Neuroscience Lab (See *Program Note 5* above.)
- NEUROSCI 3SN3 - Neural Circuits

3 units

- STATS 2B03 - Statistical Methods for Science

(See *Program Note 4* above.)

6 units

from
- *Course Lists 1, 2, 3, 4* (See *Program Note 3* above.)

0-3 units
- PHYSICS 2B03 - Electricity and Magnetism I

(See *Program Note 6* above.)

3-6 units
- Electives

LEVEL IV: 30 UNITS

3 units
- NEUROSCI 4S03 A/B - Neuroscience Seminar

3 units

from
- *Course List 2* (See *Program Note 3* above.)

3 units

from
- *Course List 3* (See *Program Note 3* above.)

3 units

from
- *Course List 4* (See *Program Note 3* above.)

12 units
- NEUROSCI 4L12 A/B - Neuroscience Senior Thesis

OR
- NEUROSCI 4L09 A/B - Neuroscience Thesis and 3 units from *Course Lists 2, 3, 4*

OR

6 units from *Course Lists 2, 3, 4* and one of
- BIOLOGY 4F06 A/B S - Senior Project
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences

(See *Program Note 3* above.)

6 units
- Electives

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR (B.SC.)

Admission Notes

1. Completion of CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 is required by the end of Level II, however, at least one of BIOPHYS 1S03, CHEM 1A03, PHYSICS 1A03, 1C03, 1V03 is required for admission. It is recommended that both CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 be completed in Level I. Concepts from PHYSICS 1CC3 are particularly useful for understanding neuroscience, mathematical modelling, and perception. Students interested in these areas are encouraged to take PHYSICS 1C03 and 1CC3.
2. Either PSYCH 1FF3 or 1XX3 is required for admission, however, PSYCH 1XX3 is recommended. Completion of either PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
3. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from the following courses, with a grade of at least B-
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

3 UNITS

from
- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

6 UNITS

from
- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 3* above.)

3 UNITS

from
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9 UNITS

from
- the Science I Course List (See *Admission Notes* above.)

Program Notes

1. The Honours Psychology, Neuroscience & Behaviour program allows students to choose courses that reflect their own interests in psychology, neuroscience and/or animal behaviour. Students are encouraged to discuss their course selections with a Psychology, Neuroscience & Behaviour Academic Program Advisor.
2. Students in the Honours Psychology, Neuroscience & Behaviour program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
3. A thesis is recommended for students who wish to pursue graduate research.
4. Students who enter the program in September 2026 or later may count a maximum of 6 units from PNB 3Q03 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S towards the *Psychology, Neuroscience & Behaviour Course List*.

Capstone Course List

- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry **and** CMTYENGA 4A09 - Semester at CityLAB: Applied Project

Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- all Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PSYCH 2MP3 - Introduction to Music Cognition
- all Level III and IV PNB courses
- all Level III and IV PSYCH courses

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above)

LEVEL II: 30 UNITS

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units

from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

0-3 units

from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

6-12 units
- Electives

LEVEL III: 30 UNITS

3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from
- the *Psychology, Neuroscience & Behaviour* Course List

15 units
- Electives

LEVEL IV: 30 UNITS

6 units

from
- the *Psychology, Neuroscience & Behaviour* Course List

9 units
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes* 2 and 3 above.)

15 units
- Electives

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units

from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

0-3 units

from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

6-12 units
- Electives

LEVEL III: 30 UNITS

3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units
from
- PNB 2A03 - Python for PNB
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units
from
- the *Psychology, Neuroscience & Behaviour Course List*

15 units
- Electives

LEVEL IV: 30 UNITS

6 units
from
- the Psychology, Neuroscience & Behaviour Course List

9 units
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes 2 and 3* above.)
15 units
- Electives

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units
(See *Admission* above.)

LEVEL II: 30 UNITS

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units
from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)
0-3 units
from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)
6-12 units
- Electives

LEVEL III: 30 UNITS

3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units
from
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units
from
- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 4* above.)

15 units
- Electives

LEVEL IV: 30 UNITS

6 units
from
- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 4* above.)

9 units
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes 2* and *3* above.)
15 units
- Electives

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR - MENTAL HEALTH SPECIALIZATION (B.SC.)

Effective September 2026, admission to the Honours Psychology, Neuroscience & Behaviour - Mental Health Specialization will be suspended. Last entry into Level II is September 2025. Students who had intended to enrol in this program should consider the Honours Psychology, Neuroscience & Behaviour program or contact an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss other options.

Admission Notes

1. Completion of CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 is required by the end of Level II, however, at least one of BIOPHYS 1S03, CHEM 1A03, PHYSICS 1A03, 1C03, 1V03 is required for admission. It is recommended that both CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 be completed in Level I. Concepts from PHYSICS 1CC3 are particularly useful for understanding neuroscience, mathematical modelling, and perception. Students interested in these areas are encouraged to take PHYSICS 1C03 and 1CC3.
2. Either PSYCH 1FF3 or 1XX3 is required for admission, however PSYCH 1XX3 is recommended. Completion of either PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
3. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from the following courses, with a grade of at least B-

- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 3* above.)

3 UNITS

from

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9 UNITS

from

- the Science I Course List (See *Admission Notes* above.)

Program Notes

1. The Honours Psychology, Neuroscience & Behaviour program allows students to choose courses that reflect their own interests in psychology, neuroscience and/or animal behaviour. Students are encouraged to discuss their course selections with a Psychology, Neuroscience & Behaviour Academic Program Advisor.
2. Students in the Honours Psychology, Neuroscience & Behaviour program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
3. A thesis is recommended for students who wish to pursue graduate research.
4. Students who enter the program in September 2026 or later, may count a maximum of 6 units from PNB 3Q03 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S towards the *Psychology, Neuroscience & Behaviour Course List*.

Capstone Course List

- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry and CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Mental Health Course List

- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- PNB 2A03 - Python for PNB
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3I06 A/B
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QM3 A/B S - Independent Research in Mental Health
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3EV3 - Evolution and Mental Health
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3H03
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3VV3 - Human Memory
- SOCPSY 3M03 - Counselling & Psychotherapy

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- all Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PSYCH 2MP3 - Introduction to Music Cognition
- all Level III and IV PNB courses
- all Level III and IV PSYCH courses

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See Admission above.)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

0-6 units

- Electives

LEVEL III: 30 UNITS

9 units

from

- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 2AA3 - Child Development

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QM3 A/B S - Independent Research in Mental Health
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- the *Mental Health* Course List

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- the *Mental Health Course* List

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour* Course List

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes 2* and *3* above.)

9 units

- Electives

Requirements for Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

0-6 units

- Electives

LEVEL III: 30 UNITS

9 units

from

- PSYCH 2AA3 - Child Development
- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 3GG3

3 units

from

- PNB 2A03 - Python for PNB
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab

- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QM3 A/B S - Independent Research in Mental Health
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- the *Mental Health Course List*

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- the *Mental Health Course List*

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes 2 and 3* above.)

9 units

- Electives

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

0-3 units

from the following courses, in not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 2* above.)

0-6 units

- Electives

LEVEL III: 30 UNITS

9 units

from

- PSYCH 2AA3 - Child Development
- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 3GG3

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- the *Mental Health Course List* (See *Program Note 4* above.)

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- the *Mental Health Course List* (See *Program Note 4* above.)

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Program Notes 2* and *3* above.)

9 units

- Electives

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR - MUSIC COGNITION SPECIALIZATION (B.SC.)

Admission Notes

1. Completion of CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 is required by the end of Level III, however, at least one of BIOPHYS 1S03, CHEM 1A03, PHYSICS 1A03, 1C03, 1V03 is required for admission. It is recommended that both CHEM 1A03 and one of BIOPHYS 1S03, PHYSICS 1A03, 1C03, 1V03 be completed in Level I. Concepts from PHYSICS 1CC3 are particularly useful for understanding neuroscience, mathematical modelling, and perception. Students interested in these areas are encouraged to take PHYSICS 1C03 and 1CC3.
2. When completed together, BIOLOGY 1A01 and 1A02 serve as a substitute for BIOLOGY 1A03. These courses should be completed in the same term. If completed, both BIOLOGY 1A01 and 1A02 would be required for admission.
3. MUSIC 1A03 or 1AA3 is required for admission, however, both are required for degree completion. Students who have completed Grade 3 History (or History 1, now Level 9 History) or Grade 5 History (or History 3, now ARCT History) from the Royal Conservatory of Music,

with a grade of at least 70%, are not required to complete MUSIC 1AA3, and those students who have similarly obtained at least 70% on RCM Grade 4 History (or History 2, now Level 10 History) are not required to complete MUSIC 1A03 either for admission to the Music Cognition Specialization or to fulfill their degree requirements. If one or both course requirements are waived, it is recommended these units be replaced with other MUSIC courses.

4. Either PSYCH 1FF3 or 1XX3 is required for admission, however PSYCH 1XX3 is recommended. Completion of either PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
5. Completion of MUSIC 1CR3 is required by the end of Level II, however, it is recommended the course be completed in Level I. Students who have completed Advanced Rudiments (or Grade 2 Rudiments) from the Royal Conservatory of Music (a grade of 80% or above, within the last two years) or a grade of 70% or above on a qualifying music theory exam administered by the School of the Arts (SOTA) are not required to complete MUSIC 1CR3. If the course requirement is waived, it is recommended these units be replaced with other MUSIC courses. Appointments can be made with SOTA to write the qualifying music theory exam on specific dates between February and May. The content of the exam is summarized at: https://sota.humanities.mcmaster.ca/.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including:

3 UNITS

from the following courses, with a grade of at least B-

- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

3 UNITS

from

- MATH 1A03 - Calculus For Science I
- MATH 1LS3 - Calculus for the Life Sciences I

6 UNITS

from

- BIOLOGY 1A01 - Cellular and Molecular Biology - Laboratory Skill Development
- BIOLOGY 1A02 - Foundations and Applications of Cellular and Molecular Biology
- BIOLOGY 1A03 - Cellular and Molecular Biology
- BIOLOGY 1M03 - Biodiversity, Evolution and Humanity

(See *Admission Note 2* above.)

3 UNITS

from

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9 UNITS

from

- the Science I Course List (See *Admission Notes 1* and *4* above.)

3 UNITS

from

- MUSIC 1A03 - Introduction to the History of Western Music I
- MUSIC 1AA3 - Introduction to the History of Western Music II

(See *Admission Notes 3* and *5* above.)

Program Notes

1. Completion of MUSIC 1CR3 is required by the end of Level II, however, it is recommended the course be completed in Level I. Students who have completed Advanced Rudiments (or Grade 2 Rudiments) from the Royal Conservatory of Music (a grade of 80% or above, within the last two years) or a grade of 70% or above on a qualifying music theory exam administered by the School of the Arts (SOTA) are not required to complete MUSIC 1CR3. If the course requirement is waived, it is recommended these units be replaced with other MUSIC courses. Appointments can be made with SOTA to write the qualifying music theory exam on specific dates between February and May. The content of the exam is summarized at: https://sota.humanities.mcmaster.ca/.
2. The Honours Psychology, Neuroscience & Behaviour - Music Cognition Specialization allows students to choose courses that reflect their own interests. Students are encouraged to discuss their course selections with a Psychology, Neuroscience & Behaviour Academic Program Advisor
3. Students in the Honours Psychology, Neuroscience & Behaviour - Music Cognition Specialization program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline indicated on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
4. A thesis is recommended for students who wish to pursue graduate research.
5. Both MUSIC 1A03 and 1AA3 must be completed for degree completion.
6. Students are encouraged to complete PSYCH 3A03 as part of the *Psychology, Neuroscience & Behaviour Course List* requirement.
7. Students who enter the program in September 2026 or later may count a maximum of 6 units from PNB 3Q03 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S towards the *Psychology, Neuroscience & Behaviour Course List*.

Capstone Course List

- MUSICCOG 4D06 A/B - Thesis in Music Cognition
- MUSICCOG 4QQ3 A/B S - Experimental Laboratory in Music Cognition II
- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry and CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human

Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSIC 3MT3
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- all Level III and IV PNB courses
- all Level III and IV PSYCH courses

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units
- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

0-3 units

from
- MUSIC 1CR3 - Foundations of Music I

(See *Admission Note 5* and *Program Note 1* above.)

3-9 units
- Electives

LEVEL III: 30 UNITS

3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from
- the *Psychology, Neuroscience & Behaviour* Course List (See *Program Note 6* above.)

3 units

3-6 units

from
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

0-3 units

from the following courses, if not completed in Level I
- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9-15 units
- Electives

LEVEL IV: 30 UNITS

6 units

from
- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 6* above.)

0-3 units

from
- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

from
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

12-15 units
- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units

from
- MUSIC 1CR3 - Foundations of Music I

(See *Admission Note 5* and *Program Note 1* above.)

3 units
- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from the following courses, if not completed in Level I
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

3-6 units

- Electives (See *Admission Note 5* and *Program Notes 1* and *5* above.)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 2A03 - Python for PNB
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 6* above.)

3 units

3-6 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9-15 units

- Electives (See *Program Note 5* above.)

LEVEL IV: 30 UNITS

6 units

from

- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Note 6* above.)

0-3 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

12-15 units

- Electives (See *Program Note 5* above.)

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

30 units

(See *Admission* above.)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units

- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from the following courses, if not completed in Level I

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

(See *Admission Note 4* above.)

0-3 units

from

- MUSIC 1CR3 - Foundations of Music I

(See *Admission Note 5* and *Program Note 1* above.)

3-9 units

- Electives (See *Admission Note 5* and *Program Note 5* above.)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Notes 6* and *7* above.)

3 units

3-6 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

0-3 units

from the following courses, if not completed in Level I

- BIOPHYS 1S03
- CHEM 1A03 - Introductory Chemistry I
- PHYSICS 1A03 - Introductory Physics
- PHYSICS 1C03 - Physics for the Chemical and Physical Sciences
- PHYSICS 1V03 - Introductory Physics

(See *Admission Note 1* above.)

9-15 units

- Electives (See *Program Note 5* above.)

LEVEL IV: 30 UNITS

6 units

from

- the *Psychology, Neuroscience & Behaviour Course List* (See *Program Notes 6* and *7* above.)

0-3 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

from
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or
- PNB 4D09 A/B - Senior Honours Thesis

12-15 units
- Electives (See *Program Note 5* above.)

Minor(s):

MINOR IN PSYCHOLOGY

Notes

- **As all courses have enrolment capacities, the Faculty cannot guarantee registration in courses, even when prerequisites have been met. Completion of the Minor in Psychology may not be possible.**
- When choosing Level II courses students should consider the prerequisites for Level III courses.
- ISCI 1A24 A/B is a substitution for three units of Level I PSYCH toward the Minor in Psychology.
- ISCI 2A18 A/B is a substitution for 3 units of Level II PSYCH toward the Minor in Psychology.
- In order to declare a Minor in Psychology, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3 UNITS

from
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

21 UNITS

from
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- Levels II, III Psychology courses including at least six units from Level III Psychology courses

Faculty of Social Sciences

Kenneth Taylor Hall, Room 129, ext. 23772
http://socialsciences.mcmaster.ca/contact-us
socscfac@mcmaster.ca
DEAN OF SOCIAL SCIENCES
J. Hurley/B.A., M.A., Ph.D.
ASSOCIATE DEAN (UNDERGRADUATE STUDIES)
K. McGarry/B.A., M.A., Ph.D.
ASSOCIATE DEAN, (GRADUATE STUDIES)
M. Heath/B.A., M.A., Ph.D.
ASSOCIATE DEAN, (RESEARCH)
J. Dunn/B.Arts Sc., M.A., Ph.D.
ASSISTANT DEAN (UNDERGRADUATE STUDIES)
L. Giordano/B.A., B.A.
ACADEMIC ADVISORS
S. Hunt/B.A., B.S.W
E. Pechmann/B.A., M.A.
W. Spencer/B.A.
R. Flynn
MANAGER, CAREERS & EXPERIENTIAL EDUCATION
M. Busser/B.Arts.Sc., M.A., Ph.D.
ACADEMIC AND EXPERIENTIAL LEARNING COORDINATOR
J. Gouweloos/B.A.,M.A., Ph.D.
CAREER DEVELOPMENT ADVISOR
C. Schooley/B.A., CCDP
PROGRAMMING AND OUTREACH MANAGERS
K. Long/B.A.
R. Talbot/B.A.
CAREER DEVELOPMENT AND RELATIONSHIP MANAGER
K. Thorburn/B.A.
TALENT PARTNERSHIP CONSULTANT
A. Lech/B.A.
MANAGER OF RECRUITMENT AND MARKETING
M. Johnston/B.A.
FACULTY ACCESSIBILITY AND ACCOMODATION OFFICER
M. Alway/B.A./M.S.W.
FACILITATOR, CAREERS & EXPERIENTIAL EDUCATION
R. Jones/PGCE

The Faculty offers a range of degree programs through the following Departments/Programs/Schools:
- Aging and Society
- Anthropology
- Economics
- Environment and Society
- Health and Society
- Indigenous Studies
- Labour Studies
- Political Science
- Psychology, Neuroscience and Behaviour
- Religious Studies/ Society, Culture & Religion
- Social Psychology
- Social Work
- Sociology
- Wilson College of Leadership and Civic Engagement (joint with Faculty of Humanities)

The social sciences are concerned with the study of human activities and relationships and their social, political, economic, cultural and spatial contexts. Through the pre-industrial to the post-industrial eras, social scientists examine social, economic, cultural and political issues experienced by individuals, groups, and societies as well as the interactions between people and their environments, both natural and built.

There are various opportunities for students to link their academic goals with their career interests. These experiential education initiatives include, but are not limited to, inquiry, internships, academic placements, a career planning course, student project grants, and student research awards.

Students are strongly advised to take advantage of the extensive advisory services provided by the Faculty. New students in particular should plan a program of study that will allow them a number of options for Level II.

The Faculty of Social Sciences encourages students to become engaged in a wide variety of learning opportunities. These experiences can enrich learning, open new fields of study, and build transferable skills that prepare you for further academic work and for a range of careers.

Degree Programs

HONOURS PROGRAMS (HONOURS BACHELOR OF ARTS)

Honours Bachelor of Arts programs consist of a total of 120 units of work normally completed over four years. Honours programs provide a concentration in the particular field, as well as an extended time of study, and are normally a requirement for those who contemplate proceeding to graduate studies.

COMBINED HONOURS BACHELOR OF ARTS PROGRAMS

Subject to possible timetable restrictions, and provided that the student meets the requirements for entry into each of the relevant Honours programs, a student may combine work in any two departments and be graduated with a Combined Honours degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities, and with the Arts and Science Program. All Combined Honours programs must be approved by both Departments concerned as well as by the Office of the Associate Dean(s) (Undergraduate Studies). Students will normally complete approximately 36 units of work beyond Level I in each component of the program (normally 12 units per level in each subject). The Honours B.A. Social Psychology and Honours Bachelor of Social Work programs are not available in combination with another subject.

CO-OP PROGRAM OPTIONS (HONOURS BACHELOR OF ARTS)

Co-op program options are available in several Honours B.A. programs: Economics, Work and Labour Studies, and Political Science. Co-op program options for additional programs are slated to become open to students who complete Level I in the 2025-2026 academic year: Aging & Society, Anthropology, Environment & Society, Health & Society, and Sociology. Application to Level II co-op program options takes place during Level I (see *Applying for Admission to Level II Programs)*. The academic and course requirements of each co-op option are designed to match those of the Honours Program, with the addition of mandatory preparatory courses and three (3) work terms in a prescribed sequence, with work positions alternating with academic terms, and ending with a final academic term. Students enrolled in Co-op programs must be enrolled in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 9 units in a term) and will be charged per enrolled units. An annual administrative fee will be charged in each academic year that the student is enrolled in a Co-op option, and additional fees will be charged for each four-month work term of a Co-op program. The standard work position will be one four-month work term in duration and will be associated with one work-integrated course (e.g. 3WT0) with applicable fees. Some positions will comprise more than one work term, and will be associated with more than one work-integrated course (e.g. both 3WT0 and 4WT0) with applicable fees. With written permission from the work term supervisor, a maximum of 3 units of additional academic work may be taken during each four-month period of a work term and the student will be responsible for the additional tuition. See Honours Programs (Honours Bachelor of Arts), above, and the entries for each respective program option. For further information please consult the Careers & Experiential Education team in the Office of the Associate Dean Undergraduate Studies.

HONOURS BACHELOR OF SOCIAL WORK (B.S.W.)

The Honours Bachelor of Social Work (Honours B.S.W.) program is a professional Honours program consisting of 120 units of work, typically completed over four years. Students who have already received one or more undergraduate degrees may apply to the Bachelor of Social Work (B.S.W.) program consisting of 60 units of work, typically completed over two years.

BACHELOR OF ARTS PROGRAMS:

B.A. programs consist of a total of 90 units of work, normally completed over three years. Three-level Combined Bachelor's degree programs are available only in Indigenous Studies and Another Subject. The other subject may be from the Faculty of Social Sciences or the Faculty of Humanities.

Options to Combine with a Degree

MINOR

A Minor is an option available to students enrolled in a four- or five-level program. Normally students must complete a minimum of 24 units in the Minor subject. Students are responsible for ensuring that the courses taken meet the requirements for a Minor. Students who have the necessary requirements may apply for recognition of that Minor when they graduate. If granted, this recognition will be recorded on the student's transcript.

Within the Faculty of Social Sciences, Minors are available to students registered in an Honours program provided that the subject area of the Minor is not integral to the requirements of their degree program. At least 12 units (above Level 1) toward the Minor must be considered elective to the degree. At least 18 units must be completed at McMaster.

Please see Minors in the General Academic Regulations section of this Calendar for further information. All courses have an enrolment capacity and the Faculty cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Minors offered by the Faculty of Social Sciences include:

- Anthropology
- Asian Studies
- Economics
- Diversity and Equity
- Gender, Sexualities, and Families
- Health, Aging and Society
- Health, Well-Being and Religion
- Immigration, Race Relations, and Indigenous-Settler Relations
- Indigenous Studies
- Japanese Studies
- Justice, Law and Order
- Work and Labour Studies
- Mental Health, Addiction and Society
- Political Science
- Public Leadership
- Religion and Diversity
- Social Problems, Social Policy and the Law
- Society, Culture & Religion
- Sociology

Interdisciplinary Studies Minors administered by Departments in the Faculty of Social Sciences include:

- Archaeology
- Civic Vitality, Democracy and Electoral Management (CIV-DEM)
- Community Engagement
- Food, Nutrition and Environmental Health
- Globalization Studies
- Jewish Studies
- Muslim Studies
- Social Justice and Inclusive Communities

Students may complete Minors offered by other Faculties as well and are encouraged to consider Minors that will complement their degree studies.

AFFILIATED CERTIFICATES

Students enrolled in a three- or four-year undergraduate degree program in the Faculty of Social Sciences have the opportunity to take Social Sciences courses in the complementary fields of Business Studies, Disability Management, Leadership and Management in the Not-for-Profit Sector.

Students enrolled in a three-year degree program may take a maximum of six of these courses and students enrolled in a four-year degree program may take a maximum of eight of these courses. Students who have the necessary requirements (completed a prescribed set of 18 units) may apply to have their courses recognized by Mohawk College for the awarding of the applicable certificate when they graduate with their McMaster degree. If granted, this Certificate will be issued by Mohawk College.

In the final year of your program, you must indicate your desire to receive the affiliated certificate by completing the Minor/Certificate Application in addition to completing your profile in the Graduation tile in Mosaic. The Faculty Reviewing Committee will verify that the requirements have been met. If you are successful, your transcript will confirm completion. In order to facilitate preparation of the Certificate by Mohawk College in time for Convocation, limited personal information and relevant course completions will be provided to Mohawk College for all eligible students prior to completion of

the Graduation tile. Students who do not want this information shared with Mohawk College should inform the University Registrar by email at convctn@mcmaster.ca. See *Sessional Dates* section for deadlines.
Note: The Affiliated Certificate in Leadership and Management in the Not-for-Profit Sector is being phased out and the courses will be last offered in 2025-2026.

CONCURRENT CERTIFICATES

Concurrent Certificates are open to undergraduate students at McMaster. These certificates are designed to fill a critical need for undergraduate students to learn about and develop professional skills that are highly desirable for the pursuit of graduate programs, professional programs, and employment opportunities following undergraduate studies. Normally students must complete a minimum of 15 to 18 units of course requirements. Concurrent certificates may include co-curricular activities to complement the academic requirements.
The Faculty of Social Sciences offers the following Concurrent Certificates:

- Concurrent Certificate in Applied Social Sciences Research
- Concurrent Certificate in Critical Practice in Child Welfare
- Concurrent Certificate in Work and Labour Relations
- Concurrent Certificate in Social Innovation

Please see *Concurrent Certificates* in the Certificates and Diploma Programs section of this Calendar for further information.

INTERNSHIP OPTIONS

The Faculty of Social Sciences offers paid internship opportunities during the academic year and summer. Internship placements provide students with intense work experiences and allow students to explore careers, develop employability skills and make important contacts for both now and after graduation. Students must successfully complete SOCSCI 2EL0/2EL3 - Career Preparation in the Social Sciences to be eligible to participate in an internship. Internships are recognized as non-credit course codes on the student transcript. Full-time internships are noted as SOCSCI 3IF0 A/B S and part-time internships are noted as SOCSCI 3IP0 A/B S. Students do not receive academic credit for completing an internship placement. However, upon successful completion, a notation describing the placement is also recorded on the student's official transcript.
Further details of internship options may be obtained from:

Programming and Outreach Manager
Kenneth Taylor Hall, Room 129
(905) 525-9140, extension 21207
email: exp.ed@mcmaster.ca

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the General Academic Regulations of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Students enrolled in a program in the Faculty of Social Sciences, in addition to meeting the General Academic Regulations of the University, shall be subject to the following regulations of the Faculty of Social Sciences.

Applying for Admission to Level II Programs

Any Social Sciences I students seeking admission to a Level II program in the Faculty of Social Sciences for the following Fall/Winter session must submit an Application for Admission to Level II through the *Mosaic* Student Centre ("My Academics"; Program/Plan Selection application) no later than **April 30**. Students who have completed a minimum of 24 units in Level I will be eligible to apply for a Level II program (subject to meeting program requirements). The application allows students to rank four program choices, in order of preference. Students are advised to rank program choices carefully, especially when seeking admission to limited enrolment programs. If admitted to the first program choice, admission to other program choices will not be evaluated. If a student is not admitted for the first program, the second program choice will be evaluated, followed by third and then fourth choices. Students who are ineligible for an Honours-level program of choice will be considered for the corresponding B.A. program. Students must check the *Mosaic* Student Centre in late May/early June to confirm their program for the following Fall and Winter terms.
Students applying to the Honours B.S.W. program must also apply directly to the School of Social Work by **February 1** and must refer to department admission notes.
Students applying to an Honours Co-op program option must apply through the application process managed by the Careers & Experiential Education team in the Office of the Associate Dean Undergraduate Studies by the specified deadline. Co-op program options have **limited enrolment** and admission is by selection. Please see the admission statement for each program in this section of the Calendar.

Limited Enrolment Programs

Admission at Level II (and above) is limited for the following programs. Possession of the published minimum requirements does not guarantee admission.

- All Honours Bachelor of Social Work and Bachelor of Social Work programs
- All Honours Aging and Society programs
- All Honours Health and Society programs
- All Honours Psychology, Neuroscience & Behaviour (B.A.) programs
- All Honours Co-op program options
- Honours Economics and Computer Science
- All Honours Social Psychology programs
- Honours Political Science Specialization in Global Citizenship
- Honours Political Science Specialization in Public Law and Judicial Studies

Minimum Requirements for Entering and Continuing in a Program Beyond Level I

HONOURS HEALTH & SOCIETY I:

Students must complete Level I Honours Health and Society I (including HLTHAGE 1BB3, 1CC3, 1ZZ3) with a Grade Point Average (GPA) of at least 5.0 to continue onto Level II Honours Health & Society. If, upon completion of Level I Honours Health & Society, students achieve a GPA between 4.5 and 4.9, they may enrol in Level II Honours Health & Society but will be placed on program probation for one reviewing period. Students may be on program probation for only one reviewing period. Students with a GPA between 3.0 to 4.4 may transfer to another program for which they qualify. Students with a GPA below 3.0 may not continue at the University.

HONOURS B.A. PROGRAMS:

You must have a Grade Point Average (GPA) of at least 5.0 to continue in an Honours B.A. program. If your GPA is 4.5 to 4.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 4.4, you must transfer to another B.A. program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

HONOURS B.A. (CO-OP) PROGRAM OPTIONS:

You must have a Grade Point Average (GPA) of at least 5.0 to continue in an Honours B.A. (Co-op) program option. If your GPA is 4.5 to 4.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 4.4, you must transfer to another B.A. program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

In addition, to remain in good standing in an Honours B.A. (Co-op) program option, you must be able to complete an alternating pattern of work terms and academic terms in a sequence that satisfies the requirements of the program. You must remain eligible to apply for all work terms, (i.e. not having committed any disqualifying violations of policies governing students in a Co-op program option). For details, see the Faculty of Social Sciences (Co-op) website.

COURSES AND PROGRAMS REQUIRING AN ADDITIONAL FEE:

The Faculty offers courses and programs that may require a payment of a fee, above the regular associated tuition. Examples include: field courses, co-op program options, and experiential offerings.

Students enrolled in a Co-op program option must typically pay an annual student fee in each of the 3 years a student is enrolled in a Co-op program, as well as a work term fee. For information on Co-op fees, fee schedules, and amounts, please see the Faculty of Social Sciences Co-op website.

HONOURS B.S.W. AND B.S.W. PROGRAMS:

To continue in an Honours B.S.W., or B.S.W program, you must have a Grade Point Average (GPA) of at least 6.0, and achieve **at least the minimum grade** in all Social Work courses as listed the program notes for *Progression Within Program* in the Honours Bachelor of Social Work (B.S.W.), or the Bachelor of Social Work (B.S.W.). If your GPA is 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 5.4, you must transfer to another program for which you qualify. If your GPA is less than 3.0, you may not continue at the University.

B.A. PROGRAMS:

You must have a Grade Point Average (GPA) of at least 3.5 to continue in, or graduate from, a three-level B.A. program. If your GPA is 3.0 to 3.4, you may remain in the program, but will be placed on academic probation. You may be on academic probation only once. If your GPA is less than 3.0, you may not continue at the University.

Transferring to Honours B.A. Programs Beyond Level II

Students who are not admissible to an Honours program from Level I to Level II, may request admission for the following Fall/Winter academic session. Program entry requirements and academic requirements for continuation at the level for which application is made, must be met. Transfer requests must be submitted through the Mosaic Student Centre (Service Request application) **by March 30**.

Graduation

FROM HONOURS B.A. AND B.A. PROGRAMS

To graduate from a program, students must meet all course requirements for their degree program. The requirements for graduation from these programs are described under the heading Graduation in the General Academic Regulations section in this Calendar.

TRANSFERRING TO GRADUATE WITH A THREE-LEVEL B.A. DEGREE FROM AN HONOURS B.A. PROGRAM

Students who successfully complete at least 90 units including all expected course requirements up to the end of Level III of any Honours B.A. degree, with a minimum Grade Point Average (GPA) of 3.5 may request permission from the Office the Associate Dean Undergraduate Studies, Social Sciences to transfer to graduate with the corresponding three-level B.A. degree. Students enrolled in Honours Social Psychology may be given the option of either transferring to graduate with a B.A. in Psychology or a B.A. in Sociology based on the degree that is most relevant to the subject concentration and for which they meet all the degree requirements.

Students who do not qualify for a specific three-level B.A. degree may petition to the Office of the Associate Dean, Undergraduate Studies, to be considered to graduate with a Social Sciences B.A. (General) exit degree. To qualify for consideration for the Social Sciences B.A. (General) exit degree, students must have successfully completed 90 units of course work, including 12 units of Level III courses in a Faculty of Social Sciences discipline with a minimum cumulative Grade Point Average of 3.5.

All requests to transfer to graduate must be submitted to the Office the Associate Dean Undergraduate Studies, Social Sciences by April 15th for the Spring Convocation and by September 1st for the Fall Convocation.

LETTER OF PERMISSION - COURSES TO GRADUATE

Students taking the final courses for completion of their degree program on a Letter of Permission at another university must ensure that the official transcripts are sent to the Office the Associate Dean, Undergraduate Studies, Social Sciences at McMaster University. For students expecting to graduate at the Spring Convocation, transcripts must be received by May 15 and for Fall convocation, by October 1.

Transfers to the Faculty of Social Sciences

Students from other Faculties are able to transfer to degree programs offered by the Faculty of Social Sciences provided they have obtained a Grade Point Average of at least 3.5 and have completed the necessary program admission requirements. Students approved to transfer to the Faculty of Social Sciences may be required to fulfill additional requirements at the time of admission. Failure to comply with these conditions may result in an academic standing of *May Not Continue in Faculty* at the following reviewing period.

Reinstatement

A student who may not continue at the University may apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the application deadline for the session. See the *Application Procedures* section of this Calendar. Reinstatement forms will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation and documentation of any extenuating circumstances. **Reinstatement is not automatic or guaranteed. Decisions are normally made after June 30 for September entry. The Grade Point Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. NOTE: If at a review after reinstatement the Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months**.
Failure to comply with the conditions outlined at the time of reinstatement may result in withdrawal from the university at the following reviewing period. Reinstated students are on academic probation until they achieve good standing at the next academic review, and normally they are permitted to enrol in a maximum of 18 units of course work in the Fall/Winter term.

Deadlines

The Faculty of Social Sciences will not consider applications for admission, admission to a second degree or continuing studies, reinstatement, registration, or dropping and adding of courses after the deadlines stated in this Calendar under Sessional Dates and Application Procedures, unless written documentation is provided showing good cause, as determined by the Faculty.

Academic Breadth Requirement

The Faculty of Social Sciences encourages all of its students to embrace academic breadth in both knowledge and skills. Therefore, every Social Sciences student is required to successfully complete at least 6 units of course work outside of their department/discipline(s) of study to satisfy degree requirements. These course units must be over and above the 30 units required for Level I Social Sciences.

Academic Advising

The aim of academic advising is to help students tailor a program of studies to fit their interests. Advising also involves reviewing these interests from time to time to accommodate changing plans, needs and academic performance. Advising is available throughout the year from the Office the Associate Dean (Academic) Social Sciences and the departments or academic units in the Faculty of Social Sciences. It is strongly recommended that students consult with a Departmental Undergraduate Advisor during March in conjunction with the Level II program application.

Awards

For conditions and terms of awards for full-time and part-time students, please refer to the Undergraduate Academic Awards section of this Calendar.

Course Selection and Course Changes

Students are responsible for ensuring that their course selection meets the requirements of the degree program in which they are enrolled, that prerequisites have been met, and that, where necessary, permission to take courses has been obtained. They should review their personal academic advisement report on Mosaic each time they drop, cancel or add courses, and contact an Academic Advisor if they have questions, **particularly if the advisement report shows unused courses**. Students should also be aware that changes to their course load may affect their fees and their eligibility for scholarships or sources of financial aid such as OSAP

Overload

Normally students may not register in more than 30 units during the Fall/Winter Term. In the following circumstances an overload of up to six units may be taken:

- if a student has a Fall-Winter Average of at least 7.0 in the immediately preceding review period.
- if the student is registered in the final level of his/her program.

Students wishing to register in more than 12 units during the Spring/Summer term, or more than six units in either term of that term may do so only with permission. Requests to enroll in an overload of units should be directed to the Office the Associate Dean (Undergraduate Studies) Social Sciences.

Deferred Examinations and Deferred Term Work

Students who have been granted more than one deferred examination or term-work privilege may be required by the Faculty/Program Office to reduce their course load during the term in which the deferred examinations are being written. The decision on reduced load will be made and communicated with the decision on the application for deferred examinations or the request for deferred term-work.

Withdrawal

Students who wish to withdraw from the University may cancel courses on *Mosaic* and must surrender their McMaster Identification Card validation sticker to the Financial Services Office to ensure the processing of any fee refunds. Students who fail to withdraw formally from any course(s) by the stated deadlines will remain registered whether or not they attend classes and will be assigned a grade.

Letter of Permission

Students in good academic standing who wish to attend another accredited degree granting university to take courses for credit toward a McMaster degree must first request a Letter of Permission (LoP) from the Office the Associate Dean, Undergraduate Studies, in the Faculty of Social Sciences. The request should be initiated through the *Student Centre* in *Mosaic*.
The Faculty of Social Sciences will permit a maximum of 18 units to be taken at another university on Letter of Permission towards either a three-year B.A. or a four-year Honours B.A. degree. Required courses for the student's degree program may not be taken elsewhere unless departmental approval is given. Electives may be taken through the Letter of Permission policy.
Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Grade Point Average (GPA) at McMaster, and therefore cannot be used to raise standing. The transcript designations will read T, indicating *Transfer*, when a grade of C- or better is attained or NC indicating not complete if less than a C- grade is obtained.
Students must ensure that the official transcripts for completed courses are sent to the Office the Associate Dean, Undergraduate Studies, Social

Sciences. Students expecting to graduate upon completion of a course on Letter of Permission should refer to the heading Letter of Permission Courses to Graduate.
Students who choose not to use the Letter of Permission or cancel the course(s), must supply the Office the Associate Dean, Undergraduate Studies, Social Sciences with a transcript showing the cancelled course, or a certified letter from the host university, confirming that the student was not registered for the courses and session.
Students should refer to the *Letter of Permission* section in the *Academic Regulations* section of the calendar for the university's policies and procedures regarding taking courses on Letter of Permission.

Non-Academic Requirements

Some courses, and many important extra-curricular opportunities for students in the Faculty of Social Sciences, require students to have cleared police criminal checks which can be obtained through Hamilton-Wentworth Police Services. Additionally, students may be required to pass TB tests and have immunization for some contagious diseases. Costs related to these requirements are the responsibility of the student.

Social Sciences Study Abroad

Formal Student Exchange Programs are those where McMaster University has an agreement with another institution involving a temporary exchange of students. Exchange students register at and pay tuition fees and supplementary fees to McMaster. No tuition is paid to the other institution. McMaster University has an array of international partnerships with institutions in other countries including Australia, France and the United Kingdom to provide students the opportunity to participate in an exchange program for one year or a term. Exchanges allow students to gain a varied perspective on their course of study and enhance their professional and personal goals.

ELIGIBILITY FOR STUDY ABROAD

Students registered in any Honours or Combined Honours program in the Faculty of Social Sciences may apply to replace all or part of the work of their third year with an acceptable program of study taken at an approved university. To be eligible to take part in this program, students must have completed at least 60 units of work with a Grade Point Average of at least 7.0. All requirements must be satisfied by the end of the Fall/Winter session (September-April) preceding the commencement of study elsewhere. Students may receive up to 30 units of credit for a full year of study at another institution. The awarding of transfer credit for work completed elsewhere may be confirmed only after the Office the Associate Dean, Undergraduate Studies, Social Sciences has received transcripts and reviewed students' academic achievements following their return.

APPLICATION FOR STUDY ABROAD

Students interested in applying for this program should consult the International Student Services Office and the Faculty of Social Sciences Exchange Advisor, approximately one year before they anticipate studying abroad. Application deadlines are usually in January, although applications for some exchanges may be due as early as December. Acceptance to the Ontario and University-wide Exchange Programs is by application and recommendation. For further information please see *International Study* in the *General Academic Regulations* section in this Calendar. Information concerning student exchanges can also be found in the *Academic Facilities, Student Services and Organizations* section of this Calendar under the heading International Student Services.

International Student Services (ISS)
Gilmour Hall, Room 110
Telephone: (905) 525-9140, extension 20960
Web Address: https://studentsuccess.mcmaster.ca/global/study-abroad/

Level I Programs

The Faculty of Social Sciences offers the following Level I program leading to the Honours Bachelor of Arts and Bachelor of Arts degrees:

- Social Sciences I

Review of the Admission Requirements of Level II programs and successful completion of required courses in Level I will allow students a range of Level II program options including those from within their chosen program as well as the others.
Additionally, effective September 2019, the Faculty will offer the following direct-entry Level I programs leading to the Honours Bachelor of Arts and Bachelor of Arts degrees:

- Economics I
- Honours Health and Society I

Bachelor of Arts (Honours)

ECONOMICS I

Program Notes:

- Beginning at Level II, Economics students may complete one of the following program options in Economics:
- Honours Economics (B.A.)
- Honours Economics (Specialist Option) (B.A.)
- Honours Economics (Co-op Option) (B.A.)
- Honours Economics (Accelerated Option) (B.A.)
- Honours Economics and Mathematics (B.A.)
- Honours Economics and Computer Science (B.A.)
- Combined Honours Economics and Another Subject (B.A.)
- Economics (B.A.)

By default, students completing this Level I program will be considered for entry to Level II Honours Economics (B.A.), without needing to apply, provided they meet the required course grades and GPA requirements as stated for admission to that program. If students wish to be considered for any other Honours Economics program option or a non-Economics program, they must complete the Level II application form in April. Economics I students are encouraged to review the specific program requirements of all program options they are considering for Level II (https://economics.mcmaster.ca/undergraduate-programs/). In addition to the required Level 1 ECON courses, admission to Combined Honours programs also requires completion of the entry requirements for the other subject. For further information, see *Applying for Admission to Level II Programs*, in the Faculty of Social Sciences section of the Calendar.

- Seats in the Level 1 Computer Science courses are limited. For those students in Economics 1 who hope to be eligible for admission to the Honours Economics & Computer Science program in Level II, the Department of Economics has a pre-registration ballot for a limited number of seats for COMPSCI 1JC3 and 1MD3. Economics 1 students who are unsuccessful enrolling in these courses on their own may submit a ballot to the Department of Economics by July 1st. The ballot will be available on the Department of Economics website.
- Level I students considering the Honours Economics (Accelerated Option) program for Level II should review the recommended course selections for Year 1 of the accelerated timeline. The Accelerated Option is designed for ambitious students who aspire to expedite their careers in economics and graduate with an Honours Economics degree in three years. Economics I students interested in enrolling in this program option in Level II will need to follow a prescribed course enrollment sequence to be prepared for the compressed schedule of this program. They must also meet the specific course and GPA admission requirements

for this program. All course prerequisites must be successfully met and requirements must be completed in the following sequence. (Failure to follow the sequence will result in traditional length of the degree). Successful completion will allow for Fall graduation in November of the respective year. Year 1 suggested order of courses: Fall term: ECON 1B03, 1BB3, 1ME3 and 2 Level 1 electives; Winter term: ECON 2B03, 2Z03, 2H03 (2Y03), 2 Level 1 electives; Spring term: 2 electives; Summer term: ECON 2ZZ3, 2HH3 (2YY3). Interested Level I students are strongly recommended to meet with an Academic Advisor for guidance.

Requirements

30 units total

9 UNITS

- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics
- ECON 1ME3 - Introduction to Mathematical Economics

9 UNITS

from

- *Course List*

12 UNITS

Electives, which may include courses from the *Course List* below. See also the *Elective Courses Available To Level I Students* page.

Course List

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- GLOBALZN 1A03 - Global Citizenship
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 1G03 - Transition - Gaodadeihwahni:ya:s "They are strengthening their knowledge"
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1GL3 - The Good Life
- SCAR 1R03
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCSCI 1RM3 - How do we Know? Doing Social Sciences Research
- SOCSCI 1SS3 - Inquiry in the Social Sciences
- SOCSCI 1T03 - Life, the University, and Everything
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

HONOURS HEALTH AND SOCIETY I

Program Notes

Enrolment in this program is limited.

- As places in the Honours Health and Society I program are limited, admission is by selection, and possession of the minimum requirements does not guarantee admission.
- Beginning at Level II, Honours Health & Society students may complete one of the following program options:
- Honours Health & Society (B.A.)
- Honours Health & Society Specialization in Mental Health and Addiction (B.A.)
- Honours Health & Society (Co-op Option) (B.A.)
- Combined Honours Health & Society and Another Subject (B.A.)
- Honours Aging & Society (B.A.)
- Honours Aging & Society Specialization in Mental Health and Addiction (B.A.)
- Honours Aging & Society (Co-op Option) (B.A.)
- Combined Honours Aging & Society and Another Subject (B.A.)
- Health, Aging & Society (B.A.)

By default, students completing this Level I program will be considered for entry to Level II Honours Health & Society (B.A.), without needing to apply, provided they meet the required course grades and GPA requirements as stated for admission to that program. If students wish to be considered for any other Honours Health & Society or Honours Aging & Society program option, or any other Level II program not offered by this department, they must complete the Level II application form in April. Honours Health & Society I students are encouraged to review the specific program requirements of all program options they are considering for Level II (https://healthagingandsociety.mcmaster.ca/undergraduate-programs/honours-aging-society-ba/). In addition to the required Level 1 HLTHAGE courses, admission to Combined Honours programs also requires completion of the entry requirements for the other subject. For further information, see *Applying for Admission to Level II Programs*, in the Faculty of Social Sciences section of the Calendar.

Requirements

30 units total

9 UNITS

- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

9 UNITS

from

- *Course List*

12 UNITS

Electives, which may include courses from the *Course List* below. Also see the *Elective Courses Available To Level I Students* page.

Course List

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics

- ECON 1ME3 - Introduction to Mathematical Economics
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- GLOBALZN 1A03 - Global Citizenship
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 1G03 - Transition - Gaodadeihwahni:ya:s "They are strengthening their knowledge"
- LABRST 1D03
- LABRST 1E03
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1GL3 - The Good Life
- SCAR 1R03
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCSCI 1RM3 - How do we Know? Doing Social Sciences Research
- SOCSCI 1SS3 - Inquiry in the Social Sciences
- SOCSCI 1T03 - Life, the University, and Everything
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

SOCIAL SCIENCES I

Program Notes

- A full course load for Social Sciences I is 30 units. (The unit value of a course is determined by the last number of the course code. 3-unit courses are normally one term in duration and offered either September to December or January to April. 6-unit A/B courses are typically taught over two terms, from September to April.)
- Students who have completed a minimum of 24 units in Social Sciences I will be eligible to apply for a Level II program (subject to program requirements).
- Students should select courses based on their academic interests and anticipated Level II program of study. Elective courses may be taken from other Faculties, where requisites are met. Admission to a Level II program typically requires completion of three to six units of the subject in Level I, with an applicable Grade Point Average. Students should consult the admission statements for relevant Level II programs when selecting their Level I courses.
- Social Sciences I students are permitted to take up to 9 units of course work in any single subject.

Course List 1

The following Social Sciences courses provide entry into a Level II program.

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics
- ECON 1ME3 - Introduction to Mathematical Economics
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- LABRST 1D03
- LABRST 1E03
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1GL3 - The Good Life
- SCAR 1R03
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCIOL 1Z03 - An Introduction to Sociology
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

Course List 2

The following Social Sciences courses are also available but do not provide entry into a Level II program.

- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- GLOBALZN 1A03 - Global Citizenship
- INDIGST 1G03 - Transition - Gaodadeihwahni:ya:s "They are strengthening their knowledge"
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCSCI 1RM3 - How do we Know? Doing Social Sciences Research
- SOCSCI 1SS3 - Inquiry in the Social Sciences
- SOCSCI 1T03 - Life, the University, and Everything

Requirements: 30 Units

18 UNITS

from

- *Course List 1* and *Course List 2*

12 UNITS

Electives, which may include courses from *Course List 1* and *2*. (See the Degrees and Programs: Duration in Years section of this Calendar for a list of elective courses available to Level I students)

Department of Anthropology

http://www.anthropology.mcmaster.ca

Faculty as of January 15, 2025

CHAIR

Andrew Roddick

PROFESSORS

Megan Brickley/B.A. *(Birmingham)*, M.Sc. *(University College London)*, Ph.D. *(London, UK)*/ former Canada Research Chair in Bioarchaeology of Human Disease

Aubrey Cannon/B.A. *(Simon Fraser)*, Ph.D. *(Cambridge)*

Tristan Carter/ B.A. *(Nottingham)*, Ph.D. *(University College, London)*

John J. Colarusso/*(Linguistics and Languages)* B.A. *(Cornell)*, M.A. *(Northwestern)*, Ph.D. *(Harvard)*

Tina Moffat/B.Sc. *(Toronto)*, M.A., Ph.D. *(McMaster)*

Hendrik Poinar/*(Biochemistry & Biomedical Sciences)* B.Sc., M.Sc. *(California)*, Ph.D. *(Munich)*

Petra Rethmann/B.A. *(Vienna)*, M.A. *(Munich)*, Ph.D. *(McGill)*

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Karen McGarry/B.A., M.A. *(Trent)*, Ph.D. *(York)*

Tracy Prowse/B.Sc., M.A. *(Alberta)*, Ph.D. *(McMaster)*

Andrew Roddick/B.A. *(British Columbia)*, M.A., Ph.D. *(California-Berkeley)*

Kee Howe Yong/M.Phil., Ph.D. *(CUNY)*

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Shanti Morell-Hart/B.A. *(UTSA)*, M.A., Ph.D. *(California-Berkeley)*

ASSISTANT PROFESSORS

Basit Iqbal/B.A. *(Alberta)*, M.A. *(Toronto)*, M.A., Ph.D. *(California-Berkeley)*

Yana Stainova/B.A. *(Mount Holyoke College, South Hadley)*, M.A., Ph.D. *(Brown)*

Amanda Wissler/B.A. *(California, Berkley)*, M.A.*(Arizona State University)*, Ph.D. *(Arizona State University)*

Adrianne Xavier Lickers/B.A. *(McMaster)*, M.A. *(Royal Roads University)*, Ph.D. *(Royal Roads University*

ADJUNCT ASSISTANT PROFESSORS

Ana Duggan/B.Sc. *(Newfoundland)*, M.Sc. *(Queen's)*, Ph.D. *(Leipzig)*

Scott Martin/B.A. *(McMaster)*, M.A. *(Durham, UK)*, Ph.D. *(Cambridge, UK)*

ADJUNCT PROFESSORS

Gary Warrick/ B.A. *(McMaster)*, M.A. *(Simon Fraser)*, Ph.D. *(McGill)*

ASSOCIATE MEMBERS

Ellen Amster/*(Religious Studies, Family Medicine)* B.A. *(Chicago)*, M.A., Ph.D. *(Pennsylvania)*

Celia Rothenberg/*(Religious Studies)* B.A. *(Wellesley, Massachusetts)*, M.A. *(Oxford)*, Ph.D. *(Toronto)*

(Applicable to all Anthropology programs)

Anthropology includes the three major subfields of Sociocultural Anthropology, Biological Anthropology, and Archaeology. It should be noted that each subfield has its own sequence of courses and prerequisites.

Note

- Students are **strongly encouraged to consult the Anthropology web site** to determine sessional course offerings, as not all Level II, III, and IV courses are offered each year: http://anthropology.mcmaster.ca/programs

Sociocultural Anthropology

- ANTHROP 2DA3 - Traditional Indigenous Ecological Knowledge
- ANTHROP 2EE3 - Sport and/as Religion
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2G03 - Readings in Indo-European Myth
- ANTHROP 2HE3 - Heritage, Economy, and Ethics
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2MA3 - Art and Activism
- ANTHROP 2R03 - Religion, Magic and Witchcraft
- ANTHROP 2PP3 - Pets and their People
- ANTHROP 2SA3 - Encountering the Sacred
- ANTHROP 3AR3 - Culture and Religion
- ANTHROP 3CF3 - Climate Change, Changing Foodways and Politics
- ANTHROP 3ET3 - Ethics of Hope and Despair
- ANTHROP 3F03 - Anthropology and the 'Other'
- ANTHROP 3GG3 - Anthropology of Contemporary Europe
- ANTHROP 3GH3 - Interdisciplinary Global Health Field Course: Maternal and Infant Health in Morocco
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- ANTHROP 3LL3 - Of Beauty and Violence
- ANTHROP 3MD3 - Matters of Life and Death
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ANTHROP 3PA3 - Dish with One Spoon Health, Diet and Traditional Botany
- ANTHROP 3PH3
- ANTHROP 3SS3 - Sacred Journeys
- ANTHROP 3ST3 - Anthropology of Postcolonial Science and Technology
- ANTHROP 3TR3 - Tourism: Sex, Sun and Sightseeing
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4AA3
- ANTHROP 4B03 - Current Problems in Sociocultural Anthropology I
- ANTHROP 4BB3 - Current Problems in Sociocultural Anthropology II
- ANTHROP 4CP3 - Cultural Politics of Food and Eating
- ANTHROP 4D03
- ANTHROP 4DD3 - Anthropology of Zombies and the Undead
- ANTHROP 4LL3 - Critical Global Health
- ANTHROP 4MM3 - Borders, Migration, Refuge
- ANTHROP 4NE3 - Narrative, Ethnography, Writing
- ANTHROP 4SG3 - The Secret of the Gift

Biological Anthropology

- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2D03 - 23 and You: The Archaeology of your DNA
- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BA3 - Special Topics in Biological Anthropology
- ANTHROP 3BD3 - The Black Death
- ANTHROP 3BF3
- ANTHROP 3FA3 - Forensic Anthropology
- ANTHROP 3HD3 - Children's Health and Development
- ANTHROP 3LD3 - Learning from the Dead
- ANTHROP 3PP3 - Paleopathology
- ANTHROP 4DN3 - Diet and Nutrition in Biocultural Perspective
- ANTHROP 4J03 - Advanced Topics in Biological Anthropology I
- ANTHROP 4JJ3 - Advanced Topics in Biological Anthropology II
- ANTHROP 4R03 - Advanced Bioarchaeology and Skeletal Biology

- ANTHROP 4S03 - The Anthropology of Infectious Disease
- *(Relevant courses are also offered by Biology and Kinesiology.)*

Archaeology

- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 2C03 - Archaeology of Environmental Crisis and Response
- ANTHROP 2O03 - Local and Regional North American Archaeology
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology
- ANTHROP 2PC3 - Aliens, Curses and Nazis: Archaeology and Hollywood
- ANTHROP 2RP3 - Religion and Power in the Past
- ANTHROP 2WA3 - Neanderthals to Pyramids: Introduction to World Archaeology
- ANTHROP 3AS3 - Archaeology and Society
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3CA3 - Ceramic Analysis
- ANTHROP 3CC6 - Archaeological Field School
- ANTHROP 3DD3 - Archaeology of Death
- ANTHROP 3E03 - Special Topics in Archaeology I
- ANTHROP 3EE3 - Special Topics in Archaeology II
- ANTHROP 3EM3 - Jericho to Mycenae: Eastern Mediterranean Prehistory in Context
- ANTHROP 3FF3 - Key Debates in Andean Archaeology
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3LA3 - Lithics Analysis
- ANTHROP 3X03 - Zooarchaeology
- ANTHROP 4AA3
- ANTHROP 4AH3 - Archaeology and Heritage: Ethics, Politics, and Practice
- ANTHROP 4CC3 - Archaeology of Foodways
- ANTHROP 4CL3 - Archaeology of Climate Change and Culture
- ANTHROP 4E03 - Advanced Topics in Archaeology I
- ANTHROP 4EE3 - Advanced Topics in Archaeology II
- ANTHROP 4FF3 - Digging the City: The Archaeology of Urbanism
- ANTHROP 4HF3 - Archaeology of Hunter-Fisher-Gatherers
- ANTHROP 4HH3
- ANTHROP 4KK3 - The Archaeology of Neanderthals and Other Early Humans
- *(Relevant courses are also offered by the School of Earth, Environment & Society, History and Greek and Roman Studies.)*

Other Courses

Courses not distinguished by subfield include the required course ANTHROP 3PD3 plus the independent study courses ANTHROP 3IS3, ANTHROP 4G03, ANTHROP 4GG3 and topic courses ANTHROP 2ST3 and ANTHROP 3W03. In planning a program, it is important for students to take note of the prerequisites of certain upper-level courses.

Bachelor of Arts (Honours)

COMBINED HONOURS IN ANTHROPOLOGY AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ANTHROP 1AA3 or 1AB3. Satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
- Students enrolled in an Honours Anthropology program prior to September 2013 may substitute any Level II, III, IV **Anthropology** course for ANTHROP 3PD3.
- Students who have completed only 3 units of Level I Anthropology will be required to complete 3 more units of Level I Anthropology by the end of the following academic year.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- from the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology

3 UNITS

from

- ANTHROP 2D03 - 23 and You: The Archaeology of your DNA
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 3CA3 - Ceramic Analysis
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3LA3 - Lithics Analysis
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ANTHROP 3PP3 - Paleopathology
- ANTHROP 3X03 - Zooarchaeology

15 UNITS

- Levels II, III or IV Anthropology

3 UNITS

- ANTHROP 3PD3 - Anthropological Perspectives and Debates

36 UNITS

- courses specified for the other subject

3 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics or
- the Research Methods/Statistics requirement specified for the other subject (in combined programs within the Faculty of Social Sciences)

6 UNITS

- Level IV Anthropology

0-3 UNITS

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

(See *Note 3)*

12-15 UNITS

- Electives

HONOURS ANTHROPOLOGY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ANTHROP 1AA3 or 1AB3. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Note

- Students enrolled in an Honours Anthropology program prior to September 2013 may substitute any level II, III, or IV **Anthropology** course for ANTHROP 3PD3.
- Students who have completed only 3 units of Level I Anthropology will be required to complete 3 more units of Level I Anthropology by the end of the following academic year.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology

3 UNITS

from

- ANTHROP 2D03 - 23 and You: The Archaeology of your DNA
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 3CA3 - Ceramic Analysis
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3LA3 - Lithics Analysis
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ANTHROP 3PP3 - Paleopathology
- ANTHROP 3X03 - Zooarchaeology

24 UNITS

- Levels II, III or IV Anthropology

3 UNITS

- ANTHROP 3PD3 - Anthropological Perspectives and Debates

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

12 UNITS

- Level IV Anthropology

0-3 UNITS

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

(See *Note 2)*

33-36 UNITS

- Electives, of which at least six units must be taken from outside of Anthropology

HONOURS ANTHROPOLOGY CO-OP (B.A.)

Admission

Enrollment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ANTHROP 1AA3 or 1AB3. Preference will be given to applicants currently in a Level I program. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.
Information about this program and about co-op policies and procedures can be obtained from the Social Sciences Co-op team in the Office of the Associate Dean Undergraduate Studies.

Admission Notes

- Students who intend to apply for this program option must follow the application instructions as found on the Social Sciences Co-op web site. Students who are unable to access this web site must consult the Social Sciences Co-op team in the Office of the Associate Dean Undergraduate Studies prior to the application deadline.
- All applications for admission to the Co-op program option are considered annually and must be made directly to the Social Sciences Co-op team by March 1 for the Fall/Winter term.
- Applications that are submitted after the March 1 deadline will not be considered.
- Offers of acceptance cannot be deferred.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- Students who have completed only 3 units of Level I Anthropology will be required to complete 3 more units of Level I Anthropology by the end of the following academic year.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program. (See *Admission* above.)

9 UNITS

- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology

3 UNITS

- SOCSCI 2EL3 - Career Preparation in the Social Sciences

3 UNITS

from

- ANTHROP 2D03 - 23 and You: The Archaeology of your DNA
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 3CA3 - Ceramic Analysis
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3LA3 - Lithics Analysis
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ANTHROP 3PP3 - Paleopathology
- ANTHROP 3X03 - Zooarchaeology

24 UNITS

- Levels II, III or IV Anthropology

3 UNITS

- ANTHROP 3PD3 - Anthropological Perspectives and Debates

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

12 UNITS

- Level IV Anthropology

0-3 UNITS

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

(See *Note 2)*

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

WORK TERMS

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

27-30 UNITS

- Electives, of which at least six units must be taken from outside of Anthropology

Bachelor of Arts

ANTHROPOLOGY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including a grade of at least C- in three units from ANTHROP 1AA3 or 1AB3.

Note

1. Students who have completed only 3 units of level I Anthropology will be required to complete 3 more units of Level I Anthropology by the end of the following academic year.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

6 UNITS

from

- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology

18 UNITS

- Levels II, III or IV Anthropology

0-3 UNITS

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

(See *Note 1)*

33-36 UNITS

- Electives, of which at least six units must be taken from outside of Anthropology

Minor(s):

MINOR IN ANTHROPOLOGY

Note

In order to declare a Minor in Anthropology, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6 UNITS

from

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

3 UNITS

from

- ANTHROP 2E03 - Introduction to Biological Anthropology
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology

15 UNITS

- Levels II, III or IV Anthropology

Department of Economics

http://www.economics.mcmaster.ca

Faculty as of January 15, 2025

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Bachelor of Arts (Honours)

COMBINED HONOURS IN ECONOMICS AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including an average of at least 5.0 in ECON 1B03 and 1BB3 and completion of one of ECON 1ME3, MATH 1MM3, 1A03, 1LS3. Satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
- **Alternate admission requirements:**
- **For students enrolled in Level II or III of BA Economics**, admission to Levels II, III and IV of Honours Economics programs requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3 . **Students enrolled in Levels II or III of BA Economics cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3).**
- **For students in another program beyond Level I**, admission to Levels II, III and IV of Honours Economics programs normally requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3. **Students cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3). However, if a student enrolled in Level II or above of another program has a minimum GPA of 5.0 and has completed ECON 1B03 and 1BB3 with an average of at least 5.0 on their first attempt, they will be considered admissible.**
- Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 can take ECON 3EE3 only if they achieved a grade of at least B+ in a recognized alternative statistics course. There is no such grade requirement for ECON 3E03. See ECON 3EE3 in the *Course Listings* section of this Calendar for a list of recognized alternative statistics courses.
- Students registered in Combined Honours programs within the Faculty of Social Sciences must complete at least ECON 4F03 or ECON 4FF3. Students who wish to satisfy the Honours Seminar requirement specified by the other department may replace 4A03 and 4AA3 with another three units of Economics course.
- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- MATH 1MM3 (or 1M03) is required for any student planning to transfer into Commerce and strongly recommended for any student with a Minor in Business or Finance.
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission to the program.

(See Admission above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 8* above)

6 UNITS

- ECON 4A03 - Honours Economic Analysis
- ECON 4F03 - Methods of Inquiry in Economics

or

- ECON 4AA3 - Economic Specialist Seminar
- ECON 4FF3 - Research Methods in Economics

(See *Note 4* above.)

15 UNITS

Levels II, III, IV Economics **with no more than six units** from the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See Note 5 above.)

36 UNITS

- courses specified for the other subject

6 UNITS

- ECON 2B03 - Analysis of Economic Data and
- ECON 3EE3 - Econometrics I or
- ECON 3E03 - Applied Econometrics

Note: Students who plan to take ECON 3EE3 are strongly advised to take ECON 2B03. (See *Note 3* above.)

15 UNITS

- Electives

HONOURS ECONOMICS (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including an average of at least 5.0 in ECON 1B03 (or 1BX3) and 1BB3 (or 1BA3) and completion of one of ECON 1ME3, MATH 1MM3, 1A03, 1LS3. For continuation in program, see the section on *Minimum Requirement for Entering and Continuing in a Program Beyond Level I*.

Notes

- Alternate admission requirements:
- **For students enrolled in Level II or III of BA Economics**, admission to Levels II, III and IV of Honours Economics programs requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, 2YY3. **Students enrolled in Levels II or III of BA Economics cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3).**
- **For students in another program beyond Level I**, admission to Levels II, III and IV of Honours Economics programs normally requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, 2YY3. **Students cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3). However, if a student enrolled in Level II or above of another program has a minimum GPA of 5.0 and has completed ECON 1B03 and 1BB3 with an average of at least 5.0 on their first attempt, they will be considered admissible.**
- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 are exempt from this requirement. Those students can take ECON 3EE3 (formerly 3U03) only if they achieved a grade of at least B+ in an alternative statistics course. There is no such grade requirement for ECON 3E03 (formerly 3WW3). See ECON 3EE3 (formerly 3U03) in the *Course Listings* section of this Calendar for a list of recognized alternative statistics courses.
- Students interested in an M.A. in Economics should take ECON 3EE3 (formerly 3U03) and consider the Specialist Option.
- MATH 1MM3 (or 1M03) is required for any student planning to transfer into Commerce and strongly recommended for any student with a Minor in Business or Finance.
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program. (See *Admission* above.)

9 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2B03 - Analysis of Economic Data

(See *Notes 2* and *3* above)

- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 7* above)

3 UNITS

- ECON 4A03 - Honours Economic Analysis

24 UNITS

Levels II, III, IV Economics with no more than six units from the following courses

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 2* above.)

3 UNITS

from

- ECON 3EE3 - Econometrics I
- ECON 3E03 - Applied Econometrics

(See *Notes 3* and *4* above.)

3 UNITS

from

- ECON 4F03 - Methods of Inquiry in Economics
- ECON 4FF3 - Research Methods in Economics

42 UNITS

- Electives. Note: The number of units of Economics courses above Level I (excluding ECON 2B03, ECON 3E03 and 3EE3) must not exceed 60

HONOURS ECONOMICS (B.A.) - ACCELERATED OPTION

Admission

Completion of any Level I program with a Grade Point Average of at least 6.0 including an average of at least 5.0 in ECON 1B03 (or 1BX3) and 1BB3 (or 1BA3); and completion of one of ECON 1ME3, MATH 1MM3, MATH 1A03, 1LS3; and completion of ECON 2B03, 2Z03 and 2Y03 (or 2H03). For continuation in program, see the section on *Minimum Requirement for Entering and Continuing in a Program Beyond Level I*.

Notes

- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 are exempt from this requirement. Those students can take ECON 3EE3 (formerly 3U03) only if they achieved a grade of at least B+ in an alternative statistics course. There is no such grade requirement for ECON 3E03 (formerly 3WW3). See ECON 3EE3 (formerly 3U03) in the *Course Listings* section of this Calendar for a list of recognized alternative statistics courses.
- Students interested in an M.A. in Economics should take ECON 3EE3 (formerly 3U03) and consider the Specialist Option.
- MATH 1MM3 (or 1M03) is required for any student planning to transfer into Commerce and strongly recommended for any student with a Minor in Business or Finance.
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.
- Students who have not completed at least 42 units for the Honours Economics Accelerated Option (B.A.) within the first consecutive 12 months of the program (including Level 1) will be transferred to the Honours Economics (B.A.).

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program. (See *Admission* above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2B03 - Analysis of Economic Data
- ECON 4A03 - Honours Economic Analysis

(See *Notes 1* and *2* above)

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 6* above)

24 UNITS

Levels II, III, IV Economics with no more than six units from the following courses

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 1* above.)

3 UNITS

from

- ECON 3EE3 - Econometrics I
- ECON 3E03 - Applied Econometrics

(See *Notes 2* and *3* above.)

3 UNITS

from

- ECON 4F03 - Methods of Inquiry in Economics
- ECON 4FF3 - Research Methods in Economics

42 UNITS

- Electives. Note: The number of units of Economics courses above Level I (excluding ECON 2B03, 3E03 and 3EE3) must not exceed 60

HONOURS ECONOMICS (SPECIALIST OPTION) (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including an average of at least 5.0 in ECON 1B03 and 1BB3 and completion of one of ECON 1ME3, MATH 1MM3, 1A03, 1LS3. For continuation in program,

see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- Alternate admission requirements:
- **For students enrolled in Level II or III of BA Economics**, admission to Levels II, III and IV of Honours Economics programs requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, ECON 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3. **Students enrolled in Levels II or III of BA Economics cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3).**
- **For students in another program beyond Level I**, admission to Levels II, III and IV of Honours Economics programs normally requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, ECON 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3. **Students cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3). However, if a student enrolled in Level II or above of another program has a minimum GPA of 5.0 and has completed ECON 1B03 and 1BB3 with an average of at least 5.0 on their first attempt, they will be considered admissible.**
- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- Students in the Specialist Option are expected to take ECON 2B03. Students with prior credit in a recognized alternative statistics course are exempt from this requirement. Those students can take ECON 3EE3 only if they achieved a grade of at least B+ in a recognized alternative statistics course. See ECON 2B03 in the Course Listings section of this Calendar for a list of recognized alternative statistics courses.
- Students interested in an M.A. in Economics should take ECON 3EE3 and consider the Specialist Option.
- MATH 1MM3 (or 1M03) is required for any student planning to transfer into Commerce and strongly recommended for any student with a minor in Business or Finance.
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See Admission above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 7* above)

21 UNITS

- ECON 2B03 - Analysis of Economic Data
- ECON 3G03 - Introduction to Advanced Economic Theory
- ECON 4AA3 - Economic Specialist Seminar
- ECON 4FF3 - Research Methods in Economics
- ECON 4G03 - Econometrics II
- ECON 4T03 - Advanced Economic Theory I
- ECON 4TT3 - Advanced Economic Theory II

(See *Notes 2* and *3* above.)

12 UNITS

Levels II, III, IV Economics with **no more than six units** from the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 2* above.)

3 UNITS

- ECON 3EE3 - Econometrics I
- ECON 3E03 - Applied Econometrics (with a grade of at least A-)

(See *Notes 3* and *4* above.)

42 UNITS

- Electives. (Note: The number of units of Economics courses above Level I excluding ECON 2B03, 3EE3 and 3E03 must not exceed 60.)

HONOURS ECONOMICS AND COMPUTER SCIENCE (B.A.)

Admission

Enrollment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement, completion of any Level I program with a Grade Point Average of at least 5.0, including an average of at least 5.0 in ECON 1B03 (or 1BX3) and 1BB3 (or 1BA3), and a weighted average of at least 5.0 in ECON 1B03, ECON 1BB3; MATH 1A03, MATH 1AA3, and MATH 1B03, and an average of at least 7.0 in COMPSCI 1JC3 and 1MD3. For continuation in the program, see *Minimum Requirement for Entering and Continuing in a Program Beyond Level I*.

Notes

- **Alternate admission requirements:**
- **For students enrolled in Level II or III of BA Economics**, admission to Levels II, III and IV of Honours Economics programs requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3. **Students enrolled in Levels II or III of BA Economics cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3).**
- **For students in another program beyond Level I**, admission to Levels II, III and IV of Honours Economics programs normally requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03, and 2YY3. **Students cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3). However, if a student enrolled**

in Level II or above of another program has a minimum GPA of 5.0 and has completed ECON 1B03 and 1BB3 with an average of at least 5.0 on their first attempt, they will be considered admissible.

- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 can take ECON 3EE3 only if they achieved a grade of at least B+ in an alternative statistics course. There is no such grade requirement for ECON 3E03. See ECON 3EE3 in the Course Listings section of this Calendar for a list of recognized alternative statistics courses.
- Seats in the Level 1 Computer Science courses are limited. For those students in Economics 1 who hope to be eligible for admission to the Honours Economics & Computer Science program in Level II, the Department of Economics has a pre-registration ballot for a limited number of seats for COMPSCI 1JC3;and 1MD3. Economics 1 students who are unsuccessful enrolling in these courses on their own may submit a ballot to the Department of Economics by July 1st. The ballot will be available on the Department of Economics website.
- COMPSCI 1DM3 and 1XC3 must be completed by the end of Level II.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

OR

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 6* above)

6 UNITS

- COMPSCI 1DM3 - Discrete Mathematics for Computer Science
- COMPSCI 1XC3 - Computer Science Practice and Experience: Development Basics

(See *Note 5* above.)

6 UNITS

- ECON 4F03 - Methods of Inquiry in Economics
- ECON 4A03 - Honours Economic Analysis

or

- ECON 4FF3 - Research Methods in Economics
- ECON 4AA3 - Economic Specialist Seminar

18 UNITS

Levels II, III, IV Economics with **no more than six units from** the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 2* above.)

18 UNITS

from

- COMPSCI 2AC3 - Automata and Computability
- COMPSCI 2C03 - Data Structures and Algorithms
- COMPSCI 2DB3 - Databases
- COMPSCI 2GA3 - Computer Architecture
- COMPSCI 2LC3 - Logical Reasoning for Computer Science
- COMPSCI 2ME3 - Introduction to Software Development
- COMPSCI 2SD3 - Concurrent Systems
- COMPSCI 2XC3 - Computer Science Practice and Experience: Algorithms and Software Design

9 UNITS

from

- COMPSCI 3AC3 - Algorithms and Complexity
- COMPSCI 3MI3 - Principles of Programming Languages
- COMPSCI 3N03 - Computer Networks and Security
- COMPSCI 3SH3 - Computer Science Practice and Experience: Operating Systems
- COMPSCI 3TB3 - Syntax-Based Tools and Compilers
- COMPSCI 4HC3 - Human Computer Interfaces
- COMPSCI 4WW3 - Web Systems and Web Computing

3 UNITS

- Levels III or IV Computer Science except COMPSCI 4ZP6 A/B

6 UNITS

- STATS 2D03 - Introduction to Probability
- STATS 2MB3 - Statistical Methods and Applications

or

- ECON 3EE3 - Econometrics I (or ECON 3E03)
- ECON 2B03 - Analysis of Economic Data

(See *Notes 2 and 3* above.)

12 UNITS

- Electives

HONOURS ECONOMICS AND MATHEMATICS (B.A.)

Admission

Completion of any Level I program and a Grade Point Average of at least 5.0 including an average of at least 5.0 in ECON 1B03 and 1BB3; and successful completion of one of MATH 1A03, 1LS3 or 1X03 and one of MATH 1AA3, 1LT3, or 1XX3 with a grade of at least C+ *(see Note 3 below)*; and MATH 1B03. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- **Alternate admission requirements:**
- **For students enrolled in Level II or III of BA Economics**, admission to Levels II, III and IV of Honours Economics programs requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03 and 2YY3. **Students enrolled in Levels II or III of BA Economics cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3).**
- **For students in another program beyond Level I**, admission to

Levels II, III and IV of Honours Economics programs normally requires a minimum GPA of 5.0 and an average of at least 5.0 in ECON 2Z03, 2ZZ3, and two of 2H03, 2HH3, 2Y03 and 2YY3. **Students cannot gain admission to Honours Economics programs by upgrading ECON 1B03 (or 1BX3) or 1BB3 (or 1BA3). However, if a student enrolled in Level II or above of another program has a minimum GPA of 5.0 and has completed ECON 1B03 and 1BB3 with an average of at least 5.0 on their first attempt, they will be considered admissible.**

- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 can take ECON 3EE3 only if they achieved a grade of at least B+ in an alternative statistics course. See ECON 3EE3 in the *Course Listings* section of this Calendar for a list of recognized alternative statistics courses.
- Neither ECON 2B03, 3E03 nor 3EE3 can be used to satisfy these required units.
- Neither STATS 2D03 nor 2MB3 can be used to satisfy these required units.
- MATH 1B03 must be completed by the end of Level II. Completion in Level I is strongly recommended. It is also recommended that students consider completing MATH 1C03 prior the end of Level II.
- Students seeking admission to the program should note that MATH 1A03 and 1AA3 were designed for Chemical & Physical Science Gateway students and MATH 1LS3 and 1LT3 were developed for Life Sciences or Earth & Environmental Sciences Gateway students. MATH 1A03 and 1AA3 prepare students for a wide variety of upper year math courses. MATH 1LS3 and 1LT3 prepare students for many (but not all) upper year mathematics courses. As a result, students who take 1LS3 and 1LT3 are permitted to enroll in upper year courses, but some self-study of first year calculus topics (such as series and additional integration topics) may be required.
- It is recommended that MATH 1C03 be completed in Level 1.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 9* above)

6 UNITS

- ECON 4F03 - Methods of Inquiry in Economics *and*
- ECON 4A03 - Honours Economic Analysis

or

- ECON 4FF3 - Research Methods in Economics *and*
- ECON 4AA3 - Economic Specialist Seminar

12 UNITS

from Levels II, III, IV Economics **with no more than six units from** the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 2* above.)

0-3 UNITS

- MATH 1C03 - Introduction to Mathematical Reasoning (if not completed in Level 1)

3 UNITS

- MATH 2C03 - Introduction to Differential Equations

3 UNITS

from

- MATH 2MC3 - Multivariable Calculus
- MATH 2XA3 - Vector Calculus I
- MATH 2X03
- MATH 2XX3

3 UNITS

from

- MATH 2LA3 - Applications of Linear Algebra
- MATH 2R03 - Theory of Linear Algebra

6 UNITS

from

- MATH 3A03 - Real Analysis I
- MATH 3IA3 - Introduction to Analysis
- MATH 3X03 - Complex Analysis I
- MATH 3CF3 - Theory of Complex Functions
- MATH 3CV3 - Basic Complex Variables

15 UNITS

from

- Levels II, III, IV Mathematics, Statistics with **no more than six units** at Level II.

12 UNITS

- six units from ECON 2B03, ECON 3EE3
- six units from Levels III-IV Mathematics or Statistics

or

- six units from STATS 2D03, STATS 2MB3
- six units from Levels III-IV Economics

(See *Note 2 and 3* above.)

15-18 UNITS

- Electives

HONOURS ECONOMICS CO-OP (B.A.)

Admission

Enrollment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including an average of at least 5.0 in ECON 1B03 and ECON 1BB3 and completion of one of ECON 1ME3, MATH 1MM3, 1A03,

1LS3. Preference will be given to applicants currently in a Level I program. For continuation in program, see the section on *Minimum Requirement for Entering and Continuing in a Program Beyond Level I*.

Admission Notes

- Students who intend to apply for this program option must follow the application instructions as found on the Social Sciences Co-op web site. Students who are unable to access this web site must consult the Social Sciences Co-op team in the Office of the Associate Dean Academic prior to the application deadline.
- All applications for admission to the Co-op program option are considered annually and must be made directly to the Social Sciences Co-op team by March 1 for the Fall/Winter term.
- Applications that are submitted after the March 1 deadline will not be considered.
- Offers of acceptance cannot be deferred.
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL0 or 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of Social Sciences 2JS1 and eligibility for job search access.
- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03. Students with prior credit in a statistics course recognized as an alternative to ECON 2B03 are exempt from this requirement. Those students can take ECON 3EE3 only if they achieved a grade of at least B+ in an alternative statistics course. There is no such grade requirement for ECON 3E03. See ECON 3EE3 in the *Course Listings* section of this Calendar for a list of recognized alternative statistics courses.
- Students interested in an M.A. in Economics should take ECON 3EE3 and consider the Specialist Option.
- MATH 1MM3 (or 1M03) is required for any student planning to transfer into Commerce and strongly recommended for any student with a Minor in Business or Finance.
- For students who have completed ECON 2H03 but did not successfully complete ECON 2HH3, they may substitute ECON 2Y03 in place of ECON 2HH3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program. (See *Admission* above.)

6 UNITS

- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2ZZ3 - Intermediate Microeconomics II

3 UNITS

- SOCSCI 2EL3 - Career Preparation in the Social Sciences

6 UNITS

- ECON 2B03 - Analysis of Economic Data
- ECON 4A03 - Honours Economic Analysis

(See *Note 7* above)

6 UNITS

- ECON 2H03
- ECON 2HH3
- ECON 2Y03 - Intermediate Macroeconomics I

or

- ECON 2Y03 - Intermediate Macroeconomics I
- ECON 2YY3 - Intermediate Macroeconomics II

(See *Note 10* above)

24 UNITS

Levels II, III, IV Economics with no more than six units from the following courses

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 7* above.)

3 UNITS

from

- ECON 3EE3 - Econometrics I
- ECON 3E03 - Applied Econometrics

(See *Notes 7* and *8* above.)

3 UNITS

from

- ECON 4F03 - Methods of Inquiry in Economics
- ECON 4FF3 - Research Methods in Economics

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

WORK TERMS

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

36 UNITS

- Electives. Note: The number of units of Economics courses above Level I (excluding ECON 2B03, 3E03 and 3EE3) must not exceed 60

Bachelor of Arts

ECONOMICS (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 and an average of at least 4.0 in ECON 1B03 and 1BB3.

Notes

- COMMERCE 2FA3 may be substituted for ECON 2I03 and COMMERCE 2QA3 may be substituted for ECON 2B03.
- **Alternate admission to the B.A. Economics program requires a Cumulative Average of at least 3.5 including an average of at least 4.0 in ECON 2Z03, 2H03 (or 2Y03).**
- Students who have not completed ECON 1ME3 are recommended to complete one of Grade 12 Mathematics of Data Management, STATS 1LL3, STATS 1L03, or COMMERCE 1DA3.
- MATH 1MM3, MATH 1A03, or MATH 1LS3 may be substituted for ECON 1ME3.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- ECON 1ME3 - Introduction to Mathematical Economics
- ECON 2Z03 - Intermediate Microeconomics I
- ECON 2B03 - Analysis of Economic Data

(See *Note 1* above)

3 UNITS

- ECON 2H03
- ECON 2Y03 - Intermediate Macroeconomics I

15 UNITS

Levels II, III, IV Economics with **no more than six units from** the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Note 1* above.)

33-36 UNITS

- Electives. (Note: The number of units of Economics courses above Level I (excluding ECON 2B03, 3E03, 3EE3) must not exceed 36.)

Minor(s):

MINOR IN ECONOMICS

Notes

- Although ECON 2Z03 and 2H03 (or 2Y03) are not required for the Minor in Economics, most Level III and IV Economics courses have at least one of these courses as a prerequisite.
- COMMERCE 2FA3 may be substituted for ECON 2I03.
- COMMERCE 1DA3 may be substituted for 3 units of Level II, III, IV Economics courses.
- COMMERCE 2QA3 (or another Statistics course equivalent to ECON 2B03) may be substituted for ECON 2B03.
- ECON 2CC3 may not be used to satisfy a minor in Economics.
- Students who are presenting ARTSSCI 2E03 must complete 21 units from Level II, III, IV Economics courses.
- In order to declare a Minor in Economics, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

Level 1 Economics

- ECON 1B03 - Introductory Microeconomics (or 1BX3) *and*
- ECON 1BB3 - Introductory Macroeconomics (or 1BA3)

or

- ARTSSCI 2E03 - Economics: Principles and Policy

18-21 UNITS

Levels II, III, IV Economics with **no more than six units from** the following courses:

- ECON 2A03 - Economics of Labour-Market Issues
- ECON 2C03
- ECON 2D03 - Economic Issues
- ECON 2E03
- ECON 2F03
- ECON 2I03 - Financial Economics
- ECON 2J03 - Environmental Economics
- ECON 2N03 - Public Policy Toward Business
- ECON 2P03 - Economics of Professional Sports
- ECON 2Q03 - Economics of Bad Behaviour
- ECON 2T03 - Economics of Trade Unionism and Labour

(See *Notes* above.)

School of Earth, Environment & Society (Faculty of Social Sciences)

http://sees.mcmaster.ca

Environment & Society Subfields

(Applicable to all Environment & Society programs)
Environment & Society programs at McMaster are interdisciplinary in nature, drawing from Human Geography, Environmental Studies, Geographic Information Science, and Urban Studies. Environment & Society courses reflect this interdisciplinarity and encompass five major subfields or themes: Economic Development, Environment and Sustainability, Geographic Information Science (GIS) & Spatial Analysis, Health & Population, and Urban Geography & Planning. It should be noted that each subfield has its own sequence of courses and prerequisites (See the *Course Listings* section of this Calendar). Students can elect to take some or all of the upper- level courses from different

subfields.

- **Economic Geography:** ENVSOCTY 2LE3, ENVSOCTY 3LT3, ENVSOCTY 4LE3, ENVSOCTY 4LP3, ENVSOCTY 4LW3
- **Environmental Issues & Policy:** ENVSOCTY 2EI3, ENVSOCTY 2EK3, ENVSOCTY 3EC3, ENVSOCTY 3EE3, ENVSOCTY 3EG3, ENVSOCTY 3ER3, ENVSOCTY 4EA3, ENVSOCTY 4ET3, ENVSOCTY 4HH3
- **Geographic Information Systems (GIS) & Spatial Analysis:** ENVSOCTY 2GI3, ENVSOCTY 3GI3, ENVSOCTY 3GV3, ENVSOCTY 3SR3, ENVSOCTY 4GA3, ENVSOCTY 4GS3, ENVSOCTY 4GT3, ENVSOCTY 4SR3
- **Health & Population:** ENVSOCTY 2HI3, ENVSOCTY 3HP3, ENVSOCTY 4HC3, ENVSOCTY 4HD3, ENVSOCTY 4HH3
- **Urban Geography & Planning:** ENVSOCTY 2UI3, ENVSOCTY 3UP3, ENVSOCTY 3UR3, ENVSOCTY 3UW3, ENVSOCTY 4UD3, ENVSOCTY 4US3

Other Courses

Courses not distinguished by subfield include core courses such as research methods, statistics, field courses, internship opportunities and capstone experiences, as well as a broad suite of regional and topical courses.

- **Core (Research Methods, Field Courses, Internships, and Capstone):** ENVSOCTY 3MA3, ENVSOCTY 3MB3, GEOG 3ME3, ENVIRSC 3ME3, ENVSOCTY 3MF3, ENVSOCTY 3MI3, ENVSOCTY 4MF3, ENVSOCTY 4MS3, ENVSOCTY 4MT6 A/B
- **Regional Geography:** ENVSOCTY 2OC3, ENVSOCTY 2RC3, ENVSOCTY 2RU3, ENVSOCTY 2RW3, ENVSOCTY 3RW3
- **Topics in Geography:** ENVSOCTY 2TF3, ENVSOCTY 2TS3, ENVSOCTY 3TG3, ENVSOCTY 4UF3

In planning a program, it is important for students to take note of the prerequisites for certain upper-level courses. Further, not every Environment & Society course listed above is offered every year. For course availability, students are advised to consult "*Class Search*" on Mosaic or contact the School of Earth, Environment & Society after April 1st for the list of courses that will be offered in the following academic year.

For additional information regarding Environmental Science, please see the *School of Earth, Environment & Society (Faculty of Science)* section of this calendar.

Bachelor of Arts (Honours)

COMBINED HONOURS IN ENVIRONMENT & SOCIETY AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ENVSOCTY 1HA3 or ENVSOCTY 1HB3, and satisfaction of admission requirements for the Honours program in the other B.A. subject (See *Note 1* and *4* below). For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty of Social Sciences, with programs in the Faculty of Humanities and with the Arts & Science Program.
- Not every Environment & Society course listed in this Calendar is offered every year. For course availability, students are advised to consult "*Class Search*" on Mosaic or contact the School of Earth, Environment & Society after April 1st for the list of courses that will be offered in the following academic year.
- Students are strongly encouraged to check prerequisites of upper-level Environment & Society courses and to speak with an Undergraduate Advisor in the School of Earth, Environment & Society regarding course selection.
- ENVSOCTY 1HA3 and ENVSOCTY 1HB3 must be completed by the end of 60 units.
- Students intending to enrol in ENVSOCTY 4MT6 A/B must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of their permission to register in ENVSOCTY 4MT6 A/B on April 15. Registration in this course is conditional upon achieving a GPA of at least 7.5.
- Students interested in completing courses in the Geographic Information Systems (GIS) & Spatial Analysis subfield are strongly encouraged to complete MATH 1K03; if a Grade 12 Mathematics U was not completed.
- Students interested in taking courses in Environmental Science and/or Earth Science subfields are strongly encouraged to complete ENVIRSC 1C03 and/or EARTHSC 1G03.
- With permission from an Undergraduate Advisor in the School of Earth, Environment & Society, students enrolled in a combined Honours Environment & Society program may substitute ENVSOCTY 3MA3 and/or ENVSOCTY 3MB3 with an equivalent research methods and/or statistics course from the other subject.
- The Combined Honours Environment & Society program requires students to take one field methods course (ENVIRSC 3ME3 or ENVSOCTY 3MF3). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to decide which of these courses best fits their area of academic interest.
- The field components of ENVIRSC 3ME3 and ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

LEVEL I: 30 UNITS

30 units

from

- the Level I program completed prior to admission to the program

(See *Admission* above.)

LEVELS II TO IV: 90 UNITS

6 units

- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems

6 units

- ENVSOCTY 3MA3 - Research Methods
- ENVSOCTY 3MB3 - Data Analysis

(See *Note 8* above.)

3 units

- ENVIRSC 3ME3 - Environmental Field Camp
- ENVSOCTY 3MF3 - Urban Field Camp

(See *Notes 9* and *10* above.)

9 units

- Level II ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 7* above.)

15 units

- Level III or IV ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 7* above.)
36 units
- Courses specified for the other subject

0-3 units
0-3 units
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Note 4)*
12-15 units
- Electives

HONOURS ENVIRONMENT & SOCIETY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ENVSOCTY 1HA3 or ENVSOCTY 1HB3 (see *Note 3* below). For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Not every Environment & Society course listed in this Calendar is offered every year. For course availability, students are advised to consult "Class Search" on Mosaic or contact the School of Earth, Environment & Society after April 1st for the list of courses that will be offered in the following academic year.
- Students are strongly encouraged to check the prerequisites of upper-level Environment & Society courses and to speak with an Undergraduate Advisor in the School of Earth, Environment & Society regarding course selection.
- ENVSOCTY 1HA3 or ENVSOCTY 1HB3 must be completed by the end of 60 units.
- Students intending to register in ENVSOCTY 4MT6 A/B must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of their permission to register in ENVSOCTY 4MT6 A/B on April 15. Registration in this course is conditional upon achieving a GPA of at least 7.5.
- Students interested in completing courses in the Geographic Information Systems (GIS) & Spatial Analysis subfield are strongly encouraged to complete MATH 1K03; if a Grade 12 Mathematics U was not completed.
- Students interested in taking courses in Environmental Science and/or Earth science subfields are strongly encouraged to complete ENVIRSC 1C03 and/or EARTHSC 1G03.
- The Honours Environment & Society program requires students to take one field methods course (ENVIRSC 3ME3 or ENVSOCTY 3MF3). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to decide which of these courses best fits their area of academic interest.
- The field components of ENVIRSC 3ME3 and ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.
- The School of Earth, Environment & Society encourages students to embrace academic breadth in both knowledge and skills. As such, a minimum of 6 units of the 39 elective units (above Level I) must be taken from outside of the School of Earth, Environment & Society.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

LEVEL I: 30 UNITS
30 units
from
- the Level I program completed prior to admission to the program

(See *Admission* above.)

LEVEL II: 30 UNITS
6 units
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems

12 units
- Level II ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 6* above.)
0-3 units
0-3 units
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Note 3)*
9-12 units
- Electives

(See *Note 9* above.)

LEVELS III: 30 UNITS
6 units
- ENVSOCTY 3MA3 - Research Methods
- ENVSOCTY 3MB3 - Data Analysis

3 units
- ENVIRSC 3ME3 - Environmental Field Camp
- ENVSOCTY 3MF3 - Urban Field Camp

(See *Notes 7* and *8* above.)
12 units
- Level III ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 6* above.)
9 units
- Electives

(See *Note 9* above.)

LEVEL IV: 30 UNITS
12 units
- Level IV ENVSOCTY, EARTHSC, ENVIRSC

18 units
- Electives

(See *Note 9* above.)

HONOURS ENVIRONMENT & SOCIETY CO-OP (B.A.)

Admission

Enrollment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of ENVSOCTY 1HA3 or ENVSOCTY 1HB3 (see *Note 9* below). Preference will be given to applicants currently in a Level I program. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Information about this program and about co-op policies and procedures can be obtained from the Social Sciences Co-op team in the Office of the Associate Dean Academic.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.

- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- Not every Environment & Society course listed in this Calendar is offered every year. For course availability, students are advised to consult "Class Search" on Mosaic or contact the School of Earth, Environment & Society after April 1st for the list of courses that will be offered in the following academic year.
- Students are strongly encouraged to check the prerequisites of upper-level Environment & Society courses and to speak with an Undergraduate Advisor in the School of Earth, Environment & Society regarding course selection.
- Both ENVSOCTY 1HA3 and ENVSOCTY 1HB3 must be completed by the end of 60 units.
- Students intending to register in ENVSOCTY 4MT6 A/B must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of their permission to register in ENVSOCTY 4MT6 A/B on April 15. Registration in this course is conditional upon achieving a GPA of at least 7.5.
- Students interested in completing courses in the Geographic Information Systems (GIS) & Spatial Analysis subfield are strongly encouraged to complete MATH 1K03; if a Grade 12 Mathematics U was not completed.
- Students interested in taking courses in Environmental Science and/or Earth science subfields are strongly encouraged to complete ENVIRSC 1C03 and/or EARTHSC 1G03.
- The Honours Environment & Society program requires students to take one field methods course (ENVIRSC 3ME3;or ENVSOCTY 3MF3). All students are encouraged to meet with the academic program advisor in the School of Earth, Environment & Society to decide which of these courses best fits their area of academic interest.
- The field components of ENVIRSC 3ME3 and ENVSOCTY 3MF3 are normally taken outside of the normal term. Details are announced in March.
- The School of Earth, Environment & Society encourages students to embrace academic breadth in both knowledge and skills. As such, a minimum of 6 units of the 39 elective units (above Level I) must be taken from outside of the School of Earth, Environment & Society.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS
- the Level I program completed prior to admission to the program

(See *Admission* above.)

0-3 UNITS
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Note 9)*

12 UNITS
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3MA3 - Research Methods
- ENVSOCTY 3MB3 - Data Analysis

3 UNITS
- SOCSCI 2EL3 - Career Preparation in the Social Sciences

3 UNITS
- ENVIRSC 3ME3 - Environmental Field Camp
- ENVSOCTY 3MF3 - Urban Field Camp

(See *Notes 13* and *14* above.)

12 UNITS
- Level II ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 12* above.)

12 UNITS
- Level III ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 12* above.)

12 UNITS
- Level IV ENVSOCTY, EARTHSC, ENVIRSC

33-36 UNITS
- Electives

(See *Note 15* above.)

3 UNITS
- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

Work Terms:

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

Bachelor of Arts

ENVIRONMENT & SOCIETY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including a grade of C- 4.0 in one of ENVSOCTY 1HA3 or ENVSOCTY 1HB3. (See *Note 3* below.)

Notes

- Not every Environment & Society course listed in this Calendar is offered every year. For course availability students are advised to consult "*Class Search*" on Mosaic or contact the School of Earth, Environment & Society after April 1st for the list of courses that will be offered in the following academic year.
- Students are strongly encouraged to check prerequisites of upper-level Environment & Society courses and to speak with an Undergraduate Academic Advisor in the School of Earth, Environment & Society regarding course selection.
- ENVSOCTY 1HA3 and ENVSOCTY 1HB3 must be completed by the end of 60 units.

- Students interested in completing courses in the Geographic Information Systems (GIS) & Spatial Analysis subfield are strongly encouraged to complete MATH 1K03; if a Grade 12 Mathematics U was not completed.
- Students interested in taking courses in Environmental Science and/or Earth Science subfields are strongly encouraged to complete ENVIRSC 1C03 and/or EARTHSC 1G03.
- The School of Earth, Environment & Society encourages students to embrace academic breadth in both knowledge and skills. As such, a minimum of 6 units of the 36 elective units (above Level I) must be taken from outside of the School of Earth, Environment & Society.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

LEVEL 1: 30 UNITS

30 units

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

LEVEL II AND III: 60 UNITS

12 units

- Level II ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 5* above.)

12 units

- Level III or IV ENVSOCTY, EARTHSC, ENVIRSC

(See *Note 5* above.)

0-3 units

- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development

(See *Note 3)*

33-36 units

- Electives

(See *Note 6* above.)

Institute on Globalization and the Human Condition

https://globalization.mcmaster.ca/

Faculty as of January 1, 2025

DIRECTOR

Rachel Zhou

Please visit the *Interdisciplinary Minors and Thematic Areas* section of this calendar for information on the Interdisciplinary Minor in Globalization Studies.

Department of Health, Aging and Society

https://healthagingandsociety.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Michel Grignon

PROFESSORS

Gavin Andrews/B.A. *(Wales)*, Ph.D. *(Nottingham)*

James Dunn/B.Arts. Sc., M.A. *(McMaster)*, Ph.D. *(Simon Fraser)*

Michel Grignon/*(Economics)* M.A. *(ENSAE)*, Ph.D. *(EHESS)*

Anthea Innes/B.A., M.Sc. *(Stirling)*, Ph.D. *(Bradford)*

Lydia Kapiriri/M.D. *(Makerere, Uganda)*, MPH *(KIT, Amsterdam)*, M.Med PH *(Makerere)*, Ph.D. *(Bergen, Norway)*

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Y. Rachel Zhou/*(Institute on Globalization and the Human Condition)* B.A., LLM *(Wuhan, China)*, M.A., Ph.D. *(Toronto)*

ADJUNCT PROFESSOR

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Jason Powell/*(MILE)* B.A., M.A., *(Liverpool)*, Ph.D. *(John Moores)*

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James Gillett/B.A. *(Calgary)*, M.A., Ph.D. *(McMaster)*

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Randy Jackson/*(Social Work)* B.A. *(Ottawa)*, M.A. *(Manitoba)*

Tara Marshall/*(Social Psychology)* B.A. *(Queen's)*, M.A., Ph.D. *(Toronto)*

Mat Savelli/*(Arts & Science)* B.A *(McMaster)*, M.Sc., D.PhiI. *(Oxford)*

Geraldine Voros/B.A. *(Guelph)*, M.A. *(McMaster)*

ADJUNCT ASSOCIATE PROFESSOR

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Fran Scott/*(MIHE)*, B.Sc. *(Toronto)*, M.D. *(McMaster)*, M.Sc. *(McMaster)*

ASSISTANT PROFESSORS

Sarah Clancy/*(Social Psychology)* B.A. *(McMaster)*, M.A. *(Guelph)*, Ph.D. *(McMaster)*

Nicole Dalmer/B.Sc. *(Alberta)*, MLIS *(Alberta)*, Ph.D. *(Western)*

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Michelle Wyndham-West/*(OCAD) B.A. (York), M.A. (Toronto), Ph.D. (York)*

ASSOCIATE MEMBERS

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David Clark/*(English and Cultural Studies)* B.A., M.A., Ph.D. *(Western Ontario)*

Jeremiah E. Hurley/*(Economics)* B.A. *(John Carroll)*, M.A., Ph.D. *(Wisconsin-Madison)*

Nick Kates/*(Psychiatry and Behavioural Neurosciences)* B.Med. *(University of London)*, MCFP

Tina Moffat/*(Anthropology)* B.Sc. *(Toronto)*, B.A., Ph.D. *(McMaster)*

Allison Williams/*(School of Earth, Environment, and Society)* B.A. *(Bishop's)*, M.A. *(Toronto)*, Ph.D. *(York)*

Marisa Young/*(Sociology)* B.A., M.A., *(Calgary)*, Ph.D. *(Toronto)*

ADJUNCT LECTURER

Vanessa Mariadraga Rivas/MScN *(McMaster)*

For the Honours Arts & Science and Health Studies program (B.Arts.Sc.), see *Arts & Science Program)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN AGING AND SOCIETY AND ANOTHER SUBJECT (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1BB3 and satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.
- HLTHAGE 1AA3 - Introduction to Health and Society or HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society must be completed by the end of 60 units.
- Students are strongly encouraged to complete HLTHAGE 2A03 and 3B03 or 3G03 to satisfy the Research Methods requirement of the degree, but may complete the Research Methods course(s) as required by the other subject and replace these with equal units of Health, Aging and Society or *Course List* courses.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units, comprised of 3 units from 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03, 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03, and 6 units of 4Z06 A/B. Otherwise, they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03, and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above.)

9 UNITS

- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

(See *Note 4* above.)

3-6 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics
- in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.

3 UNITS

- HLTHAGE 3L03 - Embodied Aging

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments

- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units

- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 5* above.)

6 UNITS

from

- *Course List* or Health, Aging and Society

36 UNITS

- Courses as specified for the other subject

0-3 UNITS

from

- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

(if not completed in Level 1; see *Note 3)*

6-15 UNITS

- Electives

Course List

- ANTHROP 2HI3 - Medical Anthropology
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3D03 - Labour Economics
- ECON 3Q03 - The Economics of Aging
- ECON 3Z03 - Health Economics
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 3AG3 - Aging
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 4L03
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCIOL 3X03
- SOCIOL 3CC3
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3

or other designated and approved courses. (See Note 2 *above.)*

COMBINED HONOURS IN HEALTH AND SOCIETY AND ANOTHER SUBJECT (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0, including a grade of at least C in HLTHAGE 1AA3 or 1ZZ3 and satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- HLTHAGE 1BB3 - Introduction to Aging and Society must be completed by the end of 60 units.
- Students are strongly encouraged to complete HLTHAGE 2A03 and 3B03 or 3G03 to satisfy the Research Methods requirement of the degree, but may complete the Research Methods course(s) as required by the other subject and replace these with equal units of Health, Aging and Society or *Course List* courses.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units, comprised of 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03; 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03; and 6 units of 4Z06 A/B. Otherwise, they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03; and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society. See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research
- (See *Note 3* above.)

3-6 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics

or

- In combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject

3 UNITS

- HLTHAGE 3AA3 - State, Civil Society and Health

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
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- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units
- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 4* above.)

6 UNITS

from
- *Course List* or Health, Aging and Society

36 UNITS
- courses specified for the other subject

0-3 UNITS
- HLTHAGE 1BB3 - Introduction to Aging and Society

(if not completed in Level I see *Note 2)*

6-15 UNITS
- Electives

Course List

Students are responsible for ensuring that course prerequisites are fulfilled.
- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4S03 - The Anthropology of Infectious Disease
- ECON 3Z03 - Health Economics
- ENGLISH 3NH3 - Narratives of Health
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 4HC3 - Public and Community Health
- ENVSOCTY 4HH3 - Environment and Health
- HISTORY 3CP3
- HTHSCI 2G03 - Statistics & Epidemiology 1
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3B03 - Special Populations
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3O03 - Social Work and Sexualities
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness

(See *Note 5* above.)

HONOURS AGING AND SOCIETY (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1BB3. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- HLTHAGE 1AA3 - Introduction to Health and Society or HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society must be completed by the end of 60 units.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units comprised of 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03; 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03; and 6 units of HLTHAGE 4Z06 A/B. Otherwise they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03; and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society. See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from
- the Level I program completed prior to admission to the program (See Admission above.)

9 UNITS
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS
- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from
- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS
- SOCSCI 2J03 - Introduction to Statistics

3 UNITS
- HLTHAGE 3L03 - Embodied Aging

3 UNITS

from
- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life

- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units

- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 3* above.)

15 UNITS

from

- *Course List* or Health, Aging and Society

0-3 UNITS

from

- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

(See *Note 2* above.)

36-42 UNITS

- Electives, of which at least six units must be taken from outside of Health, Aging & Society

Course List

- ANTHROP 2HI3 - Medical Anthropology
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3D03 - Labour Economics
- ECON 3Q03 - The Economics of Aging
- ECON 3Z03 - Health Economics
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 2HI3 - Health and Place
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 3AG3 - Aging
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCIOL 3X03
- SOCIOL 3CC3
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3

or other designated and approved courses. (See Note 4 *above.)*

HONOURS AGING AND SOCIETY CO-OP (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1BB3. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations. Information about this program and about co-op policies and procedures can be obtained from the Social Sciences Co-op team in the Office of the Associate Dean Academic.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- HLTHAGE 1AA3 - Introduction to Health and Society or HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society must be completed by the end of 60 units.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units comprised of 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03, 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03, and 6 units of 4Z06 A/B. Otherwise they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4C03, 4H03, 4I03, 4L03, 4N03, 4P03, 4U03, 4W03, and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society. See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program (See Admission above.)

9 UNITS

- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS

- SOCSCI 2EL3 - Career Preparation in the Social Sciences

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

- HLTHAGE 3L03 - Embodied Aging

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness

- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units

- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 9* above.)

15 UNITS

from

- *Course List* or Health, Aging and Society

0-3 UNITS

- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

(See *Note 8* above.)

33-39 UNITS

- Electives, of which at least six units must be taken from outside of Health, Aging & Society

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

Work Terms:

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

Course List

- ANTHROP 2HI3 - Medical Anthropology
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3D03 - Labour Economics
- ECON 3Q03 - The Economics of Aging
- ECON 3Z03 - Health Economics
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 3AG3 - Aging
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCIOL 3CC3
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- SOCIOL 3X03

or other designated and approved courses. (See Note 10 *above.)*

HONOURS AGING AND SOCIETY SPECIALIZATION IN MENTAL HEALTH AND ADDICTION (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1BB3 and a grade of at least C in HLTHAGE 1CC3. HLTHAGE 1AA3 or HLTHAGE 1ZZ3 must be completed by the end of 60 units. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I.*

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.

- Students may take a maximum of 9-12 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4H03, 4I03, 4J03, 4L03, 4N03, 4O03, 4P03, 4Q03, 4U03, 4W03, 4Z06 A/B.
- HLTHAGE 1AA3 - Introduction to Health and Society or HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society **must** be completed by the end of 60 units.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.

Requirements

120 *units total (Levels I to IV), of which 48 units may be Level I*

30 UNITS

from

- Level I program completed prior to admission to the program (See *Admission* above.)

9 UNITS

from

- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2F03 - Aging and Health Care Systems

9 UNITS

from

- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

6 UNITS

from

- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health

3 UNITS

- HLTHAGE 3L03 - Embodied Aging

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

6 UNITS

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness

12 UNITS

from

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ART 2AA3 - Introduction to the Practice of Art Therapy
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing
- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HTHSCI 3MH3 - Critical Examination of Mental Health
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PHILOS 3MI3 - Philosophy of Mind
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3BA3 - Positive Psychology
- SCAR 2MT3 - Asian Meditation Traditions
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCPSY 3A03 - Mental Health
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

(See *Note 4* above.)

3 OR 6 UNITS

As outlined below:

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

6 units

- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

0-3 UNITS

from

- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

(if not completed in Level I; see *Note 3* above.)

30 UNITS

- Electives, of which no more than 15 units may be from Health, Aging and Society (the maximum Health, Aging and Society courses to be taken is 72). Electives will be reduced by 3 units if students opt to take HLTHAGE 4Z06.

HONOURS HEALTH AND SOCIETY (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1AA3 or HLTHAGE 1ZZ3. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units, comprised of 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03; 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03; and 6 units of HLTHAGE 4Z06 A/B. Otherwise, they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03; and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.
- HLTHAGE 1BB3 - Introduction to Aging and Society must be completed by the end of 60 units.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

- HLTHAGE 3AA3 - State, Civil Society and Health

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples

Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units
- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 3* above.)

15 UNITS

from
- *Course List* or Health, Aging and Society

0-3 UNITS
- HLTHAGE 1BB3 - Introduction to Aging and Society

(If not completed in Level 1; see *Note 4* above.)

36-42 UNITS
- Electives, of which at least six units must be taken from outside of Health, Aging & Society

Course List

Students are responsible for ensuring that course prerequisites are fulfilled.
- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3Z03 - Health Economics
- ENGLISH 3NH3
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 4HC3 - Public and Community Health
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 2G03 - Statistics & Epidemiology 1
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3B03 - Special Populations
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3O03 - Social Work and Sexualities
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World

(See *Note 2* above.)

HONOURS HEALTH AND SOCIETY CO-OP (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1AA3 or HLTHAGE 1ZZ3. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.
- Students who register in HLTHAGE 4Z06 A/B may take a maximum of 12 units, comprised of 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03, 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03, and 6 units of 4Z06 A/B. Otherwise, they may take a maximum of 9 units, comprised of 6 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03, and 3 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4H03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4W03.
- HLTHAGE 1BB3 - Introduction to Aging and Society must be completed by the end of 60 units.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2F03 - Aging and Health Care Systems

3 UNITS

- SOCSCI 2EL3 - Career Preparation in the Social Sciences

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

- HLTHAGE 3AA3 - State, Civil Society and Health

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

9 OR 12 UNITS

As outlined below:

9 units

6 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples

Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

or

12 units

3 units

from
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

3 units

from
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging
- HLTHAGE 4W03 - Selected Issues in Aging and Society

6 units
- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

(See *Note 9* above.)

15 UNITS

from
- *Course List* or Health, Aging and Society

0-3 UNITS
- HLTHAGE 1BB3 - Introduction to Aging and Society

(If not completed in Level 1; see *Note 10* above.)

33-39 UNITS
- Electives, of which at least six units must be taken from outside of Health, Aging & Society

3 UNITS
- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

Work Terms:

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

Course List

Students are responsible for ensuring that course prerequisites are fulfilled.
- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3Z03 - Health Economics
- ENGLISH 3NH3
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 4HC3 - Public and Community Health
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 2G03 - Statistics & Epidemiology 1
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3B03 - Special Populations
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3O03 - Social Work and Sexualities
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World

(See *Note 8* above.)

HONOURS HEALTH AND SOCIETY SPECIALIZATION IN MENTAL HEALTH AND ADDICTION (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a minimum Grade Point Average of 5.0 including a grade of at least C in HLTHAGE 1AA3 or 1ZZ3 and a grade of at least C in HLTHAGE 1CC3. HLTHAGE 1BB3 must be completed by the end of 60 units. For continuation in the program, see *General Academic Regulations*.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- Students may take a maximum of 9-12 units from HLTHAGE 4AB3, 4B03, 4BB3, 4BC3, 4C03, 4CH3, 4D03, 4F03, 4G03, 4I03, 4J03, 4N03, 4O03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4Z06 A/B.
- HLTHAGE 1BB3 - Introduction to Aging and Society must be completed by the end of 60 units.
- Courses other than those listed below in the *Course List* may be substituted with the prior permission of the Chair. Students wishing to apply for substitutions must contact the Administrator of the Department of Health, Aging and Society.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I program completed prior to admission to the program (See *Admission* above.)

9 UNITS

from

- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2F03 - Aging and Health Care Systems

9 UNITS

from

- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing

3 UNITS

- HLTHAGE 2A03 - Research Methods in Health and in Aging I

3 UNITS

from

- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

6 UNITS

from

- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health

3 UNITS

- HLTHAGE 3AA3 - State, Civil Society and Health

3 UNITS

from

- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

6 UNITS

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness

12 UNITS

from

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ART 2AA3 - Introduction to the Practice of Art Therapy
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing
- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HTHSCI 3MH3 - Critical Examination of Mental Health
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PHILOS 3MI3 - Philosophy of Mind
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3BA3 - Positive Psychology
- SCAR 2MT3 - Asian Meditation Traditions
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCPSY 3A03 - Mental Health
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

(See *Note 4* above.)

3-6 UNITS

As outlined below:

3 units

from

- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical

Environments
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HLTHAGE 4C03 - Representations of Health and Illness Across the Lifecourse
- HLTHAGE 4CH3 - Global Health Crises
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4F03 - Selected Issues in Health and Society
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4M03 - Environment and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4U03 - Professions and Occupations in Health and Aging

or

6 units
- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis

0-3 UNITS
- HLTHAGE 1BB3 - Introduction to Aging and Society

(If not completed in Level I; see *Note 3* above.)

30 UNITS
- Electives, of which no more than 15 units may be from Health, Aging and Society (the maximum Health, Aging and Society courses to be taken is 72). Electives will be reduced by 3 units if students opt to take HLTHAGE 4Z06.

Bachelor of Arts

HEALTH, AGING AND SOCIETY (B.A.)

Admission

Completion of any Level I program with a minimum Grade Point Average of 3.5 and Grade of at least C- in HLTHAGE 1AA3 or 1ZZ3 or 1BB3.

Notes

- See *Admission to Level II Programs* in the Faculty of Social Sciences Academic Regulations in this section of the Calendar.
- HLTHAGE 1AA3 (or 1ZZ3) or 1BB3 must be completed by the end of 60 units.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from
- the Level I program completed prior to admission to the program

(See *Admission* above.)

15 UNITS
- HLTHAGE 2A03 - Research Methods in Health and in Aging I
- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2F03 - Aging and Health Care Systems

6 UNITS
- HLTHAGE 3AA3 - State, Civil Society and Health
- HLTHAGE 3L03 - Embodied Aging

3 UNITS

from
- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research

3 UNITS

from
- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry

33 UNITS
- Electives, of which at least six units must be taken from outside Health, Aging & Society

Minor(s):

MINOR IN HEALTH, AGING AND SOCIETY

Notes

- Students are responsible for ensuring that course prerequisites are fulfilled.
- KINESIOL 2G03 and 3A03 may be used to satisfy Health, Aging and Society requirements for Kinesiology students pursuing a Minor in Health, Aging and Society.
- In order to declare a Minor in Health, Aging and Society, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3 UNITS

from
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society

3 UNITS
- HLTHAGE 1BB3 - Introduction to Aging and Society

18 UNITS

from
- *Course List* or Health, Aging and Society

Course List

- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4S03 - The Anthropology of Infectious Disease
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3Q03 - The Economics of Aging
- ECON 3Z03 - Health Economics
- ENGLISH 3NH3
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 4HC3 - Public and Community Health
- ENVSOCTY 4HH3 - Environment and Health
- HTHSCI 2G03 - Statistics & Epidemiology 1
- HTHSCI 3MH3 - Critical Examination of Mental Health
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany

- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PHILOS 2D03 - Bioethics
- PHILOS 3C03 - Advanced Bioethics
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3AG3 - Aging
- PSYCH 3B03 - Special Populations
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 4L03
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- SOCIOL 3CC3
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- SOCIOL 3X03
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness
- SOCPSY 3A03 - Mental Health
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World

MINOR IN MENTAL HEALTH, ADDICTION AND SOCIETY

The minor in Mental Health and Addiction provides students with opportunity to develop an in-depth understanding of the relationship between mental health, addiction, and society. It involves examining the links between mental health and wider social processes, including marginalization, the construction of deviance, and the social determinants of health. Students will also gain a solid understanding of mental illness and some of the ways in which social change and other non-biomedical interventions can be harnessed to address issues related to mental health and addiction and promote wellbeing.
Students will select courses from the Faculty of Social Sciences that address these themes, developing a strong interdisciplinary grasp on the links between mental health, addiction, and society. Beyond the required courses, students will be able to select from a wide variety of courses that cater to their own interests.
It is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions of all courses in this list. Students are encouraged to speak to their Faculty advisors about Faculty-specific rules about double-counting courses for the minor.

Requirements

24 units total

3 UNITS

- HLTHAGE 1CC3 - Introduction to Mental Health and Illness

3 UNITS

from

- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II

9 UNITS

from

- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing

3 UNITS

from

- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health

6 UNITS

from

- *Course List* (see *below.)*

Course List

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ART 2AA3 - Introduction to the Practice of Art Therapy
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing
- HLTHAGE 3AB3 - The Animal-Human Bond and Wellbeing
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HLTHAGE 4AB3 - Living Well with Dementia: Social and Physical Environments
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4Q03 - Representations of Mental Illness
- HTHSCI 3MH3 - Critical Examination of Mental Health
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PHILOS 3MI3 - Philosophy of Mind
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3BA3 - Positive Psychology
- SCAR 2MT3 - Asian Meditation Traditions
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCPSY 3A03 - Mental Health
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

Notes

- Please see the *Course Listings* section for a detailed description of the above courses.
- In order to declare a Minor in Mental Health, Addiction and Society, at least 12 units (above Level I) must be elective to degree.

Department of Indigenous Studies

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https://indigenous.mcmaster.ca
CHAIR
Robert Innes
PROFESSOR
Richard Monture/B.A., M.A., Ph.D. *(McMaster)*
ASSOCIATE PROFESSOR
Allan Downey/B.A., *(Mercyhurst)*, M.A. *(Laurier)*, Ph.D. *(Laurier)*
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Chelsea Gabel/B.A, *(Western),* M.A. *(Windsor),* Ph.D. *(McMaster)*
Robert Innes/B.A. *(Toronto)*, M.A. *(Saskatchewan)*, PhD *(Arizona)*
Renae Watchman/B.A., M.A. *(Arizona State)*, PhD *(Stanford)*
Vanessa Watts/*(Sociology),* B.A. *(Trent)*, M.A. *(Victoria)*, Ph.D. *(Queen's)*
ASSISTANT PROFESSOR
Savage Bear/B.A., B.Ed., Ph.D. *(Alberta)*
Ki'en Debicki/*(English and Cultural Studies)*, B.A. *(McMaster)*, M.A. *(York)*, Ph.D. *(McMaster)*
Jarita Greyeyes/B.A. *(Winnipeg),* M.A. *(Victoria),* M.A. *(Stanford),* Ph.D. *(Stanford)*
Adrianne Xavier/*(Anthropology)*, B.A. *(McMaster),* M.A., D.SocSci *(Royal Roads)*
For the Honours Arts & Science and Indigenous Studies Program (B.Arts.Sc.), see *Arts & Science Program.*

Bachelor of Arts (Honours)

COMBINED HONOURS IN INDIGENOUS STUDIES AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program, with a Grade Point Average of at least 5.0 and a grade of at least C in one of INDIGST 1A03, 1AA3, 1B03. Satisfaction of the admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Students who have completed only 3 units of level I Indigenous Studies will be required to complete 3 more units of Level I Indigenous Studies by the end of the following academic year.

Course List

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ASTRON 2A03 - Perspectives on Indigenous and Eurocentric Astronomy
- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CAYUGA 2Z03 - Intermediate Cayuga
- ENGLISH 2KA3 - Indigenous Futurisms and Wonderworks
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3W03 - Contemporary Native Literature in Canada (or PEACJUST 3W03 or PEACEST 3W03)
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 4DW3 - Indigenous History in a Decolonizing World
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- MOHAWK 2Z03 - Intermediate Mohawk
- OJIBWE 2Z03 - Intermediate Ojibwe
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches

Requirements

120 units total (Level I to IV), of which 48 units may be Level I

30 UNITS
from
- Level I completed prior to admission to the program (See *Admission* above.)

9 UNITS
from
- Level II Indigenous Studies

6 UNITS
- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory

6 UNITS
from
- Level III Indigenous Studies

9 UNITS
from
- Level II or III or IV Indigenous Studies or the *Course List*

6 UNITS
from
- Level IV Indigenous Studies

36 UNITS
- courses specified for the other subject

3 UNITS
from
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- INUKTUT 1Z03
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture

(Note: If this requirement was completed in Level I, these units will be taken as electives.)

0-3 UNITS

from

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada

12-15 UNITS

- Electives

HONOURS INDIGENOUS STUDIES (B.A.)

Admission

Completion of any Level I program, with a Grade Point Average of at least 5.0 and a grade of at least C in one of INDIGST 1A03, 1AA3, 1B03. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Students who have completed only 3 units of level I Indigenous Studies will be required to complete 3 more units of Level I Indigenous Studies by the end of the following academic year.

Course List

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ASTRON 2A03 - Perspectives on Indigenous and Eurocentric Astronomy
- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CAYUGA 2Z03 - Intermediate Cayuga
- ENGLISH 2KA3 - Indigenous Futurisms and Wonderworks
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3W03 - Contemporary Native Literature in Canada (or PEACJUST 3W03)
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 4DW3 - Indigenous History in a Decolonizing World
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- MOHAWK 2Z03 - Intermediate Mohawk
- OJIBWE 2Z03 - Intermediate Ojibwe
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches

Requirements

120 units total (Level I to IV), of which 48 units may be Level I

30 UNITS

from

- Level I completed prior to admission to the program (See *Admission* above.)

9 UNITS

from

- Level II Indigenous Studies

6 UNITS

- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory

9 UNITS

from

- Level III Indigenous Studies

15 UNITS

from

- Level II or III or IV Indigenous Studies or the *Course List*

12 UNITS

From any level IV Indigenous Studies course or 9 units of level IV Indigenous Studies courses plus 3 units of any level IV course from Course List.

3 UNITS

from

- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture

(Note: If this requirement was completed in Level I, these units will be taken as electives.)

0-3 UNITS

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada

33-36 UNITS

- Electives

Bachelor of Arts

COMBINED PROGRAM IN INDIGENOUS STUDIES AND ANOTHER SUBJECT (B.A.)

This program is being phased out and last entry was in September 2024. The Department of Indigenous Studies introduced an **Indigenous Studies (B.A.)***, in September 2024.*

Admission

Completion of any Level I program, with a Grade Point Average of at least 3.5 and a grade of at least C- in three units of INDIGST 1A03, 1AA3, or 1B03, and satisfaction of admission requirements for the B.A. program in the other subject.

Notes

- Three units of work in the other subject of the combined program which are also in the *Course List* may be used to fulfill the requirements of both program components.
- Students who previously completed ANTHROP 2H03, 2VV3, 2W03, 3F03 or POLSCI 3C03 may use these units toward the *Course List* requirement.
- Students who have completed only 3 units of level I Indigenous Studies will be required to complete 3 more units of Level I Indigenous Studies by the end of the following academic year.

Course List

- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CAYUGA 2Z03 - Intermediate Cayuga
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3W03 - Contemporary Native Literature in Canada (or PEACJUST 3W03 or PEACEST 3W03)
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 4DW3 - Indigenous History in a Decolonizing World
- MOHAWK 2Z03 - Intermediate Mohawk
- OJIBWE 2Z03 - Intermediate Ojibwe
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3F03
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3Q03

Requirements

90 units total (Levels I to III), of which 42 may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

6 UNITS

from

- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory

9 UNITS

from

- Level II Indigenous Studies

6 UNITS

from

- from Level III Indigenous Studies

3 UNITS

from

- Level II or III Indigenous Studies or Course List

3 UNITS

from

- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture

0-3 UNITS

from

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada

24 UNITS

- courses specified for the other subject

6-9 UNITS

- Electives

INDIGENOUS STUDIES (B.A.)

Admission

Completion of any Level I program, with a Grade Point Average of at least 3.5 and a grade of at least C- in three units of INDIGST 1A03, 1AA3, or 1B03.

Notes

- Students who previously completed ANTHROP 2H03, 2VV3, 2W03, 3F03 or POLSCI 3C03 may use these units toward the *Course List* requirement.
- Students who have completed only 3 units of level I Indigenous Studies will be required to complete 3 more units of Level I Indigenous Studies by the end of the following academic year.

Course List

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ASTRON 2A03 - Perspectives on Indigenous and Eurocentric Astronomy
- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CAYUGA 2Z03 - Intermediate Cayuga
- ENGLISH 2KA3 - Indigenous Futurisms and Wonderworks
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3W03 - Contemporary Native Literature in Canada (or PEACJUST 3W03)
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- MOHAWK 2Z03 - Intermediate Mohawk
- OJIBWE 2Z03 - Intermediate Ojibwe
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3W03 - Contemporary Native Literature in Canada
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCWORK 3I03 - Social Work and Indigenous Peoples

Requirements

90 units total (Levels I to III), of which 42 may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

6 UNITS

from

- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory

9 UNITS

from

- Level II Indigenous Studies

6 UNITS

from

- Level III Indigenous Studies

3 UNITS

from

- Level II or III Indigenous Studies or Course List

3 UNITS

from

- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture

0-3 UNITS

from

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada

33-36 UNITS

- Electives

Minor(s):

MINOR IN INDIGENOUS STUDIES

Notes

- At least 12 of the 18 units required for the Minor must be Indigenous Studies or Indigenous language courses.
- In order to declare a Minor in Indigenous Studies, at least 12 units (above Level I) must be elective to degree.

Course List

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ASTRON 2A03 - Perspectives on Indigenous and Eurocentric Astronomy
- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ARTHIST 3BB3 - Indigenous Art and Visual Culture in Canada (or INDIGST 3F03)
- CAYUGA 2Z03 - Intermediate Cayuga
- ENGLISH 2KA3 - Indigenous Futurisms and Wonderworks
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3W03 - Contemporary Native Literature in Canada (or PEACJUST 3W03 or PEACEST 3W03)
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 4DW3 - Indigenous History in a Decolonizing World
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- MOHAWK 2Z03 - Intermediate Mohawk
- OJIBWE 2Z03 - Intermediate Ojibwe
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3W03 - Contemporary Native Literature in Canada (or PEACEST 3W03)
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights (or INDIGST 3J03)
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches

Requirements

24 units total

3 UNITS

from

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada

3 UNITS

from

- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture

18 UNITS

from

- the *Course List* or Level II, III, IV Indigenous Studies (See *Notes* above.)

School of Labour Studies

http://www.labourstudies.mcmaster.ca

Faculty as of January 15, 2025

DIRECTOR

David Goutor/B.A., M.A., Ph.D. *(Toronto)*

PROFESSORS

Judy Fudge/ B.A. *(McGill)*, M.A. *(York)*, LLB *(Osgoode)*, Ph.D. *(Oxford)*

ASSOCIATE PROFESSORS

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Stephanie Premji/*(Health, Aging & Society)* B.A. *(Concordia)*, M.Sc., Ph.D. *(Montréal)*

Stephanie Ross/B.A. *(Carleton)*, M.A.*(Carleton)*, PhD. *(York)*

ASSISTANT PROFESSORS

David Goutor/B.A., M.A., Ph.D. *(Toronto)*

Tommy Wu/B.S. *(Carnegie Mellon)*, M.S. *(Columbia)*, Ph.D. *(City University of New York)*

ASSOCIATE MEMBERS

Nibaldo Galleguillos/*(Political Science and Global Peace & Social Justice)*, B.A. *(Chile)*, M.A., Ph.D. *(Toronto)*

Peter Graefe/*(Political Science)* B.A. *(McGill)*, M.A. *(York)*, Ph.D. *(Montréal)*

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Ian McKay/*(Wilson Institute for Canadian History)* B.A., M.A. *(England)*, Ph.D., LL.D., FRSC, *(Dalhousie)*

Sean O'Brady/*(Political Science)*, B.A. *(Montreal)*, M.A. *(Carleton)*, PhD. *(Montréal)*

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Geraldina Polanco/*(Sociology)* B.A. *(British Columbia)*, M.A. *(Concordia)*, Ph.D. *(British Columbia)*

Tony Porter/*(Political Science)* B.A. *(McGill)*, M.A., Ph.D. *(Carleton)*

ADJUNCT LECTURERS

Bretton Fosbrook/B.A., *(Mount Holyoke College, Massachusetts)*, M.A., Ph.D.*(York)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN WORK AND LABOUR STUDIES AND ANOTHER SUBJECT (B.A.)

Admission

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of WORKLABR 1A03, 1D03, 1E03 (or LABRST 1D03, 1E03, 1A03 or 1C03; see *Note 3* below), and satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty and with programs in the Faculty of Humanities.
- See *Admission to Level II Programs* in the Academic Regulations section of the Calendar.
- Students who have who have completed only 3 units of Level I Work and Labour Studies (or Labour Studies) will be required to complete 3 more units of Level I Work and Labour Studies during their Level II year.
- Students may not transfer to another Work and Labour Studies program except by the normal application process.
- Students who complete a six-unit Research Methods/Statistics course will reduce their elective component by three units.
- Students combining Work and Labour Studies with a Humanities subject or with Religious Studies must complete WORKLABR 4A06 A/B and SOCSCI 2J03. Students in other Combined Honours Programs may complete the Honours Seminar requirement as specified by the other Department and replace WORKLABR 4A06 A/B with six units Level III Labour Studies courses.
- Students who have completed LABRST 4D03 need not complete WORKLABR 4C03 or LABRST 4E03.
- Students are encouraged to consult the School of Labour Studies website at: http://www.labourstudies.mcmaster.ca.

Course List

- COMMERCE 1BA3 - Organizational Behaviour (or 2BA3)
- COMMERCE 4BC3 - Collective Bargaining
- SOCWORK 2BB3 - Anti-Oppressive Social Work or

any level III or IV *Social & Political Context of Social Work* courses offered by the School of Social Work. Eligible to count for Level II or above.

- SOCWORK 2CC3 - Introduction to Community Practice

Note: While student can use this course to fulfill Work and Labour Studies requirements, and while the content is salient to Work and Labour Studies students, this course has a social work focus.

- WOMENST 2A03
- WORKLABR 2A03 - Unions in Action
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2H03 - Sports, Work and Labour
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2K03 - Technology and The Future of Work
- WORKLABR 2M03 - Pop Culture, Media and Work
- WORKLABR 2P03 - Working in Healthcare
- WORKLABR 2W03 - Human Rights and Social Justice
- WORKLABR 3A03 - Economics of Labour Market Issues
- WORKLABR 3B03 - Economics of Trade Unionism and Labour
- WORKLABR 3C03 - Labour and Employment Law
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World
- WORKLABR 3E03 - Gender, Sexuality and Work
- WORKLABR 3K03 - On the Move: Workers in a Global World
- WORKLABR 3L03 - Labour Policy and Advocacy
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies
- WORKLABR 3P03 - Workers' Resistance - Past and Present
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice
- WORKLABR 3T03 - Poverty and Homelessness
- WORKLABR 4J03 - Independent Study

Social and Political Context of Social Work Course List

- SOCWORK 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3H03
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3Q03
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4B03
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
- SOCWORK 4I03
- SOCWORK 4L03
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice*****
- SOCWORK 4SB3*****
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

***only open to those students in a Social Work program**

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above.)

9 UNITS

from

- WORKLABR 2A03 - Unions in Action
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice

18 UNITS

from

- *Course List*, where at least nine units must be selected from Levels III or IV

(See above.)

36 UNITS

- courses specified for the other subject

3 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics or
- an equivalent Research Methods/Statistics course specified by the other subject.

(See *Note 5* above.)

9 UNITS

from

- ENVSOCTY 4LE3 - Geographies of the North American Political Economy
- WORKLABR 4C03 - Public Sector Collective Bargaining
- WORKLABR 4F03 - Work and the Environment
- WORKLABR 4G03 - Advanced Topics in Work and Labour Studies
- WORKLABR 4H03 - Working Precariously: Labour Strategies, Labour Renewal

(See *Note 7* above.)

0-3 UNITS

from

- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1E03 - Navigating the World of Work

(See *Notes 3* & *8* above.)

12-15 UNITS

- Electives

HONOURS WORK AND LABOUR STUDIES (B.A.)

Admission

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of WORKLABR 1A03, 1D03, 1E03 (or LABRST 1D03, 1E03, 1A03 or 1C03; see *Note 2* below). For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- See Admission to Level II Programs in *Academic Regulations* in this section of the Calendar.
- Students who have who have completed only 3 units of Level I Work and Labour Studies will be required to complete 3 more units of Level I Work and Labour Studies during their Level II year.
- Students may not transfer to another Work and Labour Studies program except by the normal application process.
- Students who complete a six-unit Research Methods/Statistics course will reduce their elective component by three units.
- Students are encouraged to consult the School of Labour Studies website at: http://www.labourstudies.mcmaster.ca.

Course List 1

- COMMERCE 1BA3 - Organizational Behaviour (or 2BA3)
- COMMERCE 4BC3 - Collective Bargaining
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2H03 - Sports, Work and Labour
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2M03 - Pop Culture, Media and Work
- WORKLABR 2P03 - Working in Healthcare
- WORKLABR 2W03 - Human Rights and Social Justice
- WORKLABR 3A03 - Economics of Labour Market Issues
- WORKLABR 3B03 - Economics of Trade Unionism and Labour
- WORKLABR 3E03 - Gender, Sexuality and Work
- WORKLABR 3K03 - On the Move: Workers in a Global World
- WORKLABR 3L03 - Labour Policy and Advocacy
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies
- WORKLABR 3P03 - Workers' Resistance - Past and Present
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice
- WORKLABR 4J03 - Independent Study

Course List 2

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- ECON 2F03
- ECON 2K03 - Economic History of Canada
- ECON 2N03 - Public Policy Toward Business
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- POLSCI 3EE3 - International Relations: North-South
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2I03
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 2SS3 - Sociology of Work and Occupations

Social and Political Context of Social Work Course List

- SOCWORK 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3H03
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3Q03
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4B03
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
- SOCWORK 4I03
- SOCWORK 4L03
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice*****
- SOCWORK 4SB3*****
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

**only open to those students in a Social Work program*

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See Admission above.)

9 UNITS

from

- WORKLABR 2A03 - Unions in Action

- WORKLABR 2K03 - Technology and The Future of Work
- WORKLABR 3C03 - Labour and Employment Law
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies

21 UNITS

from

- *Course List 1*, where at least nine units must be selected from Levels III or IV courses

3-6 UNITS

from

- *Course List 2*

3 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics or
- an equivalent Research Methods/Statistics course as prescribed by the other Social Sciences Programs. (See *Note 4* above.)

9 UNITS

from

- ENVSOCTY 4LE3 - Geographies of the North American Political Economy
- WORKLABR 4A03 - Work and Labour Studies Practicum
- WORKLABR 4C03 - Public Sector Collective Bargaining
- WORKLABR 4F03 - Work and the Environment
- WORKLABR 4G03 - Advanced Topics in Work and Labour Studies
- WORKLABR 4H03 - Working Precariously: Labour Strategies, Labour Renewal

(See *Note 5* above.)

3 UNITS

from

- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

(See *Notes 2* & *6* above.)

42-45 UNITS

- Electives, of which at least six units must be taken from outside of Work and Labour Studies

HONOURS WORK AND LABOUR STUDIES CO-OP (B.A.)

Admission

Enrolment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in one of WORKLABR 1A03, 1D03, 1E03 (see *Note 2* below).
Preference will be given to applicants currently in a Level I program.
For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Students who intend to apply for this program option must follow the application instructions as found on the Social Sciences Co-op web site. Students who are unable to access this web site must consult the Social Sciences Co-op team in the Office of the Associate Dean Academic prior to the application deadline.
- All applications for admission to the Co-op program option are considered annually and must be made directly to the Social Sciences Co-op team by March 1 for the Fall/Winter term.
- Applications that are submitted after the March 1 deadline will not be considered.
- Offers of acceptance cannot be deferred.
- Students who have who have completed only 3 units of Level I Work and Labour Studies will be required to complete 3 more units of Level I Work and Labour Studies during their Level II year.
- Students may not transfer to another Work and Labour Studies program except by the normal application process.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term.
  For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of Social Sciences 2JS1 and eligibility for job search access.
- Students who complete a six-unit Research Methods/Statistics course will reduce their elective component by three units.
- Students are encouraged to consult the School of Labour Studies website at: http://www.labourstudies.mcmaster.ca.

Course List 1

- COMMERCE 1BA3 - Organizational Behaviour (or 2BA3)
- COMMERCE 4BC3 - Collective Bargaining
- WORKLABR 2A03 - Unions in Action
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2H03 - Sports, Work and Labour
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2M03 - Pop Culture, Media and Work
- WORKLABR 2P03 - Working in Healthcare
- WORKLABR 2W03 - Human Rights and Social Justice
- WORKLABR 3A03 - Economics of Labour Market Issues
- WORKLABR 3B03 - Economics of Trade Unionism and Labour
- WORKLABR 3E03 - Gender, Sexuality and Work
- WORKLABR 3K03 - On the Move: Workers in a Global World
- WORKLABR 3L03 - Labour Policy and Advocacy
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies
- WORKLABR 3P03 - Workers' Resistance - Past and Present
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice
- WORKLABR 4J03 - Independent Study

Course List 2

- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- ECON 2K03 - Economic History of Canada
- ECON 2N03 - Public Policy Toward Business
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- POLSCI 3EE3 - International Relations: North-South
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 2SS3 - Sociology of Work and Occupations

Social and Political Context of Social Work Course List

- SOCWORK 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3H03
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3Q03
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4B03
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
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- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice*****
- SOCWORK 4SB3*****
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

**only open to those students in a Social Work program*

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See Admission above.)

0-3 UNITS

- SOCSCI 2EL0
- SOCSCI 2EL3 - Career Preparation in the Social Sciences

9 UNITS

from

- WORKLABR 2A03 - Unions in Action
- WORKLABR 2K03 - Technology and The Future of Work
- WORKLABR 3C03 - Labour and Employment Law
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies

21 UNITS

from

- *Course List 1*, where at least nine units must be selected from Levels III or IV courses

3-6 UNITS

from

- *Course List 2*

3 UNITS

from

- SOCSCI 2J03 - Introduction to Statistics or
- an equivalent Research Methods/Statistics course as prescribed by the other Social Sciences Programs. (See *Note 4* above.)

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

WORK TERMS

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

9 UNITS

from

- ENVSOCTY 4LE3 - Geographies of the North American Political Economy
- WORKLABR 4C03 - Public Sector Collective Bargaining
- WORKLABR 4F03 - Work and the Environment
- WORKLABR 4G03 - Advanced Topics in Work and Labour Studies
- WORKLABR 4H03 - Working Precariously: Labour Strategies, Labour Renewal

(See *Note 5* above.)

0-3 UNITS

from

- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1E03 - Navigating the World of Work

(See *Notes 2* & *6* above.)

39-42 UNITS

- Electives, of which at least six units must be taken from outside of Work and Labour Studies

Bachelor of Arts

WORK AND LABOUR STUDIES (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 including a grade of at least C- in one of WORKLABR 1A03, 1D03, 1E03 (or LABRST 1D03, 1E03, 1A03 or 1C03; see *Note 1* below.)

Notes

- Students who have who have completed only 3 units of Level I Work and Labour Studies (or Labour Studies) will be required to complete 3 more units of Level I Work and Labour Studies during their Level II year.
- Students may not transfer to another Work and Labour Studies program except by the normal application process.
- Students are encouraged to consult the School of Labour Studies website at: http://www.labourstudies.mcmaster.ca.

Course List

- COMMERCE 1BA3 - Organizational Behaviour (or 2BA3)
- COMMERCE 4BC3 - Collective Bargaining
- SOCWORK 2BB3 - Anti-Oppressive Social Work or

any Level III or IV *Social & Political Context of Social Work* courses offered by the School of Social Work. Eligible to count for Level II or above.

- SOCWORK 2CC3 - Introduction to Community Practice

Note: While student can use this course to fulfill Work and Labour Studies

requirements, and while the content is salient to Work and Labour Studies students, this course has a social work focus.

- WOMENST 2A03
- WORKLABR 2A03 - Unions in Action
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2H03 - Sports, Work and Labour
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2K03 - Technology and The Future of Work
- WORKLABR 2M03 - Pop Culture, Media and Work
- WORKLABR 2P03 - Working in Healthcare
- WORKLABR 2W03 - Human Rights and Social Justice
- WORKLABR 3A03 - Economics of Labour Market Issues
- WORKLABR 3B03 - Economics of Trade Unionism and Labour
- WORKLABR 3C03 - Labour and Employment Law
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World
- WORKLABR 3E03 - Gender, Sexuality and Work
- WORKLABR 3K03 - On the Move: Workers in a Global World
- WORKLABR 3L03 - Labour Policy and Advocacy
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies
- WORKLABR 3P03 - Workers' Resistance - Past and Present
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice
- WORKLABR 3T03 - Poverty and Homelessness
- WORKLABR 4J03 - Independent Study

Social and Political Context of Social Work Course List

- WORKLABR 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3H03
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3Q03
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4B03
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
- SOCWORK 4I03
- SOCWORK 4L03
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice*****
- SOCWORK 4SB3*****
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

**only open to those students in a Social Work program*

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

from

- WORKLABR 2A03 - Unions in Action
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism
- WORKLABR 2M03 - Pop Culture, Media and Work
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice

21 UNITS

from

- *Course List*, where at least nine units must be selected from Levels III or IV courses.

0-3 UNITS

from

- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

(See *Notes 1* & *3* above.)

27-30 UNITS

- Electives, of which at least six units must be taken from outside of Work and Labour Studies

Minor(s):

MINOR IN WORK AND LABOUR STUDIES

Notes

- Students working towards a Minor in Work and Labour Studies may take no more than three units of Level IV Work and Labour Studies courses.
- Students are encouraged to consult the Work and Labour Studies website at: http://www.labourstudies.mcmaster.ca/.
- Students may not transfer from the Minor in Work and Labour Studies to another Work and Labour Studies program except by the normal application process.
- In order to declare a Minor in Work and Labour Studies, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6 UNITS

- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

(See *Note 2* above.)

6 UNITS

- WORKLABR 2A03 - Unions in Action
- WORKLABR 3M03 - Theoretical Approaches to Work and Labour Studies

12 UNITS

- Levels II, III, or IV Work and Labour Studies (See *Note 2* above.)

Department of Political Science

https://politicalscience.mcmaster.ca/

Faculty as of January 15, 2025

CHAIR

Peter Graefe

PROFESSORS

Donald Abelson/ B.A. *(Toronto)*, M.A. *(Queen's)*, M.A. *(Western)*, Ph.D. *(Queen's)*

J. Marshall Beier/ B.A., M.A., Ph.D. *(York)*

Karen Bird/ B.A. *(Wilfrid Laurier)*, Ph.D. *(Minnesota)*
Michelle L. Dion/ B.A. *(Texas-Austin)*. M.A., Ph.D. *(North Carolina-Chapel Hill)*
Catherine Frost/ B.A. *(Lakehead)*, M.A., Ph.D. *(Toronto)*
Ahmed Shafiqul Huque/ B.A., M.A. *(Dhaka)*, M.A. *(Manitoba)*, Ph.D. *(British Columbia)*
Thomas Marois/ B.A., M.A. (Alberta), PhD (York)
Stephen McBride/ B.Sc. *(London)*, M.A., Ph.D. *(McMaster)*
Robert J. O'Brien/ B.A. *(Carleton)*, M.Sc. *(London)*, Ph.D. *(York)*
Peter Nyers/ B.A., M.A. *(Victoria)*, Ph.D. *(York)*
Tony Porter/ B.A. *(McGill)*, M.A., Ph.D. *(Carleton)*
ASSOCIATE PROFESSORS
Nathan Andrews/ B.A. *(Ghana)*, M.A. *(Brock)*, Ph.D. *(Alberta)*
Katherine Boothe/ B.A. *(Alberta)*, M.A., Ph.D. *(British Columbia)*
Nibaldo H. Galleguillos/ B.A. *(Chile)*, M.A., Ph.D. *(Toronto)*
Peter Graefe/ B.A. *(McGill)*, M.A. *(York)*, Ph.D. *(Montreal)*
James D. Ingram/ B.A. *(Alberta)*, M.A. *(Queen's)*, Ph.D. *(New School)*
Robert Innes/ B.A. *(Toronto)*, M.A. *(Saskatchewan)*, Ph.D. *(Arizona)*
Andrea Lawlor/ B.A. (McMaster), M.A. (British Columbia), Ph.D (McGill)
Inder Marwah/ B.A. *(Trent)*, M.A., Ph.D. *(Toronto)*
Alina Sajed/, B.A., M.A. *(Al. I. Cuza)*, M.A., Ph.D. *(McMaster)*
Netina Tan/ B.A., M.A. SE Asian Stud. *(Nat. Univ. of Singapore)*, M.A. *(Regina)*, Ph.D. *(British Columbia)*
Clifton van der Linden/ B.A. *(McMaster)*, M.A. *(Western)*, Ph.D. *(Toronto)*
Lana Wylie/ B.A. *(McMaster)*, M.A. *(Calgary)*, Ph.D. *(Massachusetts)*
ASSISTANT PROFESSORS
Todd Alway/ B.A. *(McMaster)*, M.A. *(York)*, Ph.D. *(Carleton)*
Adrienne Davidson/ B.A. *(Guelph)*, M.A., Ph.D. *(Toronto)*
Greg Flynn/ B.A. *(Waterloo)*, LL.B. *(Western)*, M.A., Ph.D. *(McMaster)*
Maria Gintova/ B.A. *(Moscow State)*, M.PAdm. *(Albany)*, Ph.D. *(Ryerson)*
ASSOCIATE MEMBERS
Julia Abelson/ *(C.E.P.A.)* B.A., B.Sc. *(McMaster)*, M.Sc. *(Harvard)*, Ph.D. *(Bath)*
Gail Krantzberg/ *(W.G. Booth School of Engineering Practice and Technology)*, B.Sc. *(McGill)*, M.Sc./M.E.S., Ph.D. *(Toronto)*
John Lavis/ *(C.E.P.A.)* M.D. *(Queen's)*, M.Sc. *(LSE)*, Ph.D. *(Harvard)*

Students are responsible for ensuring that course prerequisites are fulfilled.

- **Canadian Politics**

POLSCI 2C03 2D03, 2K03, 2F03, 2LW3, 2PF3, 2PP3, 2U03, 3BB3, 3C03, 3CL3, 3CS3, 3EL3, 3FG3, 3GG3, 3IP3, 3J03, 3JJ3, 3K03, 3OP3, 3PA3, 3RF3, 3Z03, 4CA3, 4CF3, 4ED6 A/B, 4EM3, 4JS3, 4LC3, 4O06 A/B, 4PO3, 4RR3, 4UP3

- **Comparative Politics**

POLSCI 2ID3, 2M03, 2PF3, 2PP3, 2U03, 2US3, 2XX3, 3BB3, 3CS3, 3EE3, 3EL3, 3G03, 3GA3, 3GG3, 3H03, 3I03, 3JR3, 3K03, 3KK3, 3LC3, 3LL3, 3OP3, 3PA3, 3PG3, 3V03, 3VV3, 3Y03, 4AA6 A/B, 4D06 A/B, 4ED6 A/B, 4EF3, 4EM3, 4KC3, 4LA3, 4PA3, 4PO3, 4Q06 A/B, 4RR3, 4SS3, 4UF3, 4UP3, 4WS3, 4YR3

- **International Relations**

POLSCI 2I03, 2ID3, 2J03, 2XX3, 3B03, 3EE3, 3GA3, 3GC3, 3JR3, 3K03, 3KK3, 3LB3, 3PA3, 3PG3, 3Q03, 3Y03, 4D06 A/B, 4DV3, 4EF3, 4GC3, 4GG3, 4HR3, 4KB3, 4NN3, 4PB3, 4PE3, 4QQ3, 4Y03, 4YR3

- **Political Theory**

POLSCI 2O06 A/B, 3CC3, 3CD3, 3LA3, 3PB3, 3PG3, 3VV3, 4DV3, 4FF3, 4HH3, 4OL3, 4PB3, 4RT3, 4Y03

- **Public Policy**

POLSCI 2C03, 2PP3, 2U03, 2EM3, 2LW3, 3B03, 3CS3, 3GC3, 3IP3, 3J03, 3LL3, 3LP3, 3PA3, 3Z03, 4CF3, 4ED6 A/B, 4EF3, 4EM3, 4G06 A/B, 4JS3, 4O06 A/B, 4PO3, 4LC3, 4RR3, 4SS3, 4WS3

The following courses while satisfying the requirements of the program are not specific to any field of study:

POLSCI 1AA3, 1AB3, 2NN3, 2MN3, 3NN3, 3PR3, 3UU3, 3WP3, 4AL3, 4Z06 A/B, 4ZZ3, 4ZZ6 A/B

Bachelor of Arts (Honours)

COMBINED HONOURS IN POLITICAL SCIENCE AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of C or greater in one of POLSCI 1AA3 or 1AB3 (See *Note 6* below). Satisfaction of the admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3 and POLSCI 3NN3 or POLSCI 3N06 A/B and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.
- Students may take a maximum of six units of Level IV Political Science and will be removed from any excess units of Level IV Political Science unless permission is granted by the Department. Additional units of Level IV Political Science may not be used as electives.
- Students who have completed only 3 units of level I Political Science will be required to complete 3 more units of Level I Political Science by the end of the following academic year.
- Completion of POLSCI 1AB3 by the end of Level I is strongly recommend in order for students to meet the prerequisite for POLSCI 2NN3.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program. (See *Admission* above.)

6 UNITS

- POLSCI 2O06 A/B - Political Theory

18 UNITS

- Levels II, III, Political Science of which a maximum of nine units may be Level II; including at least one course from the *Canadian Politics* Field of Study

6 UNITS

- Level IV Political Science (See *Note 4)*

36 UNITS

- courses specified for the other subject

6 UNITS

- POLSCI 2NN3 - Politics by Design *and*
- POLSCI 3NN3 - Statistical Analysis of Primary Data

or

- POLSCI 3N06 A/B

or

- in combined programs within the Faculty of Social Sciences, the six units of Research Methods/Statistics course specified for the other subject

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

If not completed in Level 1 (See *Note 5)*

15-18 UNITS

- Electives (the maximum Political Science courses to be taken is 54 units)

HONOURS POLITICAL SCIENCE (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of C or greater in one of POLSCI 1AA3 or 1AB3 (See *Note 5* below). For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the *Faculty of Social Sciences Academic Regulations*.

Notes

- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3 and 3NN3 or 3N06 A/B and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs and recommended for students in the B.A. program.
- Students may take a maximum of 12 units of Level IV Political Science and will be removed from any excess units of Level IV Political Science unless permission is granted by the Department. Additional units of Level IV Political Science may not be used as electives.
- Students who have completed only 3 units of Level I Political Science will be required to complete 3 more units of Level I Political Science by the end of the following academic year.
- Completion of POLSCI 1AB3 by the end of Level I is strongly recommended in order for students to meet the prerequisite for POLSCI 2NN3.
- Students who wish to minor in Globalization Studies, Justice, Law & Order or Public Leadership should consult with the Department of Political Science to ensure they meet all degree requirements and restrictions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program (See *Admission* above.)

6 UNITS

- POLSCI 2O06 A/B - Political Theory

24 UNITS

- Levels II, III Political Science of which a maximum of 15 units may be Level II; including at least one course from the *Canadian Politic*s Field of Study

12 UNITS

- Level IV Political Science (See Note 1 above.)

6 UNITS

- POLSCI 2NN3 - Politics by Design *and*
- POLSCI 3NN3 - Statistical Analysis of Primary Data

or

- POLSCI 3N06 A/B

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

If not completed in Level 1 (See *Note 4)*

39-42 UNITS

- Electives, of which no more than 18 units may be from Political Science (the maximum Political Science courses to be taken is 66 units)

HONOURS POLITICAL SCIENCE CO-OP (B.A.)

Admission

Enrollment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of C or greater in one of POLSCI 1AA3 or 1AB3. Students are strongly encouraged to complete POLSCI 1AB3 in Level I (See *Admission* Note 5 below). Preference will be given to applicants currently in a Level I program. For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I*. Information about this program and about co-op policies and procedures can be obtained from the Social Sciences Co-op team in the Office of the Associate Dean Academic.

Admission Notes

- Students who intend to apply for this program option must follow the application instructions as found on the Social Sciences Co-op web site. Students who are unable to access this web site must consult the Social Sciences Co-op team in the Office of the Associate Dean Academic prior to the application deadline.
- All applications for admission to the Co-op program option are considered annually and must be made directly to the Social Sciences Co-op team by March 1 for the Fall/Winter term.
- Applications that are submitted after the March 1 deadline will not be considered.
- Offers of acceptance cannot be deferred.
- Completion of POLSCI 1AB3 by the end of Level I is strongly recommended in order for students to meet the prerequisite for POLSCI 2NN3.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students

to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3, 3NN3 and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs, including the Co-op option, and they are recommended for students in the B.A. program.
- Students may take a maximum of 12 units of Level IV Political Science and will be removed from any excess units of Level IV Political Science unless permission is granted by the Department. Additional units of Level IV Political Science may not be used as electives.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- The Level I program completed prior to admission to the program (See *Admission* above.)

0-3 UNITS

- SOCSCI 2EL0
- SOCSCI 2EL3 - Career Preparation in the Social Sciences

6 UNITS

- POLSCI 2O06 A/B - Political Theory

24 UNITS

- Levels II, III Political Science of which a maximum of 15 units may be Level II; including at least one course from the *Canadian Politic*s Field of Study

12 UNITS

- Level IV Political Science (See *Program Note 8* above.)

6 UNITS

- POLSCI 2NN3 - Politics by Design *and*
- POLSCI 3NN3 - Statistical Analysis of Primary Data

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

If not completed in Level 1 (See *Admission Note 5)*

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

WORK TERMS

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

33-36 UNITS

- Electives, of which no more than 18 units may be from Political Science (the maximum Political Science courses to be taken is 66 units)

HONOURS POLITICAL SCIENCE SPECIALIZATION IN GLOBAL CITIZENSHIP (B.A.)

Admission

Enrollment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion on any Level I program with a Grade Point average of at least a 5.0 including a grade of C or greater in POLSCI 1AB3. Students are strongly encouraged to complete POLSCI 1AA3 and GLOBALZN 1A03 in Level I (See *Note 5* below). For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I.*

Notes

- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3, 3NN3 and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.
- Students may take a maximum of 12 units of Level IV Political Science and will be removed from any excess units of Level IV Political Science unless permission is granted by the Department. Additional units of Level IV Political Science may not be used as electives.
- POLSCI 4Z06 A/B may be selected if topic relates to Global Citizenship.
- Students who have not completed POLSCI 1AA3 or GLOBALZN 1A03 in Level I should do so by the end of Level II.
- Certified International Experience: Students in the Global Citizenship Specialization may apply for the optional Certified International Experience (CIE) to be completed at a partner University in the United Kingdom. Upon completion of this international exchange opportunity, students will receive a formal "parchment" from the partner university as well as a notation on the completed courses that will appear on their McMaster transcript. Completion of the CIE will also satisfy the "study abroad" component of the Global Citizenship Experiential requirement. Students may contact the Global Citizenship program advisor for details on the application process.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program (See *Admission* above.)

12 UNITS

- POLSCI 2I03 - Global Politics
- POLSCI 2J03 - Global Political Economy
- POLSCI 2O06 A/B - Political Theory

3 UNITS

- POLSCI 2D03 - Canadian Democracy

or

- POLSCI 2M03 - Governance, Representation, and Participation in Democracies

6 UNITS

- POLSCI 2NN3 - Politics by Design
- POLSCI 3NN3 - Statistical Analysis of Primary Data

18 UNITS

Global Citizenship Experiential requirement

A.

One term abroad taking equivalent of 9 units from courses similar to those on Global Citizenship Course List and 9 units from the Global Citizenship Level III Course List

9 units

- Taken abroad

and

9 units

from

- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3EE3 - International Relations: North-South

- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3H03 - Honours Issues in Comparative Politics
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 3LC3 - Southeast Asian Politics
- POLSCI 3LL3 - Development and Public Policy
- POLSCI 3PB3 - Politics from Below
- POLSCI 3PG3 - Political Geography
- POLSCI 3Q03 - The Causes of War
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights

Or

B.

Two terms abroad taking 18 units of courses similar to those on the Global Citizenship Level III Course List

Or

C.

POLSCI 3WP3 and 15 units from the Global Citizenship Level III Course List

3 units

- POLSCI 3WP3 - Working in Politics AND

15 units

from

- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3H03 - Honours Issues in Comparative Politics
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LC3 - Southeast Asian Politics
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 3LL3 - Development and Public Policy
- POLSCI 3PB3 - Politics from Below
- POLSCI 3PG3 - Political Geography
- POLSCI 3Q03 - The Causes of War
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights

3 UNITS

- POLSCI 4GC3 - Advanced Issues in Global Citizenship

9 UNITS

- From the Global Citizenship Level IV Course List

0-3 UNITS

- GLOBALZN 1A03 - Global Citizenship (See *Note 5)*

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power (See *Note 5)*

36-39 UNITS

- Electives, of which no more than 6 units may be from Political Science

Global Citizenship Level III Course List

- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3H03 - Honours Issues in Comparative Politics
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 3LC3 - Southeast Asian Politics
- POLSCI 3LL3 - Development and Public Policy
- POLSCI 3PA3 - Politics of Pandemics
- POLSCI 3PB3 - Politics from Below
- POLSCI 3PG3 - Political Geography
- POLSCI 3Q03 - The Causes of War
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights

Global Citizenship Level IV Course List

- POLSCI 4CF3 - Canadian Foreign Policy
- POLSCI 4D06 A/B - International Politics
- POLSCI 4GG3 - Conceptual Issues in Global Politics
- POLSCI 4HR3 - Human Rights
- POLSCI 4JJ3
- POLSCI 4KB3 - Non-Western International Relations
- POLSCI 4KC3 - Comparative Democratization
- POLSCI 4KK3
- POLSCI 4LA3 - Politics in Latin America
- POLSCI 4NN3 - Studies in Global Political Economy
- POLSCI 4PE3 - Global Political Ecology
- POLSCI 4QQ3 - Issues in International Politics
- POLSCI 4UF3 - US Foreign Policy
- POLSCI 4Y03 - Domination and Decolonization
- POLSCI 4YR3 - Child/Youth Rights and Security in Global Political Perspective
- POLSCI 4Z06 A/B - Honours Essay *(see note 4)*

HONOURS POLITICAL SCIENCE SPECIALIZATION IN PUBLIC LAW AND JUDICIAL STUDIES (B.A.)

Admission

Enrollment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement. Completion on any Level I program with a Grade Point average of at least a 5.0 including a grade of C or greater in one of POLSCI 1AA3 or 1AB3 (See *Note 5* below). For continuation in the program, see *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the *Faculty of Social Sciences Academic Regulations*.

Notes

- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3 and 3NN3 or 3N06 A/B and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. program.
- Students may take a maximum of 12 units of Level IV Political Science and will be removed from any excess units of Level IV Political Science unless permission is granted by the Department. Additional units of

Level IV Political Science may not be used as electives.
- Students who have completed only 3 units of level I Political Science will be required to complete 3 more units of Level I Political Science by the end of the following academic year.
- Completion of POLSCI 1AB3 by the end of Level I is strongly recommend in order for students to meet the prerequisite for POLSCI 2NN3.
- Students enrolled in Honours Political Science Specialization in Public Law and Judicial Studies may not claim a Minor in Justice, Law and Order.
- Certified International Experience: Students in the Public Law and Judicial Studies Specialization may apply for the optional Certified International Experience (CIE) to be completed at a partner University in the United Kingdom. Upon completion of this international exchange opportunity, students will receive a formal "parchment" from the partner university as well as a notation on the completed courses that will appear on their McMaster transcript. Students may contact the Public Law and Judicial Studies program advisor for details on the application process.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- POLSCI 2O06 A/B - Political Theory
- POLSCI 2C03 - Force and Fear, Crime and Punishment

3 UNITS

- POLSCI 2D03 - Canadian Democracy

or

- POLSCI 2M03 - Governance, Representation, and Participation in Democracies

6 UNITS

- POLSCI 3CL3 - Constitutional and Public Law in Canada
- POLSCI 3RF3 - The Charter of Rights and Freedoms

or

- POLSCI 3NN6 A/B

9 UNITS

- from the Public Law and Judicial Studies Course List

9 UNITS

- Level II, III Political Science of which a maximum of 3 units may be Level II

6 UNITS

- Level IV Political Science (See *Note 1* above.)

6 UNITS

- POLSCI 4JS3 - Judicial Studies
- POLSCI 4LC3 - Research on Law and Courts

6 UNITS

- POLSCI 2NN3 - Politics by Design and
- POLSCI 3NN3 - Statistical Analysis of Primary Data

or

- POLSCI 3N06 A/B

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

If not completed in Level 1 (See *Note 4)*

33-36 UNITS

- Electives, of which no more than 12 units may be from Political Science (the maximum Political Science courses to be taken is 66 units)

Public Law and Judicial Studies Course List

- LABRST 3C03
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3EL3 - Election Law and Policy
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GG3 - Federalism
- POLSCI 3IP3 - Intellectual Property
- POLSCI 3JR3 - The Rule of Law and Legal and Judicial Reforms in the Developing World
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LP3 - Topics in Law and Policy
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights
- WORKLABR 3C03 - Labour and Employment Law

Bachelor of Arts

POLITICAL SCIENCES (B.A.)

Admission

Completion of any Level I program, with a Grade Point Average of at least 3.5 including a grade of C- or greater in one of POLSCI 1AA3 or 1AB3 (see *Note 4* below).

Notes

- Students should be alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
- POLSCI 2NN3 and POLSCI 3NN3 or POLSCI 3N06 A/B and POLSCI 2O06 A/B are required for students enrolled in Honours Political Science programs and they are recommended for students in B.A. programs.
- Students who have completed only 3 units of Level I Political Science will be required to complete 3 more units of Level I Political by the end of the of the following academic year.
- Completion of POLSCI 1AB3 by the end of Level I is strongly recommend in order for students to meet the prerequisite for POLSCI 2NN3.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above)

24 UNITS

- Level II, III Political Science of which a maximum of 15 units may be Level II; including at least one course from the *Canadian Politics* Field of Study

(See *Note 2* above)

0-3 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

If not completed in Level 1 (See *Note 3)*

33-36 UNITS

- Electives, of which no more than 18 units can be from Political Science (the maximum Political Science courses to be taken is 42 units)

Minor(s):

MINOR IN JUSTICE, LAW AND ORDER

Notes

- In order to declare a Minor in Justice, Law and Order, at least 12 units (above Level I) must be elective to the degree.
- Students are responsible for ensuring that any prerequisites for preferred upper-year courses are met in advance.
- Students enrolled in Honours Political Science Specialization in Public Law and Judicial Studies may not claim a Minor in Justice, Law and Order.

Requirements

24 units total

6 UNITS

- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World

6 UNITS

- POLSCI 2D03 - Canadian Democracy
- POLSCI 2C03 - Force and Fear, Crime and Punishment

6 UNITS

- POLSCI 3CL3 - Constitutional and Public Law in Canada
- POLSCI 3RF3 - The Charter of Rights and Freedoms

or

- POLSCI 3NN6 A/B

6 UNITS

- from the Multidisciplinary Course List

(See Note 2)

Multidisciplinary Course List

- ANTHROP 3FA3 - Forensic Anthropology
- HLTHAGE 2G03
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 3DD3 - Workers' Health and Well-Being in a Changing World
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3EL3 - Election Law and Policy
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GG3 - Federalism
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights
- PSYCH 3CC3 - Forensic Psychology
- RELIGST 2RD3
- SCAR 2RD3 - Religion and Diversity
- SOCWORK 3H03
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 2C06
- SOCIOL 3GG3

MINOR IN POLITICAL SCIENCE

Note

In order to declare a minor in Political Science, at least 12 units (above Level I) must be elective to the degree.

Requirements

24 units total

6 UNITS

- Level I Political Science

18 UNITS

- Levels II, III Political Science of which up to 12 units may be Level II

MINOR IN PUBLIC LEADERSHIP

This minor is intended to provide students with a strong theoretical, practical and applied understanding of leadership and the role that political and/or public actors can play in the public domain of both democratic and non-democratic states to achieve their policy goals, affect positive social change and impact the policy choices of governments. Students will be prepared for further studies or careers in politics, government, public policy, community organization and activism, education, human rights and law.
Students will select courses from the Faculty of Social Sciences that address these themes, developing a strong interdisciplinary grasp on the different concepts of leadership and their application to different policy and public environments. Beyond the required courses, students will be able to select from a wide variety of courses that cater to their own interests.
It is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions of all courses in this list. Students are encouraged to speak to their Faculty advisors about Faculty-specific rules about double-counting courses for the minor.

Requirements

24 units total

3 UNITS

Foundations of Public Policy, Public Administration and Public Service

- POLSCI 2U03 - Public Policy and Administration

3 UNITS

from

Leadership and Leadership Practices

- POLSCI 3FG3 - Public Service Leadership
- SOCSCI 2LC3 - Leadership and Communications for the Not-For-Profit Sector

6 UNITS

from

Spaces, Places and Needs for Public Leadership

- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2XX3 - Politics of the Developing World
- POLSCI 3PB3 - Politics from Below
- RELIGST 2ER3
- RELIGST 2VR3
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2VR3

12 UNITS

from

Other Aspects of Leadership

- POLSCI 3BB3 - Political Communication: Canada and the World
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3F03

- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3J03 - Honours Issues in Canadian Politics and Canadian Public Policy
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 3LL3 - Development and Public Policy
- POLSCI 3V03 - Gender and Politics
- POLSCI 3VV3 - Democratic Theory
- POLSCI 3Y03 - Democratization and Human Rights
- POLSCI 3Z03 - Canadian Public Sector Management
- POLSCI 4O06 A/B - Canadian Politics
- RELIGST 3CC3
- SCAR 3CC3 - Religion and Politics

Notes

- Please see the *Course Listings* section for a detailed description of the above courses.
- In order to declare a Minor in Public Leadership, at least 12 units (above Level I) must be elective to degree.

Department of Psychology, Neuroscience & Behaviour (Faculty of Social Sciences)

http://www.science.mcmaster.ca/pnb/

Honours Arts & Science and Psychology Neuroscience & Behaviour

(B.Arts.Sc.; See *Arts & Science Program)*

Honours Biology and Psychology, Neuroscience & Behaviour (B.Sc.)

(See B.Sc. programs in *Biology, Faculty of Science, Department of Biology)*

Honours Cognitive Science of Language (B.A.)

(See *Faculty of Humanities, Department of Linguistics and Languages)*

Honours Applied Psychology of Human Behaviour (B.A.Sc.)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Applied Psychology of Human Behaviour - Autism and Behavioural Science Specialization (B.A.Sc.)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Applied Psychology of Human Behaviour - Early Childhood Studies Specialization (B.A.Sc.)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Neuroscience (B.Sc.)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Psychology, Neuroscience & Behaviour (B.Sc.)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Psychology, Neuroscience and Behaviour (B.Sc.) (Mental Health Specialization)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Psychology, Neuroscience & Behaviour (B.Sc.) (Music Cognition Specialization)

(See *Faculty of Science, Department of Psychology, Neuroscience & Behaviour)*

Honours Social Psychology (B.A.)

B.A.; (See *Faculty of Social Sciences, Honours Social Psychology (B.A.))*

Bachelor of Arts (Honours)

COMBINED HONOURS IN PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR AND ANOTHER SUBJECT (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0; a grade of at least B- in PSYCH 1FF3 or 1XX3 (See *Note 7* below); credit in 3 units from BIOLOGY 1A03, 1M03, 1P03 or Grade 12 Biology U (See *Note 8* below); and credit in MATH 1LS3 or 1A03. (See *Note 1* below). Satisfaction of the admission requirements for the Honours program in the other subject.

Notes

- Students with Grade 12 Calculus and Vectors U must take one of MATH 1A03 or 1LS3. Students with Grade 12 Advanced Functions U must complete MATH 1F03 prior to completing one of MATH 1LS3 or 1A03. Students with Grade 11 Math must first take MATH 1K03 prior to completing MATH 1F03 and then one of MATH 1LS3 or 1A03.
- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with Arts and Science Programs.
- Students in the Combined Honours Psychology, Neuroscience & Behaviour program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
- A thesis is recommended for students who wish to pursue graduate research.
- Students who enter the program in September 2026 or later may count a maximum of 6 units from PNB 3Q03, 3QQ3, 4Q03, 4QQ3 towards the Psychology, Neuroscience & Behaviour Course List.
- Both PNB 2XD3 and 2XF3 are recommended but not required. PNB 2XD3 is included in the *Psychology, Neuroscience & Behaviour Course List* and may be used towards the Level III Psych requirements.
- Either PSYCH 1FF3 or 1XX3 is required for Admission but PSYCH 1XX3 is recommended. Completion of one of PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I..
- It is recommended that students take BIOLOGY 1M03 in Level I, and BIOLOGY 1A03 in Level II.
- Students may take a maximum of 6 units from SOCPSY 3B03, SOCPSY 3C03, 3F03, 3H03, 3M03, 3OP3, 3ZZ3 towards the Psychology, Neuroscience & Behaviour Course List.

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- PNB 2A03 - Python for PNB
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PSYCH 2MP3 - Introduction to Music Cognition
- All Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits

All Level III and IV PNB courses with no more than 6 units from the following courses:

- PNB 3Q03
- PNB 3QQ3
- PNB 4Q03
- PNB 4QQ3

AND,

all Level III and IV PSYCH courses.

A maximum of 6 units from the following list may be used:

- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

(See *Admission* above).

LEVEL II: 30 UNITS

12 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial

12 units

- courses as specified for the other subject

0-3 units

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 7* above)

3-6 units

- Electives

(See *Notes 6* and *8* above)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5, 6,* and *8* above)

12 units

- courses as specified for the other subject

6 units

- Electives

(See *Notes 5* and *6* above)

LEVEL IV: 30 UNITS

12 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5, 6, and 8* above)

12 units

- courses as specified for the other subject

6 units

- Electives

(See *Note 5* above)

Requirements For Students who Entered in September 2024 or prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

(See *Admission* above)

LEVEL II: 30 UNITS

12 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial

12 units

- courses as specified for the other subject

0-3 units

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 7* above)

3-6 units

- Electives

(See *Notes 6* and *8* above)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- PNB 2A03 - Python for PNB
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience

- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

6 units
from
- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 9* above)
12 units
- courses as specified for the other subject

6 units
- Electives

(See *Notes 5* and *6* above)

LEVEL IV: 30 UNITS
12 units
from
- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 9* above)
12 units
- courses as specified for the other subject

6 units
- Electives

(See *Note 5* above)

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS
(See *Admission* above).

LEVEL II: 30 UNITS
12 units
- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XT0 - PNB Tutorial

12 units
- courses as specified for the other subject

0-3 units
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 7* above)
3-6 units
- Electives

(See *Notes 6* and *8* above)

LEVEL III: 30 UNITS
3 units
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units
from
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

6 units
from
- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5, 6, and 8* above)
12 units
- courses as specified for the other subject

6 units
- Electives

(See *Notes 5* and *6* above)

LEVEL IV: 30 UNITS
12 units
from
- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5, 6, and 8* above)
12 units
- courses as specified for the other subject

6 units
- Electives

(See *Note 5* above)

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0; a grade of at least B- in PSYCH 1FF3 or 1XX3 (See *Note 4* below); credit in 3 units from BIOLOGY 1A03, 1A02, 1A01, 1M03, 1P03 or Grade 12 Biology U (See *Note 5* below); and credit in MATH 1LS3 or 1A03. (See *Note 1* below).

Notes

- Students with Grade 12 Calculus and Vectors U must take MATH 1LS3 or 1A03. Students with Grade 12 Advanced Functions U must complete MATH 1F03 prior to completing MATH 1LS3 or 1A03. Students with Grade 11 Math must first take MATH 1K03 prior to completing MATH 1F03 and then one of MATH 1LS3 or 1A03.
- Students considering applying to graduate school should complete a course with a strong research component such as PNB 3QQ3 A/B S, 4QQ3 A/B S, 4QQ6 A/B, 4D06 A/B, 4D09 A/B. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/ permission forms by the deadline indicated on the PNB website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
- Students who enter the program in September 2026 or later may count a maximum of 6 units from PNB 3Q03 A/B S, 3QQ3 A/B S, PNB 4Q03 A/B S, 4QQ6 A/B towards the Psychology, Neuroscience & Behaviour Course List.
- Either PSYCH 1FF3 or 1XX3 is required for Admission but PSYCH 1XX3 is recommended. Completion of one of PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
- It is recommended that students take BIOLOGY 1M03 in Level I, and BIOLOGY 1A03 in Level II.
- Students may take a maximum of 6 units from SOCPSY 3B03, 3C03, 3F03, 3H03, 3M03, 3OP3, 3ZZ3 towards the Psychology, Neuroscience & Behaviour Course List.

Capstone Course List

- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity

- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry

and

- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- All Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PSYCH 2MP3 - Introduction to Music Cognition
- All Level III and IV PNB courses

AND

all Level III and IV PSYCH courses.

A maximum of 6 units from the following list may be used:

- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- (See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

9-12 units

- Electives

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 3 and 6* above)

15 units

- Electives

(See *Note 3* above)

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

*(*See *Notes 3 and 6* above*)*

9 units

from

- PNB 4D09 A/B - Senior Honours Thesis
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 2, 3 and 6* above)

15 UNITS

15 units

- Electives

Requirements for Students who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- (See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

9-12 units

- Electives

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- PNB 2A03 - Python for PNB
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Note 6* above)

15 units

- Electives

(See *Note 3* above)

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Note 6* above)

9 units

- PNB 4D09 A/B - Senior Honours Thesis or
- 6 units from *Capstone Course List* and 3 units from *Psychology, Neuroscience & Behaviour Course List*

(See *Note 6* above)

15 units

- Electives

(See *Note 3* above)

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

- (See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

0-3 units

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

9-12 units

- Electives

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 3* and *6* above)

15 units

- Electives

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 3* and *6* above)

9 units

- PNB 4D09 A/B - Senior Honours Thesis
- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

(See *Note 2* above)

15 units

- Electives

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR - MENTAL HEALTH SPECIALIZATION (B.A.)

Effective September 2026, admission to the Honours Psychology, Neuroscience & Behaviour - Mental Health Specialization will be suspended. Last entry into Level II is September 2025. Students who had intended to enrol in this program should consider the Honours Psychology, Neuroscience & Behaviour program with a Minor in Mental Health, Addiction and Society, or contact an Academic Advisor in the Office of the Associate Dean, Undergraduate Studies to discuss other options.

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0; a grade of at least B- in PSYCH 1FF3 or 1XX3 (See *Note 4* below); credit in 3 untis from BIOLOGY 1A03, 1A02, 1A01, 1M03, 1P03 or Grade 12 Biology U (See *Note 5* below); and credit MATH 1LS3 or 1A03 (See *Note 1* below).

Notes

- Students with Grade 12 Calculus and Vectors U must take MATH 1LS3 or 1A03. Students with Grade 12 Advanced Functions U must complete MATH 1F03 prior to completing MATH 1LS3 or 1A03. Students with Grade 11 Math must first take prior to completing MATH 1F03 and then one of MATH 1LS3 or 1A03.
- Students in the Honours Psychology, Neuroscience & Behaviour Mental Health Specialization program are eligible to complete a library study, independent research, and/or a thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
- A thesis is recommended for students who wish to pursue graduate research.
- Either PSYCH 1FF3 or 1XX3 is required for Admission but PSYCH 1XX3 is

recommended. Completion of one of PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
- It is recommended that students take BIOLOGY 1M03 in Level I and BIOLOGY 1A03 in Level II.
- Effective September 2026, students may count a maximum of 6 units from PNB 3Q03, PNB 3QQ3, PNB 4Q03, PNB 4QQ3 towards the Psychology, Neuroscience & Behaviour Course List.
- Students may take a maximum of 6 units from SOCPSY 3B03, SOCPSY 3C03, 3F03, 3H03, 3M03, 3OP3, 3ZZ3 towards the Psychology, Neuroscience & Behaviour Course List.

Capstone Course List

- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry **and**
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Mental Health Course List

- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- PNB 3I06 A/B
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3D03 - The Multisensory Mind
- PSYCH 3EV3 - Evolution and Mental Health
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3H03
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3UU3
- PSYCH 3VV3 - Human Memory
- SOCPSY 3M03 - Counselling & Psychotherapy

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSICCOG 2MP3 - Introduction to Music Cognition
- All Level III and IV MUSICCOG courses
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- PSYCH 2MP3 - Introduction to Music Cognition
- All Level III and IV PNB courses
- All Level III and IV PSYCH courses
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

See *Admission* above.

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

3-6 units

- Electives

LEVEL III: 30 UNITS

9 units

- PSYCH 2AA3 - Child Development
- PSYCH 3GG3
- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QM3 A/B S - Independent Research in Mental Health
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- *Mental Health Course List*

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- *Mental Health Course List*

9 units

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Notes 2 & 3* above)

9 units

- Electives

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

See *Admission* above.

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

3-6 units

- Electives

LEVEL III: 30 UNITS

9 units

- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 2AA3 - Child Development
- PSYCH 3GG3

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 2A03 - Python for PNB
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QM3 A/B S - Independent Research in Mental Health
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

9 units

from

- *Mental Health Course List*

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- *Mental Health Course List*

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Notes 2 & 3* above)

9 units

- Electives

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

See *Admission* above.

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

6 units

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 4* above)

3-6 units

- Electives

LEVEL III: 30 UNITS

9 units

- PSYCH 2AA3 - Child Development
- PNB 3HP3 - History of Psychology
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 3GG3

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab

- PNB 3V03 - Human Memory Lab

9 units

from

- *Mental Health Course List*

9 units

- Electives

LEVEL IV: 30 UNITS

9 units

- PNB 4A03 - Assessment in Children
- PSYCH 3B03 - Special Populations
- PSYCH 3MT3 - Psychometrics

3 units

from

- *Mental Health Course List*

9 units

from

- 6 units from the *Capstone Course List* and 3 units from the *Psychology, Neuroscience & Behaviour Course List*

or

- PNB 4D09 A/B - Senior Honours Thesis

(See *Notes 2 & 3* above)

HONOURS PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR - MUSIC COGNITION SPECIALIZATION (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0; a grade of at least B- in PSYCH 1FF3 or 1XX3 (See *Note 8* below); credit in 3 units from BIOLOGY 1A03, 1A02, 1A01, 1M03, 1P03 or Grade 12 Biology U (See *Note 9* below); credit in MATH 1LS3 or MATH 1A03 (See *Note 1* below); and credit in MUSIC 1A03 or 1AA3 (See *Note 2* below).

Notes

- Students with Grade 12 Calculus and Vectors U must take MATH 1LS3 or 1A03. Students with Grade 12 Advanced Functions U must complete MATH 1F03 prior to completing MATH 1LS3 or 1A03. Students with Grade 11 Math must first take MATH 1K03 prior to completing MATH 1F03 and then one of MATH 1LS3 or 1A03.
- MUSIC 1A03 or 1AA3 is required for admission, however, completion of both are required by the end of Level IV.
- Students who have completed Grade 3 History (or History 1, now Level 9 History) or Grade 5 History (or History 3, now ARCT History) from the Royal Conservatory of Music, with a grade of at least 70%, are not required to complete MUSIC 1AA3, and those students who have similarly obtained at least 70% on RCM Grade 4 History (or History 2, now Level 10 History) are not required to complete MUSIC 1A03 either for admission to the Music Cognition Specialization or to fulfill their degree requirements. If one or both course requirements are waived, it is recommended these units be replaced with other MUSIC courses.
- Completion of MUSIC 1CR3 is required by the end of level II, however, it is recommended the course be completed in Level I. Students who have completed Advanced Rudiments (or Grade 2 Rudiments) from the Royal Conservatory of Music (a grade of 80% or above, within the last two years) or a grade of 70% or above on a qualifying music theory exam administered by the School of the Arts (SOTA) are not required to complete MUSIC 1CR3. If the course requirement is waived, it is recommended these units be replaced with other MUSIC courses. Appointments can be made with SOTA to write the qualifying music theory exam on specific dates between February and May. The content of the exam is summarized at: https://sota.humanities.mcmaster.ca/
- Students considering applying to graduate school should complete a course with a strong research component such as MUSICCOG 3QQ3 A/B S, 4D06 A/B, 4QQ3 A/B S; PNB 3QQ3 A/B S, 4D06 A/B, 4D09 A/B, 4QQ3 A/B S, PNB 4QQ6 A/B. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission forms by the deadline indicated on the PNB website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).
- Students may take a maximum of 6 units from SOCPSY 3B03, 3C03, 3F03, 3H03, 3M03, 3OP3, 3ZZ3; towards the Psychology, Neuroscience & Behaviour Course List.
- Students are encouraged to complete both PSYCH 3A03 and 3H03 as part of the *Psychology, Neuroscience & Behaviour Course List* requirement.
- Either PSYCH 1FF3 or 1XX3 is required for Admission but PSYCH 1XX3 is recommended. Completion of one of PSYCH 1F03 or 1X03 is required by the end of Level II but PSYCH 1X03 is recommended in Level I.
- It is recommended that students take BIOLOGY 1M03 in Level I, and BIOLOGY 1A03 in Level II.

Capstone Course List

- MUSICCOG 4D06 A/B - Thesis in Music Cognition
- MUSICCOG 4QQ3 A/B S - Experimental Laboratory in Music Cognition II
- PNB 4D06 A/B - Senior Thesis
- PNB 4E03 - Topics in Social Diversity
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- PNB 4QQ6 A/B - Senior Independent Research
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- PSYCH 4R03 - Special Topics in Animal Behaviour
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- SUSTAIN 4S06 A/B - Leadership in Sustainability
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City

Psychology, Neuroscience & Behaviour Course List

- BIOLOGY 3P03 - Cell Physiology
- BIOLOGY 4T03 - Molecular and Cellular Neuroscience
- HTHSCI 4BB3 - Neuroimmunology
- HUMBEHV 3MD3 - Research Methods for Applied Psychology in Human Behaviour
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3K03 - Neural Control of Human Movement
- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3J03 - Visual Neuroscience
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- NEUROSCI 3SN3 - Neural Circuits
- PNB 2A03 - Python for PNB
- All Level III and IV PNB courses,

AND,

All Levels III and IV PSYCH.

A maximum of 6 units from the following list may be used:

- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

(See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units

- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 8* above)

0-3 units

- MUSIC 1CR3 - Foundations of Music I

(See *Note 4* above)

3-9 units

- Electives

(See *Notes 2* and *4* above)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

3 units

3-6 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

12-15 units

- Electives

(See *Note 2* above)

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

0-3 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

- PNB 4D09 A/B - Senior Honours Thesis or
- 6 units from *Capstone Course List* and 3 units from *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5 and 6* above)

12-15 units

- Electives

(See *Note 2* above)

Requirements For Students Who Entered in September 2024 or Prior

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

(See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units

- MUSIC 1CR3 - Foundations of Music I

3 units

- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 8* above)

3-6 units

- Electives

(See *Notes 2* and *4* above)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

- MUSICCOG 3QQ3 A/B S - Experimental Laboratory in Music Cognition I
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 2A03 - Python for PNB
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3QQ3 A/B S - Intermediate Independent Research
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

3 units

- MUSIC 2CA3

3-6 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

12-15 units

- Electives

(See *Note 2* above)

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

0-3 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

- PNB 4D09 A/B - Senior Honours Thesis or
- 6 units from *Capstone Course List* and 3 units from *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5 and 6* above)

12-15 units

- Electives

(See *Notes 2* and *6* above)

Requirements (Effective September 2026)

120 units total (Levels I to IV), of which no more than 48 units may be Level I

LEVEL I: 30 UNITS

(See *Admission* above)

LEVEL II: 30 UNITS

18 units

- PNB 2XA3 - Human Perception & Cognition
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PNB 2XC3 - Animal Behaviour & Evolution
- PNB 2XD3 - Integrative PNB Through Scientific Writing
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 2XF3 - Perspectives in PNB
- PNB 2XT0 - PNB Tutorial

3 units

- MUSICCOG 2MP3 - Introduction to Music Cognition

0-3 units

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

if not completed in Level I (See *Note 8* above)

6-9 units

- Electives

(See *Notes 2* and *4* above)

LEVEL III: 30 UNITS

3 units

- PNB 3XE3 - Inferential Statistics and Research Methods

3 units

from

- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PNB 3EE3 - Perception Laboratory
- PNB 3EV3 - Evolutionary Psychology Lab
- PNB 3L03 - Neurodevelopment & Plasticity Lab
- PNB 3MM3 - Cognitive Neuroscience Lab
- PNB 3S03 - Animal Behaviour Lab
- PNB 3V03 - Human Memory Lab

3 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

3 units

3-6 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

12-15 units

- Electives

(See *Note 2* above)

LEVEL IV: 30 UNITS

6 units

from

- *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 6 and 7* above)

0-3 units

from

- MUSICCOG 3SP3 - The Science of Performance
- MUSICCOG 4MP3 - Neuroscience of Music

9 units

- PNB 4D09 A/B - Senior Honours Thesis or
- 6 units from *Capstone Course List* and 3 units from *Psychology, Neuroscience & Behaviour Course List*

(See *Notes 5 and 6* above)

12-15 units

- Electives

(See *Note 2* above)

Bachelor of Arts

PSYCHOLOGY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 and a grade of at least C- in PSYCH 1F03 or 1X03.

Notes

- One of MHF4U -Advanced Functions, MCV4U - Calculus and Vectors, or MDM4U - Data Management is required. Students entering the program without one of these courses must complete one of MATH 1F03, 1K03, or STATS 1LL3 by the end of Level II. Completion in Level I is recommended.
- SOCSCI 2J03 must be completed by the end of Level II.
- PSYCH 1FF3 or 1XX3 and credit in 3 units from BIOLOGY 1A03, 1M03 or 1P03 or Grade 12 Biology U are recommended and serve as prerequisites for some upper-level Psychology courses. Students are encouraged to check requisites carefully.
- Students may take a maximum of 6 units from SOCPSY 3B03, 3C03, 3F03, 3H03, 3M03, 3OP3, 3ZZ3 towards the Psychology Course List.

Psychology Course List

- LINGUIST 2PS3 - Psycholinguistics
- LINGUIST 3C03 - Child Language Acquisition
- PSYCH 2AA3 - Child Development

- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 3A03 - Audition
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3B03 - Special Populations
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3C03 - Child Language Acquisition
- PSYCH 3CB3 - Attitudes and Persuasion
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3CD3
- PSYCH 3F03 - Evolution and Human Behaviour
- PSYCH 3FA3 - Neuroscience of Learning and Memory
- PSYCH 3M03 - Motivation and Emotion
- PSYCH 3MT3 - Psychometrics
- PSYCH 3T03 - Behavioural Ecology
- PSYCH 3UU3
- PSYCH 3VV3 - Human Memory
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

LEVEL II: 30 UNITS

3 units

- SOCSCI 2J03 - Introduction to Statistics

(See *Note 2* above.)

9 units

Level II Psychology, where at least six units must be from:

- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour

3 units

from

- MATH 1F03 - Introduction to Calculus and Analytic Geometry
- MATH 1K03 - Advanced Functions
- STATS 1LL3 - Introduction to Probability and Statistics

(If requirement completed in Level I, or students have one of MHF4U, MCV4U, or MDM4U, these units will be taken as non-psychology electives.)

(See *Note 1* above.)

9 units

- Electives, excluding Psychology

6 units

- Electives

LEVEL III: 30 UNITS

12 units

from

- *Psychology Course List*, of which at least nine units must be from Level III

(See Note 4 above)

12 units

- Electives, excluding Psychology

6 units

- Electives

Department of Religious Studies

http://www.religiousstudies.mcmaster.ca

Faculty as of January 15, 2025

CHAIR

Celia Rothenberg

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Celia Rothenberg/B.A. *(Wellesley College)*, M.St. *(Oxford)*, Ph.D. *(Toronto)*

Mark Rowe/B.A. *(McGill)*, M.A., Ph.D. *(Princeton)*

Hanna Tervanotko/B.A., M.A. *(Helsinki)*, Ph.D. *(Vienna)*, Th.D. *(Helsinki)*

Matthew Thiessen/B.R.S. *(Tyndale)*, M.A. *(Trinity Western)*, M.St. *(Oxford)*, Ph.D. *(Duke)*

ASSISTANT PROFESSORS

Jeremy Cohen/B.A., M.A. *(Concordia)*, Ph.D. *(McMaster)*

Meirav Jones/ B.A., M.A., PhD. *(Hebrew University of Jerusalem)*

ASSOCIATE MEMBERS

Basit Iqbal/(Anthropology) B.A. *(Alberta)*, M.A. *(Toronto)*, Ph.D. *(California-Berkeley)*

Daniel Machiela/(Notre Dame) B.A. *(Grand Valley State)*, M.A. *(Jerusalem University College)*, Ph.D. *(Notre Dame)*

Dilyana Mincheva/(Communication Studies and Multimedia) B.A., M.A. *(Sofia)*, Ph.D. *(Trent)*

Bachelor of Arts (Honours)

COMBINED HONOURS IN SOCIETY, CULTURE & RELIGION AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in three units from SCAR 1B03, 1GL3, 1SC3. Satisfaction of the admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities, and with the Arts and Science Program.
- All Society, Culture & Religion students will be assigned a faculty mentor upon entering the program. It is the responsibility of the student to consult with the mentor at least once each academic year to discuss their academic goals and course options.
- Students must consult both departments to determine how the Research Methods/Statistics requirement is to be satisfied.

- SCAR 4R06 A/B;is strongly recommended for students considering graduate work in Religious Studies. Students are encouraged to consider language training that supports their studies in Society, Culture & Religion. The Department of Religious Studies offers courses in Arabic, Hebrew, and Sanskrit. The study of other languages, including Chinese, Farsi, French, German, Greek, Japanese, and Latin, is also available at McMaster.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- (minimum) Level II Society, Culture & Religion

12 UNITS

- (minimum) Level III Society, Culture & Religion

3 UNITS

- SCAR 3F03 - Approaches to the Study of Religion

12 UNITS

- Levels II, III or IV Society, Culture & Religion

3 UNITS

- SCAR 4SC3 - Society, Culture & Religion Seminar

36 UNITS

- courses specified for the other subject

3 UNITS

If requirement completed in Level I, these units will be taken as electives.

from

- Either SOCSCI 2J03, three units of a language other than English, or the three-unit Research Methods/Statistics course specified for the other subject.

(See *Notes* above.)

12 UNITS

- Electives

HONOURS SOCIETY, CULTURE & RELIGION (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of C in three units from SCAR 1B03, 1GL3, 1SC3; students will be required to complete three more units of Level 1 Society, Culture & Religion prior to the completion of their degree. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- All Society, Culture & Religion students will be assigned a faculty mentor upon entering the program. It is the responsibility of the student to consult with the mentor at least once each academic year to discuss their academic goals and course options.
- SCAR 4R06 A/B is strongly recommended for students considering graduate work in Religious Studies.
- SCAR 4SC3 is offered each year. Note that Level IV seminars have the following prerequisite: Enrolment in Level III and above or by permission of the instructor.
- Students are encouraged to consider language training that supports their studies in Society, Culture & Religion. The Department of Religious Studies offers courses in Arabic, Hebrew, and Sanskrit. The study of other languages, including Chinese, Farsi, French, German, Greek, Japanese, and Latin, is also available at McMaster.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

12 UNITS

- Level II Society, Culture & Religion

15 UNITS

- Level III Society, Culture & Religion

3 UNITS

- SCAR 3F03 - Approaches to the Study of Religion

24 UNITS

- Levels II, III or IV Society, Culture & Religion.

(See *Notes* above)

3 UNITS

- SCAR 4SC3 - Society, Culture & Religion Seminar

(See *Notes* above)

3 UNITS

If requirement completed in Level I, these units will be taken as electives.

from

- Either SOCSCI 2J03 or three units of a language other than English

(See *Notes* above)

0-3 UNITS

If requirement completed in Level I, these units will be taken as electives.

- SCAR 1B03 - What on Earth is Religion?
- SCAR 1GL3 - The Good Life
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion

27-30 UNITS

- Electives, of which at least six units must be taken from outside of Society, Culture & Religion

Bachelor of Arts

SOCIETY, CULTURE & RELIGION (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5 and a grade of at least C- in three units from SCAR 1B03, 1GL3, 1SC3.

Notes

- All Society, Culture & Religion students will be assigned a faculty mentor upon entering the program. It is the responsibility of the student to consult with the mentor at least once each academic year to discuss their academic goals and course options.
- Students are encouraged to consider language training that supports their studies in Society, Culture & Religion. The Department offers courses in Arabic, Hebrew, and Sanskrit. The study of other languages, including Chinese, Farsi, French, German, Greek, Japanese, and Latin, is also available at McMaster.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

9 UNITS

- Level II Society, Culture & Religion

9 UNITS

- Level III Society, Culture & Religion

3 UNITS

- SCAR 3F03 - Approaches to the Study of Religion

3 UNITS

- SCAR 4SC3 - Society, Culture & Religion Seminar

3 UNITS

- Levels II, III or IV Society, Culture & Religion

(See *Notes* above.)

33 UNITS

- Electives, of which at least 6 units must be taken outside of Society, Culture & Religion.

Minor(s):

MINOR IN ASIAN STUDIES

Note

In order to declare a Minor in Asian Studies, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total, with no more than six units from Level I

12-15 UNITS

from

- CHINESE 1Z06 A/B - Mandarin Chinese for Beginners
- JAPANESE 1Z06 A/B S - Beginner's Intensive Japanese
- JAPANESE 2X03 - Japanese Anime (Taught in English)
- SANSKRIT 2A03 - Introduction to Sanskrit I
- SANSKRIT 2B03 - Introduction to Sanskrit II
- SCAR 2BN3 - Sex and the City in Buddhism: The Urban Life of Buddhist Nuns in North India
- SCAR 2F03 - Storytelling in Asian Religions
- SCAR 2GB3 - Great Books in Asian Religions
- SCAR 2HI3 - Introduction to Hinduism
- SCAR 2HW3 - History of Writing in Buddhist Asia
- SCAR 2IR3 - Bollywood and Indian Religions
- SCAR 2K03 - What is Buddhism?
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2NH3 - Gods, Ghosts, and Gandharvas: A Survey of Non-Human Realms in Asian Religions
- SCAR 2SB3 - Introduction to Sanskrit II
- SCAR 2SK3 - Introduction to Sanskrit I
- SCAR 2TT3 - Japanese Popular Culture and Religion

9-12 UNITS

from

- JAPANESE 2Z03 - Intermediate Intensive Japanese I
- JAPANESE 2ZZ3 - Intermediate Intensive Japanese II
- SANSKRIT 3A03 - Readings in Sanskrit
- SANSKRIT 3A06 A/B
- SANSKRIT 3B03 - Advanced Readings in Sanskrit
- SANSKRIT 4B06 A/B
- SCAR 2BF3 - Buddhism and Film
- SCAR 3BE3 - Buddhist Ethics
- SCAR 3E03 - Japanese Film and Religion
- SCAR 3S03 - The East Asian Religious Tradition
- SCAR 3U03 - The Buddhist Tradition in India
- SCAR 3UU3 - Zen Buddhism

MINOR IN HEALTH, WELL-BEING & RELIGION

Note

In order to declare a Minor in Health, Well-Being & Religion, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

15 UNITS:

6-12 units

from

- SCAR 2HA3 - Religion and Health in Antiquity
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views

3-9 units

from

- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2GR3 - Evil
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2SP3 - Sport and/as Religion
- SCAR 2UD3 - Utopias, Dystopias
- SCAR 2RN3 - Science, Religion, and Human Futures
- SCAR 3EE3 - Sacred Journeys
- SCAR 3GH3 - Interdisciplinary Global Health Field Course: Maternal and Infant Health in Morocco
- SCAR 3LL3 - Being Human in the Anthropocene
- SCAR 3XI3 - Selected Topics in Mysticism
- SCAR 3Y03 - Love

9 units

from

- Society, Culture & Religion at Levels II, III, IV

MINOR IN RELIGION & DIVERSITY

Note

In order to declare a Minor in Religion & Diversity, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

6-9 UNITS

- INDIGST 2A03 - Indigenous Peoples' Spirituality
- SCAR 2IR3 - Bollywood and Indian Religions
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2MT3 - Asian Meditation Traditions
- SCAR 2RD3 - Religion and Diversity
- SCAR 2TT3 - Japanese Popular Culture and Religion
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SCAR 3JJ3 - Social Justice

6-9 UNITS

from

- CMST 3RR3 - Race, Religion, and Media
- HISTORY 2A03 - Modern Middle Eastern Societies

- SCAR 2SA3 - Encountering the Sacred
- SCAR 3AR3 - Culture and Religion
- SCAR 3C03 - Islam in the Modern World
- SCAR 3FF3 - Gender and Religion
- SCAR 3GH3 - Interdisciplinary Global Health Field Course: Maternal and Infant Health in Morocco (or ANTHROP 3GH3 or HISTORY 3GH3) in combination with ARABIC 3GH3
- SCAR 3RL3 - Religion and Law
- SCAR 3SM3 - Secular Modernity?
- SCAR 3S03 - The East Asian Religious Tradition
- SCAR 3XI3 - Selected Topics in Mysticism
- SCAR 3ZZ3 - Judaism in the Modern World

9 UNITS

from

- Level II, III, IV Society, Culture & Religion

MINOR IN SOCIETY, CULTURE & RELIGION

Note

In order to declare a Minor in Society, Culture & Religion, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

24 UNITS

- Society, Culture & Religion courses with no more than six units from Level I

Social Psychology Program

Kenneth Taylor Hall, Room 212, ext. 22241
https://socialpsychology.mcmaster.ca

DIRECTOR

Tara Marshall*/(Health and Aging)* B.A. *(Queen's)*, M.A., Ph.D *(Toronto)*

COMMITTEE OF INSTRUCTORS

Luca Berardi*/(Sociology)* B.A., M.A. *(Toronto)*, Ph.D. *(Alberta)*
Sarah Clancy*/(Health and Aging)* B.A. *(McMaster)*, M.A. *(Guelph)*, Ph.D. *(McMaster)*
Meridith Griffin*/(Health and Aging)* B.Kin. *(McMaster)*, M.A. *(British Columbia)*, Ph.D. *(Exeter)*
Tara Marshall*/(Health and Aging)* B.A. *(Queen's)*, M.A., Ph.D *(Toronto)*
Jessica Maxwell*/(Health and Aging)* B.A. *(Queen's)*, M.A., Ph.D *(Toronto)*

Students study various aspects of Social Psychology from a multidisciplinary perspective to gain an understanding of how individuals behave and psychologically thrive, how small groups and communities interact, and how societies form practices and priorities. Students will learn how to locate themselves in the complex fabrics of their cultures, their geographies and their power relationships. This program is ideal for students who are interested in many social science perspectives on how people develop over the lifespan, how they behave in different environmental contexts, and how psychological health plays a role in these dynamics.

FIELDS OF STUDY

Mental Health

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3HI3
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ART 2AA3 - Introduction to the Practice of Art Therapy
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ENVSOCTY 2HI3 - Health and Place
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 2L03 - Drugs, Sex and Alcohol: Society and its Addictions
- HLTHAGE 2N03 - Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 2P03 - Sex and Wellbeing
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4Q03 - Representations of Mental Illness
- INDIGST 2F03 - Indigenous Education in Canada
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3B03 - Special Populations
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3MT3 - Psychometrics
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCPSY 2B03 - Psychology of Well-Being
- SOCPSY 2D03 - Making and Breaking Rules
- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 2F03 - Psychology of Close Relationships
- SOCPSY 3A03 - Mental Health
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3RR3 - Imprisonment
- SOCPSY 4G03 - Child Clinical Psychology
- SOCPSY 4H03 - Advanced Topics in Close Relationships
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

Law, Justice, Crime and Deviance

- ANTHROP 3FA3 - Forensic Anthropology
- ECON 2Q03 - Economics of Bad Behaviour
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 3JJ3 - Crime, Constables, and Courts: Modern Criminal Justice, 1700 to Present
- HISTORY 3XX3 - Human Rights in History
- HLTHAGE 3T03 - Health and Incarceration
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- PHILOS 1B03 - Philosophy, Law and Society
- POLSCI 2C03 - Force and Fear, Crime and Punishment
- POLSCI 3CL3 - Constitutional and Public Law in Canada

- POLSCI 3RF3 - The Charter of Rights and Freedoms
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 3CC3 - Forensic Psychology
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 3GG3
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCPSY 2D03 - Making and Breaking Rules
- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3RR3 - Imprisonment
- SOCPSY 4F03 - Social Psychology of Crime and the Media
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

Health and Well-Being

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3HI3
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 2P03 - Economics of Professional Sports
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4HD3 - Disability, Society and Environment
- HLTHAGE 2C03 - Health Economics and its Application to Health Policy
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3M03 - Approaches to Mental Health and Resilience
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4T03 - Gender, Sex and Health
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- KINESIOL 3V03 - Sport Psychology
- PHILOS 3D03 - Philosophy of Science
- POLSCI 4RR3 - Health Policy in the Industrialized World
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCIOL 2T03 - Sociology of Sport
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3HH3
- SOCPSY 2B03 - Psychology of Well-Being
- SOCPSY 2C03 - Social Psychology of Popular Culture
- SOCPSY 2F03 - Psychology of Close Relationships
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism

Family and the Life Course

- SOCPSY 2C03 - Social Psychology of Popular Culture
- SOCPSY 2F03 - Psychology of Close Relationships
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood
- SOCPSY 4G03 - Child Clinical Psychology
- SOCPSY 4H03 - Advanced Topics in Close Relationships
- HLTHAGE 2M03 - Aging in Modern (and Post-Modern) Families
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 3P03
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 3Y03 - Love
- PSYCH 2AA3 - Child Development
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AG3 - Aging
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 3CC3
- SOCIOL 3X03
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCSCI 2CC3 - Children and Family in Canada
- SOCSCI 2O03 - Canadian Children
- SOCSCI 2P03 - Canadian Adolescents

PSYCHOLOGY - SOCIOLOGY COURSE LIST

Students are responsible for ensuring that they have successfully completed any prerequisite courses and are strongly encouraged to consult with an academic advisor in planning their course of studies.

- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2B03 - Personality
- PSYCH 2C03 - Social Psychology
- PSYCH 3AB3 - Adolescent Psychology
- PSYCH 3AC3 - Human Sexuality
- PSYCH 3AG3 - Aging
- PSYCH 3B03 - Special Populations
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3CB3 - Attitudes and Persuasion
- PSYCH 3CC3 - Forensic Psychology
- PSYCH 3JJ3 - Socio-Emotional Development
- PSYCH 3MT3 - Psychometrics
- PSYCH 3WA3 - The Mind as a Work of Art
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2T03 - Sociology of Sport
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3CC3
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives
- SOCIOL 3NN3 - Popular Culture and Inequality
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 3X03
- SOCIOL 3Z03

LEVEL 4 COURSE LIST

- ANTHROP 4D03 - Practicing Anthropology: Ethics, Theory, Engagement
- ENVSOCTY 4HD3 - Disability, Society and Environment
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4UD3 - Special Topics in Urban Planning
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4BB3 - Aging and Technology
- HLTHAGE 4H03 - History and Culture of Aging
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4L03 - Social Policy and Aging
- HLTHAGE 4N03 - Aging and Wellbeing
- HLTHAGE 4O03 - Soundscapes of Wellbeing in Popular Music
- HLTHAGE 4P03 - Leisure and Recreation in Later Life
- HLTHAGE 4Q03 - Representations of Mental Illness
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- HLTHAGE 4T03 - Gender, Sex and Health
- HLTHAGE 4W03 - Selected Issues in Aging and Society
- INDIGST 4B03 - Indigenous Literary Governance and Resistance
- SOCPSY 4IS3 - Independent Research
- SOCPSY 4IS6 A/B - Independent Research
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4E03 - Self and Identity
- SOCIOL 4EE3 - Selected Topics in the Sociology of Culture
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCIOL 4R03 - Individual and Society
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4SR3 - Topics in the Sociology of Religion
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4U03 - Special Topics in the Sociology of Women
- SOCIOL 4W03 - Social Problems
- SOCIOL 4XX3 - Youth in Society: Challenge and Change

Bachelor of Arts (Honours)

HONOURS SOCIAL PSYCHOLOGY (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in SOCPSY 1Z03 and successful completion of one of PSYCH 1F03, PSYCH 1X03, or SOCIOL 1Z03. Completion of SOCIOL 1Z03 and one of PSYCH 1F03, PSYCH 1X03 is required by the end of the first term in Level II. Completion of both requirements in Level I is strongly recommended. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Students must have completed both an introductory Psychology course (either PSYCH 1F03 or PSYCH 1X03) and an introductory Sociology course (SOCIOL 1Z03) by the end of the first term in Level II.
- Students are responsible for ensuring that they meet the prerequisites for any course they wish to take from the course lists.
- Students considering a graduate program should consult a departmental advisor to plan a program of study that meets admission requirements for such programs. Additional courses may be required.
- This program does not normally provide the appropriate preparation for students to enter graduate studies in clinical psychology. Please refer to the Honours Social Psychology (Research Specialist Option) (B.A.) program or the Honours Psychology, Neuroscience & Behaviour (B.A.) program in this section of the calendar.
- Students may take a maximum of 3 units from SOCPSY 4B03, 4D03, 4E03, 4F03, 4G03, 4H03, 4MM3.
- Social Psychology at McMaster encompasses a broad area. The program is flexible in that students are able to select from a wide range of courses those that interest them most. However, for those students who wish to give their studies a tighter focus, there are several thematic areas to consider in making course selections.
- Students interested in a concentration in Psychology may complete the Minor in Psychology provided they do not have more than 6 units of Psychology courses above Level 1 overlapping with the Honours Social Psychology degree requirements.
- Students interested in a concentration in Sociology may complete the Minor in Sociology provided they do not have more than 6 units of Sociology courses above Level 1 overlapping with the Honours Social Psychology degree requirements.
- Students who take SOCPSY 3L03 are encouraged to take it before entry in SOCPSY 4ZZ6 A/B.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

0-3 UNITS

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

0-3 UNITS

from

- SOCIOL 1Z03 - An Introduction to Sociology

6 UNITS

- SOCPSY 2K03 - Research Methods in Social Psychology
- SOCPSY 2YY3 - Theories in Social Psychology

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

from

- SOCPSY 2B03 - Psychology of Well-Being
- SOCPSY 2D03 - Making and Breaking Rules

3 UNITS

from

- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 2F03 - Psychology of Close Relationships

3 UNITS

- SOCPSY 3Y03 - Applied Social Psychology

9 UNITS

from

- SOCPSY 3A03 - Mental Health
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3E03 - Big Ideas/Great Thinkers in Social Psychology
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3L03 - Advanced Research Methods
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology
- SOCPSY 3RR3 - Imprisonment
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

6 UNITS

- SOCPSY 4ZZ6 A/B - Social Psychology Research Project

3 UNITS

from

- SOCPSY 4B03 - Special Topics in Social Psychology
- SOCPSY 4D03 - Contemporary Social Issues
- SOCPSY 4E03 - Special Topics in Social Psychology
- SOCPSY 4F03 - Social Psychology of Crime and the Media
- SOCPSY 4G03 - Child Clinical Psychology
- SOCPSY 4H03 - Advanced Topics in Close Relationships
- SOCPSY 4MM3 - Public Social Psychology

3 UNITS

- from the Level 4 Course List (found here)

9 UNITS

- Psychology from the Psychology - Sociology Course List

9 UNITS

- Sociology from the Psychology - Sociology Course List

33 UNITS

- Electives

HONOURS SOCIAL PSYCHOLOGY (RESEARCH SPECIALIST OPTION) (B.A.)

Admission

Enrolment in this program is limited and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0 including a grade of at least C in SOCPSY 1Z03 and successful completion of one of PSYCH 1F03, PSYCH 1X03, or SOCIOL 1Z03. Completion of SOCIOL 1Z03 and one of PSYCH 1F03, PSYCH 1X03 is required by the end of the first term in Level II. Completion of both requirements in Level I is strongly recommended. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Honours Social Psychology (Research Specialist Option) is intended for students who are considering research-based graduate programs (e.g., Clinical Psychology).
- Students in the Research Specialist Option B.A. will have priority enrolment in SOCPSY 3L03.
- Students must have completed both an introductory Psychology course (either PSYCH 1F03 or PSYCH 1X03) and an introductory Sociology course (SOCIOL 1Z03) by the end of the first term in Level II.
- Students interested in the Research Specialist Option may wish to take SOCSCI 1RM3 prior to entry.
- Students are responsible for ensuring that they meet the prerequisites for any course they wish to take from the course lists.
- Students considering a graduate program should consult a departmental advisor to plan a program of study that meets admission requirements for such programs. Additional courses may be required.
- Students may take a maximum of 3 units from SOCPSY 4B03, 4D03, 4E03, 4F03, 4G03, 4H03, 4MM3.
- Social Psychology at McMaster encompasses a broad area. The program is flexible in that students are able to select from a wide range of courses those that interest them most. However, for those students who wish to give their studies a tighter focus, there are several thematic areas to consider in making course selections.
- Students interested in a concentration in Psychology may complete the Minor in Psychology provided they do not have more than 6 units of Psychology courses above Level 1 overlapping with the Honours Social Psychology degree requirements.
- Students interested in a concentration in Sociology may complete the Minor in Sociology provided they do not have more than 6 units of Sociology courses above Level 1 overlapping with the Honours Social Psychology degree requirements.
- Supervisory priority for SOCPSY 3K03 and 4A03 will be given to students who have not yet completed one of these courses.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program.

(See *Admission* above.)

0-3 UNITS

from

- PSYCH 1F03 - Survey of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour

0-3 UNITS

from

- SOCIOL 1Z03 - An Introduction to Sociology

6 UNITS

- SOCPSY 2K03 - Research Methods in Social Psychology
- SOCPSY 2YY3 - Theories in Social Psychology

3 UNITS

- SOCSCI 2J03 - Introduction to Statistics

3 UNITS

from

- SOCPSY 2B03 - Psychology of Well-Being
- SOCPSY 2D03 - Making and Breaking Rules

3 UNITS

from

- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 2F03 - Psychology of Close Relationships

3 UNITS

- SOCPSY 3Y03 - Applied Social Psychology

6 UNITS

from

- SOCPSY 3A03 - Mental Health
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 3E03 - Big Ideas/Great Thinkers in Social Psychology
- SOCPSY 3F03 - Who Am I? Self and Identity
- SOCPSY 3H03 - Industrial/Organizational Psychology
- SOCPSY 3M03 - Counselling & Psychotherapy
- SOCPSY 3OP3 - Political Psychology

- SOCPSY 3RR3 - Imprisonment
- SOCPSY 3ZZ3 - Small Worlds: Children and Childhood

3 UNITS

- SOCPSY 3L03 - Advanced Research Methods

3 UNITS

- SOCPSY 3K03 - Research Experience
- SOCPSY 4A03 - Advanced Research Experience

6 UNITS

- SOCPSY 4ZZ6 A/B - Social Psychology Research Project

3 UNITS

from

- SOCPSY 4B03 - Special Topics in Social Psychology
- SOCPSY 4D03 - Contemporary Social Issues
- SOCPSY 4E03 - Special Topics in Social Psychology
- SOCPSY 4F03 - Social Psychology of Crime and the Media
- SOCPSY 4G03 - Child Clinical Psychology
- SOCPSY 4H03 - Advanced Topics in Close Relationships
- SOCPSY 4MM3 - Public Social Psychology

3 UNITS

- from the Level 4 Course List (found here)

9 UNITS

- Psychology from the Psychology - Sociology Course List

9 UNITS

- Sociology from the Psychology - Sociology Course List

30 UNITS

- Electives

School of Social Work

http://www.socialwork.mcmaster.ca

Faculty as of January 15, 2025

DIRECTOR

Saara Greene

PROFESSORS

Mirna E. Carranza/B.S.W. *(El Salvador)*, M.T.S *(Wilfrid Laurier)*, Ph.D. *(Guelph)*
Saara Greene/B.A., B.S.W. *(Manitoba)*, M.S.W. *(McGill)*, Ph.D. *(Edinburgh)*
Christina Sinding*/(Health, Aging and Society)* B.A. *(Western Ontario)*, M.A. *(McMaster)*, Ph.D. *(Toronto)*

ASSOCIATE PROFESSORS

Janice Chaplin/B.A. *(Mount Allison)*, B.S.W., M.S.W. *(McMaster)*
Gary C. Dumbrill/B.Sc. *(South Bank, London)*, M.S.W. *(York)*, Ph.D. *(Toronto)*
Bonnie Freeman*/(Indigenous Studies)* B.A., B.S.W., M.S.W. *(McMaster)* Ph.D. *(Laurier)*
Randy Jackson*/(Health, Aging and Society)* B.A. *(Ottawa)*, M.A. *(Manitoba)*
Ameil Joseph/B.A. *(Waterloo)*, M.S.W. *(Laurier)*, Ph.D. *(York)*
Tara La Rose/B.S.W. *(Ryerson)*, M.S.W. *(Dalhousie)*, Ph.D. *(Toronto)*
Jennie Vengris/B.A., B.S.W., M.S.W. *(McMaster)*

ASSISTANT PROFESSORS

Jennifer Ma/B.A. *(York)*, M.S.W., Ph.D. *(Toronto)*
Rochelle Maurice*/B.H.S. (Western), M.S.W. (New York), M.HSc. (Toronto)*

ADJUNCT PROFESSORS

Ken Moffatt*/(School of Social Work, Ryerson)*, B.E.S. *(Waterloo)*, M.S.W., Ph.D. *(Toronto)*

ADJUNCT ASSISTANT PROFESSORS

Lee de bie Das/B.A., B.S.W. *(McMaster)*, M.E.S. *(York)*, *M.HSc. (Toronto), Ph.D. (McMaster).*
Allyson Ion/B.Sc. *(McGill)*, M.Sc., Ph.D. *(McMaster)*
Erin Kuri/B.F.A. *(York)*, M.A. *(Concordia)*, Ph.D. *(McMaster)*
Cathy Paton*/B.S.W. (Toronto Metropolitan), M.S.W. (Toronto Metropolitan), Ph.D. (McMaster)*
Sue Phipps/BScN, MHM, *(McMaster)*

ASSOCIATE MEMBERS

Amber Dean*/(Cultural Studies and Gender Studies)*, B.A. *(Alberta)*, M.A. *(Simon Fraser)*, Ph.D. *(Alberta)*
James Gillett*/(Health, Aging & Society)*, B.A. *(Calgary)*, M.A. *(McMaster),* Ph.D. *(McMaster)*
Robert D. Wilton*/(Earth, Environment & Society)* B.A. *(Hull)*, M.A., Ph.D. *(Southern California)*
Y. Rachel Zhou*/(Health, Aging and Society and Institute on Globalization and the Human Condition)* B.A., LLM *(Wuhan, China)*, M.A., Ph.D. *(Toronto)*

Bachelor of Social Work (Honours)

HONOURS BACHELOR OF SOCIAL WORK (B.S.W.)

Admission

Enrolment in this program is limited. Eligibility is dependent upon completion of any Level I program including a total of six units of introductory Social Work or introductory Sociology and six additional units of introductory level courses from the Course List below (or equivalent). Students who are interested in the Honours B.S.W. are strongly encouraged to take both SOCWORK 1AA3 and SOCWORK 1BB3 in level 1. Students are also encouraged to take one or both of INDIGST 1A03 - Introduction to Indigenous Studies, or INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies, in level I as completion of one of these courses will be required for completion of the B.S.W. Admission requires, as a minimum, completion of any level I program with a grade point average of at least 6.0 and evidence of personal suitability which may be evaluated by one or a combination of written statements, tests or interviews.

Volunteer/work experience including references (mandatory, not scored) - Applicants will be asked to submit details regarding previous volunteer, placement and/or work experience in social/human services. As well, applicants will be asked to submit two references from a combination of their volunteer, social/human services work, and/or placement experience. Note - if a student has completed all hours within one organization, it is acceptable to submit two references from two different people at the same organization.

We require 100 hours of volunteer/work/placement experience. To provide flexibility, 50 hours must be completed by April in the year of application and any remaining hours must be completed after admission to the program in the term before the student starts the first placement: SOCWORK 3DD6 A/B S. We will not grade this experience but rather ask for it to be documented and references provided.

We welcome a wide variety of experience: work, placement, or volunteer experience in human services/social change. We welcome volunteer experience with one's own faith-based or cultural community.

For students who completed their secondary schooling in Ontario, the required hours required will be in addition to an applicant's high school volunteer hours requirement, unless the high school volunteer hours were in human services/social change.

Course List

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- CMST 1A03 - Introduction to Communication
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics
- ECON 1ME3 - Introduction to Mathematical Economics
- ENVSOCTY 1HA3 - Society, Culture and Environment

- ENVSOCTY 1HB3 - Population, Cities and Development
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GLOBALZN 1A03 - Global Citizenship
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- PEACJUST 1A03 - Peace, Justice, Human Rights
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1R03
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCSCI 1SS3 - Inquiry in the Social Sciences
- SOCSCI 1T03 - Life, the University, and Everything
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

Admission Notes

- Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum cumulative average Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOCWORK 1AA3 and SOCWORK 1BB3. Students who have successfully completed this diploma **with a cumulative average of 3.4 - 4.0 (85%-100%)** are not required to complete six additional units of introductory level courses from the Course List above to be eligible for admission.
- An applicant is required to complete the prerequisite undergraduate degree work by April of the year in which the application is made.
- Indigenous students (includes First Nations, Métis & Inuit) may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.
- **Enrolment in the B.S.W. program is limited.** Students who intend to apply to the B.S.W. program must follow the application instructions as found on the School of Social Work website: https://socialwork.mcmaster.ca/.
- Applicants **must also apply** to the University.
- **All applications for admission to the School of Social Work are considered annually and must be made directly to the School well before February 1 for the Fall/Winter term.**
- **Applications that are submitted after the February 1 deadline will not be considered.**
- **Offers of acceptance cannot be deferred; students must complete a required social work course in the year of admission.**

Mandatory Applications

McMaster Applicants

SUPPLEMENTARY APPLICATION

- Applicants must complete the mandatory *School of Social Work Supplementary Application* by February 1 in the year of application.

Non-McMaster Applicants

SUPPLEMENTARY APPLICATION

- Applicants must complete the mandatory *School of Social Work Supplementary Application* by February 1 in the year of application.

AND:

OUAC APPLICATION

- Applicants must also complete the mandatory Ontario University Application Centre (OUAC) 105 form on-line application form (with payment). Visit the OUAC website to confirm the January deadline date each year.

Program Notes

- **Course Groupings:** There are two groups of courses in the Social Work program:

Foundation of Social Work. This category includes core courses which are required by social work students, most of which are available to social work students only. One exception to this is SOCWORK 4J03 which has a limited number of seats for undergraduates in a Labour Studies program and undergraduates in Level III or above of a non-Social Work/Work and Labour Studies program who have completed SOCWORK 1AA3 or SOCWORK 1BB3.
Social and Political Context of Social Work. Social Work students must take 9 units from the Social and Political Context of Social Work group of courses. Social and Political Context of Social Work courses except SOCWORK 4SA3 are also available for elective credit by undergraduates in programs outside of Social Work according to the individual pre-requisites. Registration in SOCWORK 4SA3 is restricted to Social Work students who have received permission from the School of Social Work. All Social and Political Context of Social Work courses have limited enrolment.

Foundations of Social Work

- SOCWORK 2A06 A/B - Theory, Process and Communication Skills for Social Work
- SOCWORK 2BB3 - Anti-Oppressive Social Work
- SOCWORK 2CC3 - Introduction to Community Practice
- SOCWORK 3D06 A/B S - General Social Work I
- SOCWORK 3DD6 A/B S - Field Practicum I
- SOCWORK 3E03 - Individual Practice Across the Lifespan
- SOCWORK 3F03 - Social Work with Groups
- SOCWORK 4D06 A/B S - General Social Work II
- SOCWORK 4DD6 A/B S - Field Practicum II
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4X03 - Social Work with Families
- SOCWORK 4ZZ3 - Social Welfare: Practice Implications and Advocacy

Social and Political Context of Social Work

- SOCWORK 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3ID3 - Special topics in Indigenous Social Work Research and Practice
- SOCWORK 3L03
- SOCWORK 3O03 - Social Work and Sexualities

- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice
- SOCWORK 4SB3
- SOCWORK 4TI3 - Trauma Informed Practice
- SOCWORK 4TR3 - Deyohahage: Gihę̀ gowahneh/Two Row on the Grand: Cultural Resurgence, Respect & Reconciliation
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- **Progression Within Program:** Students must achieve a minimum grade of C+ in each of SOCWORK 2A06 A/B, 2BB3, 2CC3, 3D06 A/B S, 3E03, 3F03, 4D06 A/B S, 4J03, 4X03 and 4ZZ3, a Pass in their field placements SOCWORK 3DD6 A/B S and 4DD6 A/B S, and a GPA of at least 6.0. If a student fails to meet the minimum grade requirements in these required social work courses or a Pass designation in either field placement (SOCWORK 3DD6 A/B S and 4DD6 A/B S), the student may not proceed in the program; however, the student may make a request in writing to the Director of the School of Social Work to be allowed to repeat the course in which the minimum grade or Pass requirement has not been met. Such requests will be reviewed by the Director of the School of Social Work in consultation with the Chair of the Undergraduate Studies Committee and/or the Chair of the Field Education Program and the course instructor. These courses and/or placements may only be repeated when approval is given by the Director of the School of Social Work following consultation as described above. Students who subsequently fail to meet the minimum grade or *Pass* requirement after repeating the course or placement may not continue in the program.
- Students who were admitted to this program in 2017-2018 or later must complete INDIGST 1A03 - Introduction to Indigenous Studies or INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies. If one of these courses was taken in level I then students will be required to take an additional 3 units of electives.
- Students must complete three units of Social Sciences Research Methods (e.g. SOCIOL 2Z03, SOCPSY 2K03, HLTHAGE 2A03, INDIGST 2M03, etc.). A statistics course may not substitute for a research methods course.
- **Graduation**: The Honours B.S.W will be granted only if the student has achieved a grade of at least C+ in each of SOCWORK 2A06 A/B, 2BB3, 2CC3, 3D06 A/B S, 3E03, 3F03, 4D06 A/B S, 4J03, 4X03 and 4ZZ3, a *Pass* in SOCWORK 3DD6 A/B S and 4DD6 A/B S, and a Grade Point Average of at least 6.0.
- Students are expected to assume the cost of travelling to and from field practice agencies and for any related expenses.
- Students in the social work program must apply for third- and fourth-year field placements (SOCWORK 3DD6 A/B S and 4DD6 A/B S), and are able to provide information on areas of interest. While efforts are made to match placements with student preferences, the final assignment of placement settings is constrained by many factors, including the availability of settings and field and faculty resources. Students may therefore be required to complete a field placement in an agency that is not among their preferred options.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- From the Level I program completed prior to admission to the program. (See *Admission* above.)

12 UNITS

- SOCWORK 2A06 A/B - Theory, Process and Communication Skills for Social Work
- SOCWORK 2BB3 - Anti-Oppressive Social Work
- SOCWORK 2CC3 - Introduction to Community Practice

Note: SOCWORK 2A06 A/B, SOCWORK 2BB3 and SOCWORK 2CC3 must be completed prior to enrolling in SOCWORK 3D06 A/B S and SOCWORK 3DD6 A/B S

12 UNITS

- SOCWORK 3D06 A/B S - General Social Work I
- SOCWORK 3DD6 A/B S - Field Practicum I

Note: SOCWORK 3D06 A/B S and SOCWORK 3DD6 A/B S must be completed prior to enrolling in SOCWORK 4D06 A/B S and SOCWORK 4DD6 A/B S

12 UNITS

- SOCWORK 4D06 A/B S - General Social Work II
- SOCWORK 4DD6 A/B S - Field Practicum II

15 UNITS

- SOCWORK 3E03 - Individual Practice Across the Lifespan
- SOCWORK 3F03 - Social Work with Groups
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4X03 - Social Work with Families
- SOCWORK 4ZZ3 - Social Welfare: Practice Implications and Advocacy

9 UNITS

- from the *Social and Political Context of Social Work* courses

3 UNITS

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies

Note: If one of these courses was taken in level I then students will be required to take an additional 3 units of electives. (See *Program Note 3* above).

3 UNITS

- Social Sciences Research Methods. (See *Program Note 4* above)

24-27 UNITS

- Electives

*A maximum of 12 additional units of *Social and Political Context of Social Work* courses can be taken as electives.

Bachelor of Social Work

BACHELOR OF SOCIAL WORK (B.S.W.)

Admission

Enrolment in this program is limited. Eligibility is dependent upon completion of an undergraduate degree from a recognized university, including a total of six units of introductory Social Work or introductory Sociology and six additional units of introductory level courses from the Course List below (or equivalent). Students who are interested in the B.S.W. (post degree) are strongly encouraged to take both SOCWORK 1AA3 and SOCWORK 1BB3 during their first degree. Students are also encouraged to take one or both of INDIGST 1A03 - Introduction to Indigenous Studies, or INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies, in their first degree, as completion of one of these courses will be required for completion of the B.S.W. To be considered for admission, students must normally have a minimum average of 6.0 on the most recent 30 units (five full credits) of university-level courses completed and evidence of personal suitability which may be evaluated by one or a

combination of written statements, tests or interviews.

Volunteer/work experience including references (mandatory, not scored) - Applicants will be asked to submit details regarding previous volunteer, placement and/or work experience in social/human services. As well, applicants will be asked to submit two references from a combination of their volunteer, placement and/or work experience in social/human services work. Note - if a student has completed all hours within one organization, it is acceptable to submit two references from two different people from the same organization.

We require 100 hours of volunteer/work/placement experience. To provide flexibility, 50 hours must be completed by April in the year of application and any remaining hours must be completed after admission to the program in the term before the student starts the first placement: SOCWORK 3DD6 A/B S. We will not grade this experience but rather ask for it to be documented and for references to be provided.

We welcome a wide variety of experience: work, placement, or volunteer experience in human services/social change. We welcome volunteer experience with one's own faith-based or cultural community.

For students who completed their secondary schooling in Ontario, the required hours required will be in addition to an applicant's high school volunteer hours requirement, unless the high school volunteer hours were in human services/ social change.

Course List

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- CAYUGA 1Z03 - Introduction to Cayuga Language and Culture
- CMST 1A03 - Introduction to Communication
- ECON 1B03 - Introductory Microeconomics
- ECON 1BB3 - Introductory Macroeconomics
- ECON 1ME3 - Introduction to Mathematical Economics
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GLOBALZN 1A03 - Global Citizenship
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- MOHAWK 1Z03 - Introduction to Mohawk Language and Culture
- OJIBWE 1Z03 - Introduction to Ojibwe Language and Culture
- PEACJUST 1A03 - Peace, Justice, Human Rights
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- PSYCH 1F03 - Survey of Psychology
- PSYCH 1FF3 - Survey of Biological Basis of Psychology
- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- SCAR 1B03 - What on Earth is Religion?
- SCAR 1SC3 - The Big Questions: Introduction to Society, Culture & Religion
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCSCI 1SS3 - Inquiry in the Social Sciences
- SOCSCI 1T03 - Life, the University, and Everything
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- WORKLABR 1A03 - An Introduction to Work and Labour in Canada
- WORKLABR 1D03
- WORKLABR 1E03 - Navigating the World of Work

Admission Notes

- Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOCWORK 1AA3 and SOCWORK 1BB3. Students who have successfully completed this diploma **with a cumulative average of 3.4 - 4.0 (85%-100%)** are not required to complete six additional units of introductory level courses from the Course List above to be eligible for admission.
- An applicant is required to complete the prerequisite undergraduate degree work by April of the year in which application is made.
- Indigenous students (includes First Nations, Métis & Inuit) may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.
- **Enrolment in the B.S.W. program is limited.** Students who intend to apply to the B.S.W. program must follow the application instructions as found on the School of Social Work website: https://socialwork.mcmaster.ca/.
- Applicants **must also apply** to the University.
- **All applications** for admission to the School of Social Work are considered annually and must be made **directly to the School of Social Work well before the deadline(s) noted below.**
- Applications that are submitted after the February 1 deadline will not be considered.
- Offers of acceptance cannot be deferred; students must complete a required social work course in the year of admission.

Mandatory Applications

Individuals interested in the B.S.W. program must complete **two** application forms as follows:

General Application

- If you have graduated from a **University other than McMaster**, you must complete the mandatory Ontario University Application Centre (OUAC) 105 form on-line application form (with payment). Visit the OUAC website to confirm the January deadline date each year. If you are a McMaster graduate, complete the *McMaster Returning Student Application*.

Supplementary Application

- All applicants must complete the mandatory *School of Social Work Supplementary Application* by February 1 in the year of application.

Program Notes

- **Course Groupings:** There are two groups of courses in the Social Work program:
- **Foundation of Social Work**. This category includes core courses which are required by social work students, most of which are available to social work students only. One exception to this is SOCWORK 4J03 which has a limited number of seats for undergraduates in a Work and Labour Studies program and undergraduates in Level III or above of a non-Social Work/ Work and Labour Studies program who have

completed SOCWORK 1AA3 or SOCWORK 1BB3.

- **Social and Political Context of Social Work.** Social Work students must take 3-9 units from the Social and Political Context of Social Work group of courses, depending on if INDIGST 1A03 - Introduction to Indigenous Studies or INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies, and Social Research methods were completed in the first degree. See *Notes 3 and 4* below. All Social and Political Context of Social Work courses except SOCWORK 4SA3 are available for credit by undergraduates in programs outside of Social Work according to the individual course pre-requisites. Registration in SOCWORK 4SA3 is restricted to Social Work students who have received permission form the School of Social Work. All Social and Political Context of Social Work courses have limited enrolment.

Foundation of Social Work

- SOCWORK 2A06 A/B - Theory, Process and Communication Skills for Social Work
- SOCWORK 2BB3 - Anti-Oppressive Social Work
- SOCWORK 2CC3 - Introduction to Community Practice
- SOCWORK 3D06 A/B S - General Social Work I
- SOCWORK 3DD6 A/B S - Field Practicum I
- SOCWORK 3E03 - Individual Practice Across the Lifespan
- SOCWORK 3F03 - Social Work with Groups
- SOCWORK 4D06 A/B S - General Social Work II
- SOCWORK 4DD6 A/B S - Field Practicum II
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4X03 - Social Work with Families
- SOCWORK 4ZZ3 - Social Welfare: Practice Implications and Advocacy

Social and Political Context of Social Work

- SOCWORK 3B03
- SOCWORK 3C03 - Social Aspects of Health and Illness
- SOCWORK 3ID3 - Special topics in Indigenous Social Work Research and Practice
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3L03
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4G03 - Selected Topics
- SOCWORK 4I03
- SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice
- SOCWORK 4SB3
- SOCWORK 4TI3 - Trauma Informed Practice
- SOCWORK 4TR3 - Deyohahage: Gihę' gowahneh/Two Row on the Grand: Cultural Resurgence, Respect & Reconciliation
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- **Progression Within Program:** Students must achieve a minimum grade of C+ in each of SOCWORK 2A06 A/B, 2BB3, 2CC3, 3D06 A/B S, 3E03, 3F03, 4D06 A/B S, 4J03, 4X03 and 4ZZ3, a *Pass* in their field placements SOCWORK 3DD6 A/B S and 4DD6 A/B S, and a Grade Point Average of at least 6.0. If a student fails to meet the minimum grade requirements in these required social work courses or a *Pass* designation in either field placement (SOCWORK 3DD6 A/B S and 4DD6 A/B S), the student may not proceed in the program; however, the student may make a request in writing to the Director of the School of Social Work to be allowed to repeat the course in which the minimum grade or *Pass* requirement has not been met. Such requests will be reviewed by the Director of the School of Social Work in consultation with the Chair of the Undergraduate Studies Committee and/or the Chair of the Field Education Program and the course instructor. These courses and/or placements may only be repeated when approval is given by the Director of the School of Social Work following consultation as described above. Students who subsequently fail to meet the minimum grade or *Pass* requirement after repeating the course or placement may not continue in the program.
- Students who were admitted to this program in 2017-2018 or later must complete INDIGST 1A03 - Introduction to Indigenous Studies or INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies. If this requirement was not completed prior to admission to the B.S.W. program, students must replace three units from the Social and Political Context of Social Work courses with INDIGST 1A03 or INDIGST 1AA3.
- Students must complete three units of Social Sciences Research Methods (e.g. SOCIOL 2Z03, SOCPSY 2K03, HLTHAGE 2A03, INDIGST 2M03, etc.). If this requirement was not completed prior to admission to the B.S.W. program, students must replace three units from the Social and Political Context of Social Work courses with a research methods course. A statistics course may not substitute for a research methods course.
- **Graduation:** To qualify for the B.S.W. students must complete a total of 60 units. The B.S.W will be granted only if the student has achieved a grade of at least C+ in each of SOCWORK 2A06 A/B, 2BB3, 2CC3, 3D06 A/B S, 3E03, 3F03, 4D06 A/B S, 4J03, 4X03 and 4ZZ3, a *Pass* in SOCWORK 3DD6 A/B S and 4DD6 A/B S, and a Grade Point Average of at least 6.0.
- Students are expected to assume the cost of travelling to and from field practice agencies and for any related expenses.
- Students in the social work program must apply for third- and fourth-year field placements (SOCWORK 3DD6 A/B S and 4DD6 A/B S), and are able to provide information on areas of interest. While efforts are made to match placements with student preferences, the final assignment of placement settings is constrained by many factors, including the availability of settings and field and faculty resources. Students may therefore be required to complete a field placement in an agency that is not among their preferred options.

Requirements

60 units total

12 UNITS

- SOCWORK 2A06 A/B - Theory, Process and Communication Skills for Social Work
- SOCWORK 2BB3 - Anti-Oppressive Social Work
- SOCWORK 2CC3 - Introduction to Community Practice

(SOCWORK 2A06 A/B, SOCWORK 2BB3 and SOCWORK 2CC3 must be completed prior to enrolling in SOCWORK 3D06 A/B S and SOCWORK 3DD6 A/B S)

12 UNITS

- SOCWORK 3D06 A/B S - General Social Work I
- SOCWORK 3DD6 A/B S - Field Practicum I

(SOCWORK 3D06 A/B S and SOCWORK 3DD6 A/B S must be completed prior to enrolling in SOCWORK 4D06 A/B S and SOCWORK 4DD6 A/B S)

12 UNITS

- SOCWORK 4D06 A/B S - General Social Work II
- SOCWORK 4DD6 A/B S - Field Practicum II

15 UNITS

- SOCWORK 3E03 - Individual Practice Across the Lifespan
- SOCWORK 3F03 - Social Work with Groups
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4X03 - Social Work with Families
- SOCWORK 4ZZ3 - Social Welfare: Practice Implications and Advocacy

3-9 UNITS

- from the *Social and Political Context of Social Work* courses (See *Program Notes 3* and *4* above)

3 UNITS

- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies

Note: If this requirement was completed prior to admission, these units must be chosen from the *Social and Political Context of Social Work* courses. (See Program *Note 3* above)

3 UNITS

- Social Sciences Research Methods. If requirement was completed prior to admission, these units must be chosen from the Social and Political Context of Social Work courses.

(See *Program Note 4* above.)

Department of Sociology

http://www.sociology.mcmaster.ca

Faculty as of January 15, 2025

CHAIR

Tina Fetner

PROFESSORS

Tina Fetner/B.A. *(California Santa Cruz)*, M.A., Ph.D. *(New York)*
Gregory Hooks/B.A. *(Kent State)*, M.S. *(Ohio State)*, Ph.D. *(Wisconsin-Madison)*
Neil McLaughlin/B.A., M.A. *(Cleveland State)*, Ph.D. *(CUNY)*
Karen Robson/B.A. *(Alberta)*, M.A. *(Calgary)*, Ph.D. *(Essex)*
Victor Satzewich/B.A., M.A. *(Saskatchewan)*, Ph.D. *(Glasgow)*

ASSOCIATE PROFESSORS

Phillipa Chong/B.A., M.A., Ph.D. *(Toronto)*
Jeff Denis/B.A. *(Toronto)*, A.M., Ph.D. *(Harvard)*
Paul Glavin/B.Sc. *(Strathclyde)*, M.A. *(Kent State)*, Ph.D. *(Toronto)*
Melanie Heath/B.A. *(California-Berkeley)*, M.A. *(California State-Sacramento)*, Ph.D. *(Southern California)*
Lisa Kaida/B.A., M.A. *(Tokyo)*, M.A., Ph.D. *(Toronto)*
Marisa Young/B.A., M.A., *(Calgary)*, Ph.D. *(Toronto)*

ASSISTANT PROFESSORS

Luca Berardi/*(Social Psychology)*, B.A., M.A. *(Toronto)*, Ph.D. *(Alberta)*
Sandra Colavecchia/B.A., M.A., Ph.D. *(Toronto)*
Anne-Marie Livingstone/B.A. *(Concordia)*, M.A. *(McGill)*, Ph.D. *(John Hopkins)*
Zhifan Luo/*(Wilson College)*, B.A. *(Fudan)*, Ph.D. *(New York)*
Geraldina Polanco/*(Labour Studies)*, B.A. *(UBC)*, M.A. *(Concordia)*, Ph.D. *(UBC)*
Lina Samuel/B.A. *(Alberta)*, B.A. *(Dalhousie)*, M.A. *(Guelph)*, B.Ed. *(Toronto)*, Ph.D. *(York)*
Vanessa Watts/*(Indigenous Studies)*, B.A. *(Trent)*, M.A. *(Victoria)*, Ph.D. *(Queen's)*
David Young/B.A., M.A. *(Queen's)*, Ph.D. *(McMaster)*

ADJUNCT PROFESSORS

Arig al Shaibah/B.A., M.A., Ph.D. *(Queen's)*
Casey Scheibling/B.A., M.A. *(Concordia)*, Ph.D. *(McMaster)*

For the Honours Arts & Science and Sociology (B.Arts.Sc.) program, see *Arts & Science Program*

FIELDS OF STUDY

Diversity and Equity

- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 2TA3 - Islam In North America
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3NN3 - Popular Culture and Inequality
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 3X03
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4SR3 - Topics in the Sociology of Religion
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4WW3

Gender, Sexualities and Families

- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 3CC3
- SOCIOL 3D03 - Special Topics in the Sociology of the Family
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 4AA3 - Selected Topics in the Sociology of the Family
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4UU3 - Global Family and Sexual Politics

Immigration, Race Relations and Indigenous-Settler Relations

- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4WW3

Social Problems, Social Policy, and the Law

- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2TT3
- SOCIOL 2VV3 - Law and Society
- SOCIOL 2WW3 - Media and Power
- SOCIOL 3G03 - Sociology of Health Care

- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCIOL 3MM3 - Political Sociology
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3RR3 - Imprisonment
- SOCIOL 3UU3 - Power, Conflict, and the Law
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 3X03
- SOCIOL 3YY3 - Sociology of Globalization
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4CM3 - Critical Analysis of Media
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4NN3 - Meeting the Challenge of a Changing Climate
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4SS3 - The Sociology of the 1960s
- SOCIOL 4U03 - Special Topics in the Sociology of Women
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4W03 - Social Problems
- SOCIOL 4XX3 - Youth in Society: Challenge and Change
- SOCIOL 4YY3 - Feminism and Social Policy
- SOCIOL 4ZZ3 - Selected Topics in Law and Society

LEVEL IV SEMINAR COURSE LIST

Courses open to students in any Honours Sociology Program

- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4BB3 - Selected Topics in the Sociology of Education
- SOCIOL 4CM3 - Critical Analysis of Media
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4E03 - Self and Identity
- SOCIOL 4EE3 - Selected Topics in the Sociology of Culture
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCIOL 4J03 - Selected Topics in Sociology I
- SOCIOL 4K03
- SOCIOL 4KK3 - Sociology through Community Engagement and Service
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4NN3 - Meeting the Challenge of a Changing Climate
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4RE3 - Hands-On Research Experience
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4SI3 - Social Media, Sex, and Inequality in Intimate Relationships
- SOCIOL 4SR3 - Topics in the Sociology of Religion
- SOCIOL 4SS3 - The Sociology of the 1960s
- SOCIOL 4U03 - Special Topics in the Sociology of Women
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4V03 - Work in Flux: The Gig Economy, the Corporate Ladder, and Changing Labour Markets
- SOCIOL 4WW3
- SOCIOL 4XX3 - Youth in Society: Challenge and Change
- SOCIOL 4ZZ3 - Selected Topics in Law and Society

LEVEL IV LECTURE COURSE LIST

Courses open to students in an Honours Sociology Program

- SOCIOL 4AA3 - Selected Topics in the Sociology of the Family
- SOCIOL 4FF3 - Applications of Quantitative Methods in the Social Sciences *
- SOCIOL 4MM3 - Public Social Psychology
- SOCIOL 4R03 - Individual and Society
- SOCIOL 4W03 - Social Problems
- SOCIOL 4YY3 - Feminism and Social Policy

*SOCIOL 4FF3 is only open to students in the Honours Sociology (Specialist Option)

LEVEL IV DIRECTED RESEARCH COURSE LIST

Courses open to students in an Honours Sociology Program

- SOCIOL 4M03 - Directed Research I for Honours Students
- SOCIOL 4MM6 A/B S - Directed Research for Honours Students *
- SOCIOL 4N03 - Directed Research II for Honours Students

*SOCIOL 4MM6 A/B S is only open to students in the Honours Sociology (Specialist Option)

Bachelor of Arts (Honours)

COMBINED HONOURS IN SOCIOLOGY (SPECIALIST OPTION) AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0, including a grade of at least C in SOCIOL 1Z03. Satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities, and with the Arts and Science Program.
- Students must normally complete SOCIOL 2KK3, 2LL3 and 2Z03 before entering Level III courses.
- Students must normally complete 3 units of advanced theory, SOCIOL 3A03 or 3P03, before entering Level IV courses.
- Students must normally complete SOCIOL 3FF3 and 3 units of advanced methods, SOCIOL 3O03 or 3W03, before entering Level IV courses.
- Students may take an additional 6 units of Level IV Sociology as electives.
- Students will be given priority enrolment in SOCIOL 3A03, 3P03, 3O03, and 3W03 as well as Level IV seminar courses.
- Students taking 6 units of independent research or thesis in their other program may not take SOCIOL 4M03, 4MM6 A/B S or 4N03.
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 2* above)

3 UNITS

from

- SOCIOL 3A03 - Advanced Analysis of Classical Sociological Theory
- SOCIOL 3P03 - Advanced Analysis of Contemporary Sociological Theory

(See *Note 3* above.)

3 UNITS

from

- SOCIOL 3O03 - Qualitative Research Methods
- SOCIOL 3W03 - Historical Methods in Sociology

(See *Note 4* above.)

3 UNITS

- SOCIOL 4FF3 - Applications of Quantitative Methods in the Social Sciences

(See *Notes 4* and *5* above.)

6 UNITS

from

- Level IV Sociology seminar course list

(See *Notes 4* and *5* above.)

15 UNITS

- Levels II or III Sociology

36 UNITS

- Courses specified for the other subject

6 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research
- SOCIOL 3FF3 - Introduction to Quantitative Research Methods

or

- in combined programs within the Faculty of Social Sciences, the six units Research Methods/Statistics course specified for the other subject (See *Notes 2* and *4* above.)

12 UNITS

- Electives, at least 6 units (above Level I) must be taken outside of Sociology

COMBINED HONOURS IN SOCIOLOGY AND ANOTHER SUBJECT (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0, including a grade of at least C in SOCIOL 1Z03. Satisfaction of admission requirements for the Honours program in the other B.A. subject. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined Honours B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities, and with the Arts and Science Program.
- Students interested in graduate studies in sociology are advised to consider the Combined Honours in Sociology (Specialist Option) and Another Subject (B.A.)
- Students must normally complete SOCIOL 2KK3, 2LL3 and 2Z03 before entering Level III courses.
- Students must normally complete SOCIOL 3FF3 before entering Level IV courses.
- Students will be given priority enrolment in Level IV lecture courses.
- Students may take an additional 6 units of Level IV Sociology as electives.
- Students taking six units of independent research or thesis in their other program may not take SOCIOL 4M03, 4MM6 A/B S or 4N03.
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

- the Level I program completed prior to admission to the program

(See *Admission* above)

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 3* above)

3 UNITS

- Level IV Sociology lecture, seminar, or directed research course lists

(See *Notes 4* and *6* above)

3 UNITS

- Level IV Sociology seminar

(See *Notes 4* and *6* above.)

18 UNITS

- Levels II or III Sociology, of which a maximum of 12 units may be Level II.

36 UNITS

- Courses specified for the other subject

6 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research

(See *Note 3* above.)

- SOCIOL 3FF3 - Introduction to Quantitative Research Methods

(See *Note 4* above.)

or

- in combined programs within the Faculty of Social Sciences, the six units Research Methods/Statistics course specified for the other subject (See *Notes 3* and *4* above).

18 UNITS

Electives, of which at least 6 units (above Level I) must be taken outside of Sociology

HONOURS SOCIOLOGY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0, including a grade of at least C in SOCIOL 1Z03. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- Students interested in graduate studies in sociology are advised to consider Honours Sociology (Specialist Option) (B.A.).
- Students must normally complete SOCIOL 2KK3, 2LL3 and 2Z03 before entering Level III courses.
- Students must normally complete SOCIOL 3FF3 before entering Level IV courses.
- Students may take an additional 6 units of Level IV Sociology as electives.
- Students may take a maximum of 3 units of Level IV independent research (SOCIOL 4M03 or 4N03).
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 2* above.)

3 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research

(See *Note 2* above.)

3 UNITS

- SOCIOL 3FF3 - Introduction to Quantitative Research Methods

(See *Note 3* above.)

3 UNITS

from

- Level IV Sociology lecture course list

(See *Notes 3, 4,* and *5* above.)

6 UNITS

from

- Level IV Sociology seminar or directed research course lists

(See *Notes 3, 4,* and *6* above.)

3 UNITS

- Level IV Sociology seminar

(See *Notes 3* and *4* above.)

18 UNITS

- Levels II or III Sociology of which a maximum of 12 units may be Level II.

48 UNITS

- Electives, at least 6 units (above Level I) must be taken outside of Sociology

HONOURS SOCIOLOGY (SPECIALIST OPTION) (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 5.0, including a grade of at least C in SOCIOL 1Z03. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Notes

- The Honours Sociology (Specialist Option) (B.A.) program is the most appropriate program for students who are considering graduate studies in sociology.
- Students must normally complete SOCIOL 2KK3, 2LL3 and 2Z03 before entering Level III courses.
- Students must normally complete 3 units of advanced theory, SOCIOL 3A03 or 3P03, before entering Level IV courses.
- Students must normally complete SOCIOL 3FF3 and 3 units of advanced methods, SOCIOL 3O03 or 3W03, before entering Level IV courses.
- Students may take an additional 6 units of Level IV Sociology as electives.
- Students will be given priority enrolment in SOCIOL 3A03, 3P03, 3O03, and 3W03 as well as Level IV seminar courses.
- Students may take a maximum of 6 units of Level IV independent research (SOCIOL 4M03, 4MM6 A/B S or 4N03).
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 2* above)

3 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research

(See *Note 2* above)

3 UNITS

from

- SOCIOL 3A03 - Advanced Analysis of Classical Sociological Theory
- SOCIOL 3P03 - Advanced Analysis of Contemporary Sociological Theory

(See *Notes 3* and *6* above.)

3 UNITS

- SOCIOL 3FF3 - Introduction to Quantitative Research Methods

(See *Note 4* above.)

3 UNITS

from

- SOCIOL 3O03 - Qualitative Research Methods
- SOCIOL 3W03 - Historical Methods in Sociology

(See *Notes 4* and *6* above.)

3 UNITS

- SOCIOL 4FF3 - Applications of Quantitative Methods in the Social Sciences

(See *Notes 4* and *5* above.)

6 UNITS

- Level IV Sociology seminar or directed research course lists

(See *Notes 4, 5, 6,* and *7* above.)

3 UNITS

from

- Level IV Sociology seminar

(See *Notes 4, 5, 6,* and *7* above.)

18 UNITS

- Levels II or III Sociology

42 UNITS

- Electives, at least 6 units (above Level I) must be taken outside of Sociology

HONOURS SOCIOLOGY CO-OP (B.A.)

Admission

Enrollment in this program option is limited. Admission is by selection and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and an interview but requires, as a minimum, completion of any Level I program with a Grade Point Average of at least 5.0, including a grade of at least C in SOCIOL 1Z03. Preference will be given to applicants currently in a Level I program. For continuation in the program, see the section on *Minimum Requirements for Entering and Continuing in a Program Beyond Level I* in the Faculty of Social Sciences Academic Regulations.

Information about this program and about co-op policies and procedures can be obtained from the Social Sciences Co-op team in the Office of the Associate Dean Academic.

Admission Notes

- Students who intend to apply for this program option must follow the application instructions as found on the Social Sciences Co-op web site. Students who are unable to access this web site must consult the Social Sciences Co-op team in the Office of the Associate Dean Academic prior to the application deadline.
- All applications for admission to the Co-op program option are considered annually and must be made directly to the Social Sciences Co-op team by March 1 for the Fall/Winter term.
- Applications that are submitted after the March 1 deadline will not be considered.
- Offers of acceptance cannot be deferred.

Program Notes

- The standard duration of this program option is five (5) years. For information, see the Social Sciences Co-op website.
- Co-op program options in the Faculty of Social Sciences follow an alternating sequence of work terms and academic terms. Students are required to enroll in at least one full-time academic term consisting of at least 9 units between any two work terms. Each student's sequence of work and academic terms must end with a final academic term. For information on permitted and recommended work term sequences compatible with scheduled course offerings in this program option, see the Social Sciences Co-op website.
- Co-op work terms are components of the program involving full-time, paid work-integrated learning opportunities, typically secured through a job search process. Students on work term must enrol in a zero-unit course (i.e. SOCSCI 2WT0, 3WT0, 4WT0).
- Students may take a maximum of 3 units during a work term, with the written permission of the work term supervisor.
- To graduate with the co-op option recognized on the transcript, students must complete three (3) work terms each consisting of a minimum 12 weeks and/or 420 hours of full-time, paid experience.
- Completion of SOCSCI 2EL3 in Fall Term of Level II or in Spring/Summer Term following Level I is strongly recommended in order for students to meet the requirements of SOCSCI 2JS1 and eligibility for job search access.
- Students interested in graduate studies in sociology are advised to consider Honours Sociology (Specialist Option) (B.A.).
- Students must normally complete SOCIOL 2KK3, 2LL3 and 2Z03 before entering Level III courses.
- Students must normally complete SOCIOL 3FF3 before entering Level IV courses.
- Students may take an additional 6 units of Level IV Sociology as electives.
- Students may take a maximum of 3 units of Level IV independent research (SOCIOL 4M03 or 4N03).
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

120 units total (Levels I to IV), of which 48 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

3 UNITS

- SOCSCI 2EL3 - Career Preparation in the Social Sciences

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 2* above.)

3 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research

(See *Note 2* above.)

3 UNITS

- SOCIOL 3FF3 - Introduction to Quantitative Research Methods

(See *Note 3* above.)

3 UNITS

from

- Level IV Sociology lecture course list

(See *Notes 3, 4,* and *5* above.)

6 UNITS

from

- Level IV Sociology seminar or directed research course lists

(See *Notes 3, 4,* and *6* above.)

3 UNITS

- Level IV Sociology seminar

(See *Notes 3* and *4* above.)

18 UNITS

- Levels II or III Sociology of which a maximum of 12 units may be Level II.

3 UNITS

- SOCSCI 2JS1 - Co-Op Job Search I
- SOCSCI 3JS1 - Co-Op Job Search II
- SOCSCI 4JS1 - Co-Op Job Search III

Work Terms:

- SOCSCI 2WT0 - Social Sciences Co-Op Work Term
- SOCSCI 3WT0 - Social Sciences Co-Op Work Term
- SOCSCI 4WT0 - Social Sciences Co-Op Work Term

42 UNITS

Electives, at least 6 units (above Level I) must be taken outside of Sociology

Bachelor of Arts

SOCIOLOGY (B.A.)

Admission

Completion of any Level I program with a Grade Point Average of at least 3.5, including a grade of at least C- in SOCIOL 1Z03.

Notes

- Students must normally complete SOCIOL 2KK3 and 2LL3 and 2Z03 before entering Level III courses.
- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.

Requirements

90 units total (Levels I to III), of which 42 units may be Level I

30 UNITS

from

- the Level I program completed prior to admission to the program

(See *Admission* above)

6 UNITS

- SOCIOL 2KK3 - Introduction to Classical Sociological Theory
- SOCIOL 2LL3 - Introduction to Contemporary Sociological Theory

(See *Note 1* above.)

3 UNITS

- SOCIOL 2Z03 - Introduction to Sociological Research

(See *Note 1* above)

9 UNITS

- Level II Sociology

6 UNITS

- Level III Sociology

36 UNITS

- Electives, of which no more than 12 units may be from Sociology (the maximum Sociology courses to be taken is 36 units)

Minor(s):

MINOR IN DIVERSITY AND EQUITY

Notes

- At least 3 units from Level I of the *Sociology Course List* must be completed for the minor. Optionally, an additional 3 units may be made up of another Level I Sociology course or a Level I course from the *Multidisciplinary Course List*.
- The 24 units of the minor may be made up entirely of selections from the *Sociology Course List* or, optionally, the 24 units may be made up of selections from the *Sociology Course List* and a limited number of selections from the *Multidisciplinary Course List*.
- Students are responsible for meeting prerequisites for upper year courses on either the *Sociology Course List* or the *Multidisciplinary Course List*. Students should check this Calendar for prerequisites and course descriptions.
- For students in an Honours Sociology program, at least 3 units drawn from Level II or above of the *Sociology Course List* must be Level III or Level IV Sociology. Students in a non-Sociology program will normally make selections from Level II or Level III of the *Sociology Course List*, but permission may be granted to take 3 units of Level IV Sociology.
- In order to declare a Minor in Diversity and Equity, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

from

- Level I of the *Sociology Course List*

or

- 3 units from Level I of the *Sociology Course List*
- 3 units from Level I of the *Multidisciplinary Course List*

(See *Note 1* above.)

12-21 UNITS

from

- Level II or above of the *Sociology Course List*

(See *Notes 2, 3,* and *4* above.)

0-6 UNITS

from

- Level II or above of the *Multidisciplinary Course List*

(See *Notes 2* and *3* above.)

Sociology Course List

- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 2TA3 - Islam In North America
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3NN3 - Popular Culture and Inequality
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4SR3 - Topics in the Sociology of Religion
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4WW3

Multidisciplinary Course List

- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ENVSOCTY 2TS3 - Society and Space
- ENVSOCTY 4HD3 - Disability, Society and Environment
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 2AA3 - Feminist Thought
- HISTORY 3XX3 - Human Rights in History
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PHILOS 2G03 - Social and Political Issues
- SCAR 2RD3 - Religion and Diversity
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

MINOR IN GENDER, SEXUALITIES AND FAMILIES

Notes

- At least 3 units from Level I of the *Sociology Course List* must be completed for the minor. Optionally, an additional 3 units may be made up of another Level I Sociology course or a Level I course from the *Multidisciplinary Course List*.
- The 24 units of the minor may be made up entirely of selections from the *Sociology Course List* or, optionally, the 24 units may be made up of selections from the S*ociology Course List* and a limited number of selections from the *Multidisciplinary Course List*.

- Students are responsible for meeting prerequisites for upper year courses on either the *Sociology Course List* or the *Multidisciplinary Course List*. Students should check this Calendar for prerequisites and course descriptions.
- For students in an Honours Sociology program, at least 3 units drawn from Level II or above of the *Sociology Course List* must be Level III or Level IV Sociology. Students in a non-Sociology program will normally make selections from Level II or Level III of the Sociology Course List, but permission may be granted to take 3 units of Level IV Sociology.
- In order to declare a Minor in Gender, Sexualities and Families, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

from

- Level I of the *Sociology Course List*

or

- 3 units from Level I of the *Sociology Course List*
- 3 units from Level I of the *Multidisciplinary Course List*

(See *Note 1* above.)

0-6 UNITS

from

- Level II or above of the *Multidisciplinary Course List*

(See *Notes 2* and *3* above.)

12-21 UNITS

from

- Level II or above of the *Sociology Course List*

(See *Notes 2, 3*, and *4* above.)

Sociology Course List

- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2PP3 - Sociology of Families
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 3CC3
- SOCIOL 3D03 - Special Topics in the Sociology of the Family
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 4AA3 - Selected Topics in the Sociology of the Family
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4UU3 - Global Family and Sexual Politics

Multidisciplinary Course List

- ENVSOCTY 4UF3 - The Geography of Gender
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GENDRST 2AA3 - Feminist Thought
- HLTHAGE 2M03 - Aging in Modern (and Post-Modern) Families
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- PHILOS 3I03 - Philosophy and Feminism
- POLSCI 3V03 - Gender and Politics
- SCAR 3BW3 - Gender in Ancient Eastern Mediterranean
- SCAR 3FF3 - Gender and Religion
- SOCSCI 2CC3 - Children and Family in Canada
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCWORK 3O03 - Social Work and Sexualities
- WORKLABR 3E03 - Gender, Sexuality and Work

MINOR IN IMMIGRATION, RACE RELATIONS AND INDIGENOUS-SETTLER RELATIONS

Notes

- At least 3 units from Level I of the *Sociology Course List* must be completed for the minor. Optionally, an additional 3 units may be made up of another Level I Sociology course or a Level I course from the *Multidisciplinary Course List*.
- The 24 units of the minor may be made up entirely of selections from the *Sociology Course List* or, optionally, the 24 units may be made up of selections from the *Sociology Course List* and a limited number of selections from the *Multidisciplinary Course List*.
- Students are responsible for meeting prerequisites for upper year courses on either the *Sociology Course List* or the *Multidisciplinary Course List*. Students should check this Calendar for prerequisites and course descriptions.
- For students in an Honours Sociology program, at least 3 units drawn from Level II or above of the *Sociology Course List* must be Level III or Level IV Sociology. Students in a non-Sociology program will normally make selections from Level II or Level III of the *Sociology Course List*, but permission may be granted to take 3 units of Level IV Sociology.
- In order to declare a Minor in Immigration, Race Relations and Indigenous-Settler Relations, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

from

- Level I of the *Sociology Course List*

or

- 3 units from Level I of the *Sociology Course List*
- 3 units from Level I of the *Multidisciplinary Course List*

(See *Note 1* above.)

12-21 UNITS

from

- Level II or above of the *Sociology Course List*

(See *Notes 2, 3*, and *4* above.)

0-6 UNITS

from

- Level II or above of the *Multidisciplinary Course List*

(See *Notes 2* and *3* above.)

Sociology Course List

- SOCIOL 1Z03 - An Introduction to Sociology
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing
- SOCIOL 3RI3 - Racial Politics and Resistance

- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4RD3 - The Sociological Indian: What is reconciliation and decolonization and why does it matter?
- SOCIOL 4RR3 - Indigenous Peoples and Canada
- SOCIOL 4WW3

Multidisciplinary Course List

- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CMST 1A03 - Introduction to Communication
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3RR3 - Race, Religion, and Media
- ENGLISH 1H03 - Words in Place
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 2B03 - Indigenous Sovereignty
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory
- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4U03 - Immigration, Settlement and Social Work

MINOR IN SOCIAL PROBLEMS, SOCIAL POLICY AND THE LAW

Notes

- At least 3 units from Level I of the *Sociology Course List* must be completed for the minor. Optionally, an additional 3 units may be made up of another Level I Sociology course or a Level I course from the *Multidisciplinary Course List*.
- The 24 units of the minor may be made up entirely of selections from the *Sociology Course List* or, optionally, the 24 units may be made up of selections from the *Sociology Course List* and a limited number of selections from the *Multidisciplinary Course List*.
- Students are responsible for meeting prerequisites for upper year courses on either the *Sociology Course List* or the *Multidisciplinary Course List*. Students should check this Calendar for prerequisites and course descriptions.
- For students in an Honours Sociology program, at least 3 units drawn from Level II or above of the *Sociology Course List* must be Level III or Level IV Sociology. Students in a non-Sociology program will normally make selections from Level II or Level III of the *Sociology Course List*, but permission may be granted to take 3 units of Level IV Sociology.
- In order to declare a Minor in Social Problems, Social Policy and the Law, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

from

- Level I of the *Sociology Course List*

or

- 3 units from Level I of the *Sociology Course List*
- 3 units from Level I of the *Multidisciplinary Course List*

(See *Note 1* above.)

12-21 UNITS

from

- Level II or above of the *Sociology Course List*

(See *Notes 2, 3,* and *4* above.)

0-6 UNITS

from

- Level II or above of the *Multidisciplinary Course List*

(See *Notes 2* and *3* above.)

Sociology Course List

- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCIOL 2BB3 - Sociology of Deviance
- SOCIOL 2CC3 - Constructing Deviance
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2QQ3 - Dynamics and Transitions in Intimate Relationships and Families
- SOCIOL 2TT3
- SOCIOL 2VV3 - Law and Society
- SOCIOL 2WW3 - Media and Power
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 3GG3
- SOCIOL 3HH3
- SOCIOL 3MH3 - Sociology of Stress and Mental Health
- SOCIOL 3MM3 - Political Sociology
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3RR3 - Imprisonment
- SOCIOL 3UU3 - Power, Conflict, and the Law
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SOCIOL 3X03
- SOCIOL 3YY3 - Sociology of Globalization
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCIOL 4CM3 - Critical Analysis of Media
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness
- SOCIOL 4GG3 - Special Topics in the Sociology of Deviance
- SOCIOL 4LL3 - Selected Topics in the Sociology of Immigration
- SOCIOL 4NN3 - Meeting the Challenge of a Changing Climate
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4SS3 - The Sociology of the 1960s
- SOCIOL 4U03 - Special Topics in the Sociology of Women
- SOCIOL 4UU3 - Global Family and Sexual Politics
- SOCIOL 4W03 - Social Problems
- SOCIOL 4XX3 - Youth in Society: Challenge and Change
- SOCIOL 4YY3 - Feminism and Social Policy
- SOCIOL 4ZZ3 - Selected Topics in Law and Society

Multidisciplinary Course List

- CMST 1A03 - Introduction to Communication

- CMST 2K03 - Political Economy of the Media
- CMST 3DJ3 - Digital Justice
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- HISTORY 2A03 - Modern Middle Eastern Societies
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PHILOS 1B03 - Philosophy, Law and Society
- PHILOS 3Q03 - Philosophy of Law
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- POLSCI 3JR3 - The Rule of Law and Legal and Judicial Reforms in the Developing World
- POLSCI 3CL3 - Constitutional and Public Law in Canada
- SCAR 3RL3 - Religion and Law
- SOCPSY 3C03 - Regimes of Social Control
- SOCPSY 2D03 - Making and Breaking Rules

MINOR IN SOCIOLOGY

Notes

- Students should check both this Calendar and the Departmental website for prerequisites and course descriptions.
- In order to declare a Minor in Sociology, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

3-6 UNITS

- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology

18-21 UNITS

- Levels II, III or IV Sociology (of which at least 3 units must be Level III or IV Sociology)

Certificate and Diploma Programs

McMaster University Continuing Education

Through McMaster University Continuing Education (MCE), undergraduate students may use their elective credit within their degree programs to earn a career-focused Certificate of Professional Learning, Certificate or Diploma. For eligibility details, students are required to consult their Faculty Academic Advisors.

Courses within MCE's academic programs are Senate-approved undergraduate-level courses. In particular, they have been approved for advanced credit toward McMaster undergraduate degrees. Information about advanced credit for degree study is provided in McMaster University's *Senate Policy on Diplomas and Certificates*.

McMaster Continuing Education is located at One James North, downtown Hamilton. Courses are scheduled evenings and weekends and delivered online to accommodate undergraduate students and working professionals. Online classes may consist of instructor-led, self-study, live virtual sessions, or a combination thereof. To learn more, please visit continuing.mcmaster.ca or contact McMaster Continuing Education at continuing.mcmaster.ca/contact.

McMaster Continuing Education offers a wide range of professional programs in areas including but not limited to Business, Health and Social Service, Marketing and Communication, Emerging Technologies and Data. MCE programs enable students to earn three types of academic credentials: Certificate of Professional Learning (9 units), Certificate (no less than 15 units), and Diploma (no less than 24 units).

Note: Continuing Education courses are not eligible for OSAP. Payment must be made at the time of enrolment.

Affiliated Associations and Institutes

Many Continuing Education courses are recognized as course equivalencies and/or have been approved as professional development units (PDUs) by well-recognized professional associations and institutes. Information about these professional associations and institutes is provided below.

ACCOUNTING

- Chartered Professional Accountant (CPA) - Chartered Professional Accountants Ontario
- Registered Professional Accountant (RPA) - The Society of Professional Accountants of Canada

BUSINESS ADMINISTRATION

- Certified in Management (C.I.M.) or Chartered Manager (C.Mgr.) - Canadian Institute of Management
- Canadian Risk Management (CRM) - Risk and Insurance Management Society (RIMS)
- Canadian Certified Administrative Professional (CCAP) - Association of Administrative Professionals
- Credit Union Institute of Canada (CUIC)

BUSINESS ANALYSIS

- International Institute of Business Analysis (IIBATM)

BUSINESS OF GOLF & RESORT MANAGEMENT

- PGA of Canada - PGA Training Academy

HEALTH AND WELLNESS COACHING

- Registered Health Coach (RHC™) - Health Coach Alliance

HUMAN RESOURCES MANAGEMENT

- Certified Human Resources Professional (CHRP™) - Human Resources Professional Association (HRPA)
- Certified Human Resources Leader (CHRL™) - Human Resources Professional Association (HRPA)

PAYROLL

- Payroll Compliance Practitioner (PCP) - National Payroll Institute
- Payroll Leadership Professional (PLP) - National Payroll Institute

PROFESSIONAL ADDICTION STUDIES

- International Certified Alcohol and Drug Counsellor (ICADC) - Canadian Addiction Counsellors Certification Federation (CACCF)
- Canadian Certified Addiction Counsellor (CCAC) - Canadian Addiction Counsellors Certification Federation (CACCF)
- Associate Addiction Counsellor (AAC)

PROJECT MANAGEMENT

- Project Management Institute (PMI)

RISK MANAGEMENT

- The educational requirement for the CRM designation - Risk and Insurance Management Society (RIMS)

Please contact McMaster Continuing Education at continuing.mcmaster.ca/contact or visit continuing.mcmaster.ca for more details.

Certificate(s)

ADVANCED ACCOUNTING, CERTIFICATE

Maximum Credit toward Degree Studies - up to 18 units pending approval of the student's Faculty office

This certificate is open to individuals with post-secondary education who have completed foundation/core-level accounting courses outside of MCE prior to beginning the program. To qualify for this Certificate, students must complete any 6 specialist courses. Courses offered in this program qualify as prerequisite requirements for entry into CPA PEP and/or exemptions from CPA preparatory courses*. A 10 month Fast-Track schedule is available

Note: Graduates of the Diploma in Accounting are not eligible for the Certificate in Advanced Accounting.

See https://continuing.mcmaster.ca/programs/business/accounting/#tab-content-certificate

APPLIED CLINICAL RESEARCH, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The Applied Clinical Research program is designed for individuals seeking to enter the field of clinical research. Program content is based on common areas of knowledge and skills for clinical research associates and managers to fulfill competencies identified by the internationally-focused Association of Clinical Research Professionals (ACRP).

See https://continuing.mcmaster.ca/programs/health-social-services/applied-clinical-research/#tab-content-certificate

BIG DATA PROGRAMMING & ARCHITECTURE, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

Big Data Programming & Architecture presents an advanced level of topics in the areas of data science, machine learning, and technical/software applications. Learn technical concepts from leading practitioners and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually and in teams to complete course projects and build a professional portfolio.

See https://continuing.mcmaster.ca/programs/tech-data/big-data-programming-and-architecture/#tab-content-certificates

BUSINESS ADMINISTRATION, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

This Certificate is a 5-course program. The curricular areas covered by the program include finance, communications, marketing, and operational skills. The program is delivered online or in person. It can be taken on a part-time or full-time equivalent course load.

See https://continuing.mcmaster.ca/programs/business/business-administration/#tab-content-certificate

BUSINESS OF GOLF AND RESORT MANAGEMENT, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The program is designed for individuals who wish to develop or upgrade their knowledge, skills, and abilities for an exciting career in golf and resort management. A rich and flexible environment to learn engages all participants by using leading-edge content and collaborative functionality.

See https://continuing.mcmaster.ca/programs/business/business-of-golf-resort-management/#tab-content-certificate

CANADIAN PAYROLL MANAGER, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The National Payroll Institute (NPI) offers the only payroll designations in Canada. Through this program, students can earn a Payroll Leadership Professional (PLP) designation. Students learn to manage the compliance requirements of an organization's annual payroll cycle, deliver clear and reliable payroll information, and contribute a payroll perspective to organizational policy and strategy discussions. Students must be a Payroll Compliance Practitioner before starting the Canadian Payroll Manager Certificate program and pursuing a PLP designation.

See https://continuing.mcmaster.ca/programs/business/payroll/#tab-content-certificates

DATA ANALYTICS, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

Data Analytics provides a basic-level introduction in the areas of statistics, data analytics, big data analytics, machine learning, and technical/software applications. Learn technical concepts from leading practitioners and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually or on teams to complete course projects and build a professional portfolio.

See https://continuing.mcmaster.ca/programs/tech-data/data-analytics/#tab-content-certificates

DATA SCIENCE, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

Data Science presents an intermediate level of content in the areas of statistics, data analytics, big data analytics, machine learning, and technical/software applications. Learn technical concepts from leading practitioners and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually and in teams to complete course projects and build a professional portfolio.

See https://continuing.mcmaster.ca/programs/tech-data/data-science/#tab-content-certificates

DIGITAL MARKETING, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The Digital Marketing program explores the tools and tactical skills required to apply data, manage creative content, and implement and measure digital strategies to engage today's consumers. Integrate marketing theory with the latest tech tools (like generative AI) to build and implement dynamic digital strategies. Discover effective search engine marketing (SEM) and optimization (SEO) tactics and content management methodologies. Advance your digital marketing expertise and get ahead in this competitive industry. Participants in this program should have prior education in a related field such as a degree or diploma in Marketing or Communications, or at least 3 years of marketing, communications, or web design experience.

See https://continuing.mcmaster.ca/programs/marketing-communications/digital-marketing/#tab-content-certificate

HEALTH AND SOCIAL SERVICE, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

Advance your skill development and future-proof your career in the health and social service sector. Whether you are new to the health and social service sectors, or you are seeking to refresh your prior training, this program can help you get ahead of your peers. Simply select the courses you need to achieve your goals. Course topics include anatomy/physiology, addiction studies, health information, privacy and workplace health and wellness.

See https://continuing.mcmaster.ca/programs/health-social-services/health-and-social-service-skill-development/#tab-content-certificates

MANAGEMENT PRINCIPLES AND PRACTICES, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The Management Principles and Practices program teaches core foundational skills and best practices for you to lead your organization to success. Learn how to effectively manage, lead and strategize to stand out in today's changing business environment.

See https://continuing.mcmaster.ca/programs/business/management-principles-and-practices/#tab-content-certificates

MARKETING, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The Marketing program is designed for students to develop and enhance the knowledge and skills required to succeed in the marketing profession. Courses focus on competencies found in successful marketing strategies such as analyzing customer demands, building customer relationships, understanding the competition, communicating ideas, and executing a strategic marketing plan.

See https://continuing.mcmaster.ca/programs/marketing-communications/marketing/#tab-content-certificate

PAYROLL COMPLIANCE PRACTITIONER, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The National Payroll Institute's Payroll Compliance Professional (PCP) designation is the foundation for a career in payroll. It will provide you with the legislative content required to keep your organization compliant throughout the annual payroll cycle, effectively communicate payroll information to all stakeholders, and understand the accounting function as it relates to payroll.

See https://continuing.mcmaster.ca/programs/business/payroll/#tab-content-certificates

PROFESSIONAL ADDICTION STUDIES, CERTIFICATE

Maximum Credit Toward Degree Studies - up to 15 units pending approval of the student's Faculty office

The Professional Addiction Studies program provides an opportunity for individuals seeking to enter the field of addiction to enhance their knowledge and skills required for employment and professional certification. The program also serves as professional development for individuals working in fields of mental health, counselling, law enforcement, nursing, social work, child and family services.

See https://continuing.mcmaster.ca/programs/health-social-services/professional-addiction-studies/#tab-content-certificate

Certificate of Professional Learning

BACK-END DEVELOPMENT, CERTIFICATE OF PROFESSIONAL LEARNING

This program will provide more specialized training in the web development language JavaScript and an understanding of web databases and their relationship to websites, servers and API technology. This course will highlight the core competencies and skillsets that every back-end and full-stack development professional needs in today's workforce.

See https://continuing.mcmaster.ca/programs/marketing-communications/full-stack-development/#tab-content-certificates

BIG DATA PROGRAMMING & ARCHITECTURE, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office

Big Data Programming & Architecture presents an advanced level of topics in the areas of data science, machine learning, and technical/software applications. Learn technical concepts from leading practitioners and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually and in teams to complete course projects and build a professional portfolio.

See https://continuing.mcmaster.ca/programs/tech-data/big-data-programming-and-architecture/#tab-content-certificates

CREATIVE, CRITICAL AND DESIGN THINKING, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office

No matter what industry you work in, building your creative, critical and design thinking skills will enhance your ability to solve complex problems in your organization. The tools taught in this 3-course certificate of professional learning program are used by leaders in business, government, health care, the arts, technology and more. Equip yourself to grow your career. Change the way you think in order to change the way you lead.

See https://continuing.mcmaster.ca/programs/marketing-communications/creative-critical-design-thinking/#tab-content-certificate

DATA ANALYTICS, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office

Data Analytics provides a basic-level introduction in the areas of statistics, data analytics, big data analytics, machine learning, and technical/software applications. Learn technical concepts from leading practitioners and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually or on teams to complete course projects and build a professional portfolio.

See https://continuing.mcmaster.ca/programs/tech-data/data-analytics/#tab-content-certificates

DATA SCIENCE, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office

Data Science presents an intermediate level of content in the areas of statistics, data analytics, big data analytics, machine learning, and technical/software applications. Learn technical concepts from leading practitioners

and benefit from hands-on courses and computer lab training with the latest industry tools. Students will work individually and on teams to complete course projects and build a professional portfolio.
See https://continuing.mcmaster.ca/programs/tech-data/data-science/#tab-content-certificates

FOUNDATIONS IN MANAGEMENT OF HUMAN RESOURCES, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
Foundations in Management of Human Resources is a flexible 3-course online program designed to teach you key concepts and techniques in building effective leadership and management strategies in various workplace settings.
See https://continuing.mcmaster.ca/programs/business/human-resources-management/#tab-content-certificates

FOUNDATIONS IN TALENT PLANNING AND ACQUISITION, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
Foundations in Talent Planning and Acquisition is a flexible 3-course online program designed to teach you key tools and techniques in planning your organization's talent pipeline, recruiting and hiring.
See https://continuing.mcmaster.ca/programs/business/human-resources-management/#tab-content-certificates

FOUNDATIONS IN WORKPLACE HEALTH AND SAFETY, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
Foundations in Workplace Health and Safety is a flexible 3-course online program designed to teach you key concepts, techniques and tools in workplace health and safety guidelines, policies, procedures and programming.
See https://continuing.mcmaster.ca/programs/business/human-resources-management/#tab-content-certificates

FRONT-END DEVELOPMENT, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
This program will provide specialized training in HTML and JavaScript, highlighting the core competencies and skillsets that front-end developers need in today's workforce. The curriculum will cover the following competency areas and software training: HTML, CSS, JavaScript and frameworks, source control (GIT) and an understanding of web services.
See https://continuing.mcmaster.ca/programs/marketing-communications/full-stack-development/#tab-content-certificates

NUTRITION, HEALTH AND WELLNESS, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
The program provides a foundational education in the areas of nutrition, healthy living and wellness. Students examine the key social, cultural and economic, physical and behavioural factors that determine health and wellness necessary for program planning and development for all life stages.
See https://continuing.mcmaster.ca/programs/health-social-services/nutrition-health-and-wellness/#tab-content-certificate

RETIREMENT COMMUNITY MANAGEMENT, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
With Canada's growing aging population, employment opportunities will increase within the retirement community and senior living sectors. This program focuses on the development of management strategies specific to the operations of retirement communities including staffing, finance, sales and quality improvement. The program is suited for students with foundational business and commerce training.
See https://continuing.mcmaster.ca/programs/business/retirement-community-management/#tab-content-certificate

RISK MANAGEMENT, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
Students will learn how to assess, identify, communicate, and control exposure of risk to create and implement structured risk management programs.
The three risk management courses can be taken as part of a Certificate of Professional Learning, the Diploma in Business Administration with a concentration in Risk Management, or as individual courses. Courses are offered online.
See https://continuing.mcmaster.ca/programs/business/risk-management/#tab-content-certificate

USER EXPERIENCE AND USER INTERFACE (UX/UI) DESIGN, CERTIFICATE OF PROFESSIONAL LEARNING

Maximum Credit Toward Degree Studies - up to 9 units pending approval of the student's Faculty office
This program will provide specialized training in design, highlighting the core competencies and skillsets that design professionals need in the digital workforce. The curriculum will cover the following competency areas and software training: design thinking and the iterative process (empathize, define, ideate, prototype and test); industry-recognized tools and technologies; developing mock-ups, frames and wireframes; an introduction to HTML/CSS and working as part of a design team on experiential projects.
See https://continuing.mcmaster.ca/programs/marketing-communications/ux-ui-design/#tab-content-certificate

Diploma(s)

ACCOUNTING, DIPLOMA

Maximum Credit toward Degree Studies - up to 33 units pending approval of the student's Faculty office
This 11-course program is designed for individuals planning a career in managerial or financial accounting. Courses serve as prerequisite requirements for entry into CPA PEP and/or exemptions from CPA preparatory courses. Courses offered under the Diploma in Accounting are accredited by SPAC towards the RPA designation. A 10-month Fast-Track schedule is available.
Note: Graduates of the Certificate in Advanced Accounting are not eligible for the Diploma in Accounting
See https://continuing.mcmaster.ca/programs/business/accounting/#tab-content-diploma

BUSINESS ADMINISTRATION, DIPLOMA

Maximum Credit Toward Degree Studies - up to 24 units pending approval of the student's Faculty office

The Business Administration program is designed to help students gain, add, or refine business skills that are in high demand by employers. The business core courses focus on the development of fundamental business skills while elective courses enable students to focus on their personal or professional areas of interest.

See https://continuing.mcmaster.ca/programs/business/business-administration/#tab-content-diploma

BUSINESS ADMINISTRATION, DIPLOMA WITH CONCENTRATION

Maximum Credit Toward Degree Studies - up to 27 units pending approval of the student's Faculty office

Concentrations in the Business Administration Diploma are available in Creative, Critical & Design Thinking, Data Analytics, Marketing, Retirement Community Management, Human Resources and Risk Management.

Many courses within the concentration options meet the requirements of professional associations, such as the Canadian Institute of Management and the Risk and Insurance Management Society (RIMS).

See https://continuing.mcmaster.ca/programs/business/business-administration/#tab-content-concentrations

BUSINESS OF GOLF & RESORT MANAGEMENT, DIPLOMA

Maximum Credit Toward Degree Studies up to 30 units pending approval of the student's Faculty office

The Business of Golf and Resort Management program brings together management theory and industry. For those already working in the golf and resort industry as well as those aspiring to enter the golf and resort sector, this program provides knowledge, practical skills, and industry insights to help ensure success in starting, managing, and working in the golf and resort industry. Courses are taught by leading industry experts.

See https://continuing.mcmaster.ca/programs/business/business-of-golf-resort-management/#tab-content-diploma

FULL-STACK DEVELOPMENT, DIPLOMA

Maximum Credit Toward Degree Studies up to 27 units pending approval of the student's Faculty office

The program is designed to prepare students with skills and knowledge to become full-stack developers for websites and online content. This program will provide training across three disciplines in the web design and development: UX/UI Design, Front-End Development and Back-End Development. Students will leave the program with a strong knowledge of the web development language JavaScript, HTML, design best practices and working as part of a development team. The program will highlight the core competencies and skillsets that every full-stack development professional needs in today's workforce.

See https://continuing.mcmaster.ca/programs/marketing-communications/full-stack-development/#tab-content-diploma

HEALTH AND WELLNESS COACHING, DIPLOMA

Maximum Credit Toward Degree Studies - up to 24 units pending approval of the student's Faculty office

The program will focus on four main areas of study: nutrition and health, behaviour therapy and motivating for change, health coach principles and practices and program development. The program will blend theory with practice for students to acquire the foundational knowledge of the coaching role and its relationship with clients.

See https://continuing.mcmaster.ca/programs/health-social-services/health-and-wellness-coaching/#tab-content-diploma

HEALTH INFORMATICS, DIPLOMA

Maximum Credit Toward Degree Studies - up to 27 units pending approval of the student's Faculty office

The Health Informatics program is designed to develop and/or enhance the core competencies for professionals working in the field of health informatics. Using technology, clinical guidelines, information systems, and data management practices, health informatics professionals optimize the collection, storage, and use of information in healthcare. Health informatics applies to the areas of nursing, clinical care, dentistry, pharmacy, public health, occupational therapy, and medical research.

See https://continuing.mcmaster.ca/programs/health-social-services/health-informatics/#tab-content-diploma

HUMAN RESOURCES MANAGEMENT, DIPLOMA

Maximum Credit Toward Degree Studies - up to 27 units pending approval of the student's Faculty office

The program offers university-level knowledge and the applied skills required to succeed as a human resources practitioner. The program offers all courses required to fulfill the academic requirements of HRPA™ to become eligible to write the comprehensive knowledge exam for the Certified Human Resources Leader (CHRL™) and Human Resources Professional (CHRP™) designations. A Fast Track schedule is available.

See https://continuing.mcmaster.ca/programs/business/human-resources-management/#tab-content-diploma

MARKETING, DIPLOMA

Maximum Credit Toward Degree Studies - up to 24 units pending approval of the student's Faculty office

The Marketing program explores topics relevant to the marketing professional such as research, consumer behaviour, market segmentation, social media, branding, pricing strategies, tracking and measurement. Master the latest marketing skills to keep pace in today's fast-paced, competitive environment.

See https://continuing.mcmaster.ca/programs/marketing-communications/marketing/#tab-content-diploma

MARKETING, DIPLOMA WITH DIGITAL MARKETING CONCENTRATION

Maximum Credit Toward Degree Studies - up to 24 units pending approval of the student's Faculty office

Designed in association with the DeGroote School of Business, gain the skills and expertise needed to build marketing strategies and successfully execute plans across traditional, digital and social platforms that drive results.

See https://continuing.mcmaster.ca/programs/marketing-communications/marketing/#tab-content-concentration

PROFESSIONAL ADDICTION STUDIES, DIPLOMA

Maximum Credit Toward Degree Studies - up to 30 units pending approval of the student's Faculty office

The Professional Addiction Studies program provides an opportunity for individuals seeking to enter the field of addiction to enhance their knowledge and skills required for employment and professional certification. The program also serves as professional development for those working in fields of mental health, counselling, law enforcement, nursing, social work, child and family services.

See https://continuing.mcmaster.ca/programs/health-social-services/professional-addiction-studies/#tab-content-diploma

Bachelor of Technology Program

https://www.eng.mcmaster.ca/sept
Engineering Technology Building (ETB), Room 509
Ext. 26401

Certificate(s)

TECHNOLOGY CERTIFICATE

Maximum Credit Toward Degree Studies - 15 units
This program consists of fifteen units comprising five courses in the corresponding Bachelor of Technology program. Students must select the five required courses in their discipline.
The McMaster University Technology Certificate is offered in four disciplines:

- Civil Engineering Infrastructure Technology
- Power and Energy Engineering Technology
- Manufacturing Engineering Technology
- Software Engineering Technology

TECHNOLOGY LEADERSHIP CERTIFICATE

This five-course certificate program focuses on the additional skills needed by graduate technologists to enable them to be more effective in their positions and to advance professionally. The courses are held in the evenings and on Saturdays and are oriented towards the needs of technologists already working in industry.

Concurrent Certificates

Certificate(s)

CERTIFICATE IN BUSINESS TECHNOLOGY MANAGEMENT (BTM)

Notes

- SFWRTECH 3IT3 and SFWRTECH 3PR3 are anti-requisites.
- Many of the SFWRTECH courses are graded on a pass/fail basis. This may impact a student's eligibility for the Deans' Honour List as a minimum of 24 units of graded work is required for consideration.

Admission

Enrolment in an Honours Bachelor of Commerce (B.Com.) program is required for admission to the certificate.

Requirements

27 units total

21 UNITS

- COMMERCE 3KA3 - System Analysis and Design
- COMMERCE 3KD3 - Database Design Management and Applications
- COMMERCE 3KE3 - Management of Enterprise Data Analytics and Artificial Intelligence
- COMMERCE 4KF3 - Project Management
- COMMERCE 4KG3 - Data Mining For Business Analytics
- COMMERCE 4KH3 - Strategies for Electronic and Mobile Business
- COMMERCE 4KI3 - Business Process Management

6 UNITS

from

- SFWRTECH 3CS3 - Introduction to Cyber Security
- SFWRTECH 3IT3 - Fundamentals of Networking
- SFWRTECH 3PR3 - Procedural and Object Oriented Programming Concepts
- SFWRTECH 3RQ3 - Software Requirements and Specification
- SFWRTECH 4SD3

CONCURRENT CERTIFICATE FOR APPLIED ETHICS AND POLICY (CAEP)

Department of Philosophy
University Hall, Room 303, ext. 24275
http://philos.humanities.mcmaster.ca/
The Certificate for Applied Ethics and Policy (CAEP) is designed to prepare undergraduate students from Health Sciences, Engineering, Business, Humanities, Science, and Social Sciences to work together on teams to identify and resolve the ethical, institutional, and policy challenges posed by novel technologies that are highly promising but also potentially disruptive. The Certificate will recognize students for having gained skills in ethics and critical reasoning, the development of policy recommendations, working within multi-disciplinary teams, and engaging with relevant stakeholders.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the certificate at the time of graduation and upon satisfaction of each of the following requirements:

- The student must be accepted by the Certificate for Applied Ethics and Policy Committee (the CAEP Selection Committee). The CAEP Selection Committee will consider supplemental applications soon after the end of Winter term of each academic year, but only from students who are enrolled in an undergraduate program at McMaster University and who have completed one of PHILOS 2D03 or 2YY3. The CAEP Selection Committee's selections will be made on the basis of the student's cumulative grades and answers to the supplemental application questions.
- The student must complete 15 units in accordance with the following requirements. Of these 15 units, 9 must be elective to the degree.
- Students who entered CAEP prior to Fall 2022 may continue to proceed with requirements as listed in the year of their entry into the certificate. Students are advised to consult the 2021-2022 Undergraduate Calendar for these earlier requirements.

NOTES

- Any student enrolled in a Philosophy Honours BA or Justice, Political Philosophy, and Law Honours BA Program may satisfy no more than 2 courses (6 units) of the Philosophy Honours BA Program requirements with courses that the student has also designated as counting toward the satisfaction of the Certificate's requirements.
- Students who declare the certificate are precluded from declaring a philosophy minor.
- Transfer credits will not be accepted in lieu of PHILOS 4V03. Students accepted into the certificate program are free to request transfer credit in lieu of any other certificate course requirement. The student may submit such a request to the Selection Committee (via philadm@mcmaster.ca) at any time.
- Note that selection by the selection committee is distinct from the successful declaration of the certificate, and a student's selection does not imply that the candidate has satisfied all certificate requirements. It is the student's responsibility to make sure that at the time of graduation, all requirements of the certificate as enumerated above have

been fulfilled.
- Integrated Business and Humanities students may substitute IBH 1BC3 for PHILOS 2YY3 and/or IBH 2BD3 for PHILOS 2N03.
- Students who have previously taken PHILOS 2S03 may substitute this course for one of: PHILOS 2D03 (if not previously completed), PHILOS 2G03, PHILOS 2N03, PHILOS 2TT3 or PHILOS 2YY3 (if not previously completed).

REQUIREMENTS

15 units total

3 units

from

- PHILOS 2D03 - Bioethics
- PHILOS 2YY3 - Ethics

3 units

from

- PHILOS 2D03 - Bioethics *(if not previously completed)*
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2N03 - Business Ethics
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 2YY3 - Ethics *(if not previously completed)*

6 units

from

- PHILOS 3C03 - Advanced Bioethics
- PHILOS 3CC3 - Advanced Ethics
- PHILOS 3GH3 - Global Health Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3L03 - Environmental Philosophy
- PHILOS 3N03 - Political Philosophy
- PHILOS 3Q03 - Philosophy of Law
- PHILOS 3T03 - Philosophy and Race

3 units

- PHILOS 4V03 - Multidisciplinary Workshop in Applied Ethics and Policy

CONCURRENT CERTIFICATE IN ANTI-RACISM, INCLUSION AND EQUITY (ARIE) IN SCIENCE

Administered by the Office of the Associate Dean, Undergraduate Studies in the Faculty of Science

The Concurrent Certificate in Anti-Racism, Inclusion and Equity (ARIE) in Science is administered by the Office of the Associate Dean, Undergraduate Studeis in the Faculty of Science.
Burke Science Building, Room 136, ext. 27590
http://www.science.mcmaster.ca/
science@mcmaster.ca

The Concurrent Certificate in Anti-Racism, Inclusion and Equity (ARIE) in Science provides students with skills, knowledge, and opportunities to engage with these topics in the context of science disciplines. The Concurrent Certificate in Anti-Racism, Inclusion and Equity (ARIE) in Science addresses the emerging priority of integrating principles of equity, diversity and inclusion into the science curriculum, and is strongly aligned with McMaster's primary strategic priority of inclusive excellence.

This certificate is aimed at all undergraduate students (from Level II and above) in the Faculty of Science and would also be open to students from other Faculties. We envision this certificate as enabling undergraduate students to reflect on and actively integrate constructs of anti-racism, equity, accessibility and social justice into their science education and degree programs.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the ARIE Certificate at the time of graduation providing they satisfy the following requirements.

REQUIREMENTS

15 units total

9 units

- SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science
- SCIENCE 4AR6 - Inquiry in Equity, Justice and Anti-Racism in Science

3 units

from

- ANTHROP 2DA3 - Traditional Indigenous Ecological Knowledge
- ASTRON 2A03 - Perspectives on Indigenous and Eurocentric Astronomy
- ENVSOCTY 2EK3 - Traditional Indigenous Ecological Knowledge
- ENVSOCTY 3EN3 - Northern Environments and Societies
- ENVSOCTY 3RA3 - Human Geographies of Africa
- INDIGST 2D03 - Traditional Indigenous Ecological Knowledge
- KINESIOL 1ED3 - Equity, Diversity, and Inclusion in Physical Activity
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care

3 units

from

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- HTHSCI 2T03 - Sex, Gender, & Health
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3DA3 - Decolonizing and Conceptualizing Anatomy Through Arts Practice
- HTHSCI 3PH3 - The Politics of Help
- HTHSCI 3RH3 - Racism and Health
- HTHSCI 3WT3 - What Trauma Teaches: Lessons from Listening
- HTHSCI 4IH3 - Indigenous Health Research
- HTHSCI 4SR3 - Global Sexual and Reproductive Health and Rights
- HTHSCI 4Y03 - Science, Culture and Identity
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

CONCURRENT CERTIFICATE IN APPLIED LINGUISTICS

The Applied Linguistics Certificate (ALC) is designed to prepare undergraduate students from Linguistics and Languages, as well as other disciplines, to work on practical and applied issues that involve language related services and projects. Students who obtain the certificate will be able to contribute to teamwork identifying and solving language challenges related to educational policies, international relations, and novel communication technologies. The Certificate will recognize students for having gained skills in applied language studies and critical reasoning about linguistic issues, the development of policy recommendations, working within multi-disciplinary teams, and engaging with relevant stakeholders.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the certificate at the time of graduation and upon satisfaction of each of the following requirements:

1. Students must be enrolled in an undergraduate program at McMaster University.
2. Students must have completed 18 units of Linguistics courses listed below, including 6 units of introductory Level I courses (LINGUIST 1A03 and 1AA3; or 1Z03 and 1Z03; or 1E03 and 1EE3) and 3 units of LINGUIST 3AA3 (formerly 4AA3).

Notes

1. Students enrolled in Linguistics and the Cognitive Science of Language programs must take at least 6 units (2 courses) designated for the certificate beyond the requirements of their programs.
2. Students wishing to complete both should note that no more than 6 units (the required LINGUIST 1A03 and 1AA3) may be double counted toward both the Certificate's requirements and the Minor in Linguistics.
3. Students opting for the certificate program are free to request transfer credit in lieu of any other certificate course requirement. In consultation with their Faculty Advising Office, the student may submit such a request to the undergraduate counsellor in the Linguistics and Cognitive Science of Language programs (via lingdept@mcmaster.ca) at any time.
4. It is entirely the student's responsibility to make sure that at the time of graduation, all requirements of the certificate as enumerated above have been fulfilled.

Requirements

18 units total

6 UNITS:

- LINGUIST 1A03 and 1AA3; or
- LINGUIST 1Z03 and 1ZZ3; or
- LINGUIST 1E03 and 1EE3.

3 UNITS:

LINGUIST 3AA3 Applied Linguistics

9 UNITS (AT LEAST 6 UNITS FROM LEVEL III):

- LINGUIST 2E03 The Nature of Texts: From Slang to Formal Discourse
- LINGUIST 2FL3 Introduction to Forensic Linguistics
- LINGUIST 2S03 Language and Society
- LINGUIST 3E03 Teaching English as a Second Language (ESL)
- LINGUIST 3LA3 Introduction to Second Language Acquisition
- LINGUIST 3PG3 Introduction to Programming for Linguistics
- LINGUIST 3TT3

CONCURRENT CERTIFICATE IN APPLIED SOCIAL SCIENCES RESEARCH

FACULTY OF SOCIAL SCIENCES

KENNETH TAYLOR HALL, ROOM 129

http://socialsciences.mcmaster.ca

This certificate aims to provide opportunities for interested students to acquire broader exposure and competencies in applied research methods to meet the needs of the labour market and student interests. Upon completion, students will have had the opportunity to achieve a deeper understanding of the following competencies, along with ability to apply them in practice:

- Identify and define appropriate methods for studying a wide range of topics;
- Define and operationalize concepts;
- Statistical/quantitative data analysis (including the use of software);
- Qualitative data analysis (including the use of software);
- Create original surveys/questionnaires;
- Identify, gather and clean (original and secondary) data;
- Presentation of research findings.

CERTIFICATE REQUIREMENTS

Any McMaster student in an undergraduate degree program in the Faculty of Social Sciences or in a Combined Honours degree program with a Social Sciences subject may declare the certificate, at the time of graduation, and upon completion of the following courses. Non-McMaster credit may not be utilized in fulfilment of certificate requirements.

Students are advised to consult with the Undergraduate Chair or Academic Advisor for their program of study in Social Sciences to ensure individual courses (such as their project plan for an Independent Study course) meet the criteria of a research course.

Requirements

15-18 units total

3 UNITS

Foundations Course in Research Methods in the Social Sciences

- SOCSCI 1RM3 - How do we Know? Doing Social Sciences Research

6-9 UNITS

Research Methods and/or Analysis Courses

- ANTHROP 3IS3 - Independent Study in Anthropology
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3P03 - Doing Ethnography: Research Methods
- ECON 2B03 - Analysis of Economic Data
- ECON 3E03 A/B S - Applied Econometrics
- ECON 4FF3 - Research Methods in Economics
- ECON 4G03 - Econometrics II
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3MA3 - Research Methods
- ENVSOCTY 3MB3 - Data Analysis
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- GEOG 2GI3
- GEOG 3MA3
- GEOG 3MB3
- GEOG 4GA3
- HLTHAGE 2A03 - Research Methods in Health and in Aging I
- HLTHAGE 3B03 - Advanced Research Methods
- HLTHAGE 3G03 - Community Based Research
- HLTHAGE 3I03 - Independent Study in Health, Aging and Society
- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory
- POLSCI 2NN3 - Politics by Design
- POLSCI 3NN3 - Statistical Analysis of Primary Data
- POLSCI 4SS3 - Public Opinion and Policy
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 3RM3
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 3MT3 - Psychometrics
- PSYCH 4KK3 - Bayesian Inference
- RELIGST 3F03
- SCAR 3F03 - Approaches to the Study of Religion
- SOCPSY 2K03 - Research Methods in Social Psychology
- SOCSCI 2J03 - Introduction to Statistics
- SOCIOL 2Z03 - Introduction to Sociological Research
- SOCIOL 3FF3 - Introduction to Quantitative Research Methods
- SOCIOL 3W03 - Historical Methods in Sociology
- SOCIOL 4FF3 - Applications of Quantitative Methods in the Social Sciences

3-6 UNITS

Experiential/Capstone Courses

- ANTHROP 3CC6 - Archaeological Field School
- ANTHROP 4G03 - Independent Research I
- ANTHROP 4GG3 - Independent Research II
- ECON 4A03 - Honours Economic Analysis
- ECON 4AA3 - Economic Specialist Seminar
- GEOG 3ME3
- GEOG 3MF3
- GEOG 3MI3
- GEOG 4MF3
- GEOG 4MS3
- GEOG 4MT6 A/B

- ENVSOCTY 3MF3 - Urban Field Camp
- ENVSOCTY 3MI3 - Internship in Environment and Society
- ENVSOCTY 4MF3 - Senior Urban Field Camp
- ENVSOCTY 4MS3 - Independent Study
- ENVSOCTY 4MT6 A/B - Senior Thesis
- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry
- HLTHAGE 4Z06 A/B - Health, Aging and Society Thesis
- INDIGST 4A03 - Indigenous Climate Justice
- INDIGST 4T06 A/B - Honours Thesis
- POLSCI 4Z06 A/B - Honours Essay
- POLSCI 4ZZ6 A/B - Experiential Learning in Research
- PNB 4D06 A/B - Senior Thesis
- PNB 4D09 A/B - Senior Honours Thesis
- PNB 4J03 - Inquiry in Psychology, Neuroscience & Behaviour
- PNB 4Q03 A/B S - Senior Independent Library Study
- PNB 4QQ3 A/B S - Senior Independent Research
- SOCPSY 4IS3 - Independent Research
- SOCPSY 4IS6 A/B - Independent Research
- SOCPSY 4ZZ6 A/B - Social Psychology Research Project
- SOCIOL 4M03 - Directed Research I for Honours Students
- SOCIOL 4MM6 A/B S - Directed Research for Honours Students
- SOCIOL 4N03 - Directed Research II for Honours Students
- SOCIOL 4VV3

CONCURRENT CERTIFICATE IN BIOMEDICAL SCIENCES (BMS)

Faculty of Health Sciences

The Concurrent Certificate in Biomedical Sciences is administered by the Honours Health Sciences Program.

Michael G. DeGroote Centre for Learning and Discovery, Room 3300, ext. 22815.

hhsp.mcmaster.ca

The Concurrent Certificate in Biomedical Sciences (BMS Certificate) is designed to provide students with an interest in biomedical research with an opportunity to develop an academic focus in this area, with the BMS Certificate serving to recognize that they have gained core knowledge in this area through their coursework. This course of study will emphasize content in the biomedical sciences, along with the development of essential skills in problem-solving, critical thinking, scientific reasoning and logic, experimental design, and working independently and in teams. These transferable skills and principles in biomedical sciences will prepare students for a future in graduate-level research, industry, or professional school.

Notes

- In order to obtain the BMS Certificate, at least 12 units (above Level 1) must be elective to the degree.
- No more than 6 units can be counted toward both the BMS Certificate and a Biochemistry or Nexus Minor.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the BMS Certificate at the time of graduation provided that they satisfy the following requirements.

REQUIREMENTS

30-33 units

6 units

from

- BIOCHEM 2L06 A/B - Inquiry in Biochemical Techniques
- HTHSCI 3V03 - Research and Experimental Design
- HTHSCI 4AL3 - Model Systems
- HTHSCI 4RD3 - Integrated Statistics and Research Design
- LIFESCI 3L03 - Laboratory Methods in Life Sciences
- LIFESCI 3RP3 - Life Sciences Research Practicum

15 units

from

Biochemistry:

- BIOCHEM 1MM3 - From Molecules to Medicine: Unlocking Biochemical Secrets in Health
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3BP3 - Practical Bioinformatics in the Genomics Era
- BIOCHEM 3CB3 - Emerging Discovery in Cell Biology
- BIOCHEM 3D03 - Metabolism and Regulation
- BIOCHEM 3G03 - Proteins and Nucleic Acids
- BIOCHEM 3H03 - Clinical Biochemistry
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 3Z03 - Structural Determination and Analysis of Macromolecules
- BIOCHEM 4C03 - Inquiry in Biochemistry
- BIOCHEM 4E03 - Gene Regulation in Stem Cells and Development
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOCHEM 4M03 - Cellular and Integrated Metabolism
- BIOCHEM 4N03 - Molecular Membrane Biology
- BIOCHEM 4Q03 - Biochemical Pharmacology
- BIOCHEM 4S03 - Introduction to Molecular Biophysics

Health Sciences:

- HTHSCI 3CB3 - Introduction to Computational Biology
- HTHSCI 3CP3 - Research Project in Computational Biology
- HTHSCI 3EP3 - Epigenetics: Linking Nature and Nurture
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3HI3 - Human Histology & Histopathology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 3SB3 - Superbugs: Bacterial Antibiotic Resistance
- HTHSCI 3U03 - Medical Genetics
- HTHSCI 3X03 - Pain: Perceptions, Mechanisms and Intervention
- HTHSCI 4BB3 - Neuroimmunology
- HTHSCI 4G03 - Pathoanatomy
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4J03 - Immunological Principles In Practice
- HTHSCI 4JJ3 - Capacity Research in Everyday Life
- HTHSCI 4K03 - Human Pathophysiology
- HTHSCI 4NU3 - Nutrition
- HTHSCI 4O03 - Principles of Virus Pathogenesis

Molecular Biology:

- MOLBIOL 4H03 - Molecular Biology of Cancer

Life Sciences:

- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3BM3 - Implanted Biomaterials (CHEMBIO 3BM3)
- LIFESCI 3BP3 - Modelling Life (BIOPHYS 3G03)
- LIFESCI 3E03 - Reproductive Endocrinology
- LIFESCI 3M03 - Cellular Dynamics in Health and Disease
- LIFESCI 3RC3 - Radioisotopes in Medicine (CHEM 3RC3)
- LIFESCI 4CM3 - Foundations of Disease States Inquiry Lab
- LIFESCI 4H03 - Regeneration: What Can We Learn from Animal Models?
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- LIFESCI 4XX3 - The Synapse

9-12 units

from

- HTHSCI 4R09 A/B S

- HTHSCI 4R12 A/B S
- LIFESCI 4B09 A/B S - Independent Project
- LIFESCI 4C12 A/B S - Independent Thesis
- LIFESCI 4D15 A/B S - Independent Thesis

or

- Equivalent senior thesis courses in the student's home program

CONCURRENT CERTIFICATE IN CINEMA STUDIES

School of the Arts

Togo Salmon Hall (TSH), Room 414, ext. 27671

https://sota.humanities.mcmaster.ca/

The Concurrent Certificate in Cinema Studies is designed to provide students with a credential in a new area. It will engage all campus undergraduates who seek to undertake a formal study of an art that touches every human's life. The certificate's key objectives are to develop a student's knowledge of cinema's form (i.e., inherent structure), its historical development, and an understanding of cinema's interaction with theatre and dramatic performance. Doing so, the certificate crosses disciplinary boundaries. Students will strengthen their analytical skills of the medium, and develop the above core competencies, through contact with the structuring principles that make-up cinema's unique features, and its artistic practices. The certificate will captivate a variety of undergraduate students, including those interested in the theories of the structuring capacities of the medium, and those students studying cinema towards a practical end. In the final course of the certificate, students will have the opportunity to cap their critical and analytical skills in a culminating practical project: producing a fictional narrative short. This practical cinematic project asks students to bring together their critical understandings of the medium, with a creative application of their imaginations, informed by the course knowledge they gain. The certificate will attract, hold the interest of, and support, students who desire to engage with cinema during their time at McMaster.

Note

Any student in an undergraduate degree program may declare the certificate, at the time of graduation, upon the completion of the following courses.

Requirements

15 units total

3 UNITS

from

- IARTS 2FA3 - Film Analysis
- THTRFLM 2FA3 - Film Analysis

6 UNITS

from

- ARTHIST 3FL3 - Early Cinema History
- ARTHIST 3XX3 - Cinema History from WWII
- IARTS 3CH3 - Cinema History from WWII
- IARTS 3EC3 - Early Cinema History
- THTRFLM 3FF3 - Early Cinema History
- THTRFLM 3L03 - Cinema History from WWII

3 UNITS

from

- FRENCH 2XX3 - French Movie Stars and Entertainers (Taught in English)
- IARTS 2MM3 - Movies and Me
- IARTS 3AA3 - Modernist Theatre and Drama in Europe
- IARTS 4D03 - Theatre, Society and Early Cinema
- MUSIC 4SM3 - Music, Sound and Movies
- THTRFLM 2MM3 - Movies and Me
- THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
- THTRFLM 4D03 - Theatre, Society and Early Cinema

3 UNITS

from

- THTRFLM 3VS3 - Visual Storytelling
- IARTS 3VS3 - Visual Storytelling

CONCURRENT CERTIFICATE IN CREATIVE WRITING AND NARRATIVE ARTS (CWNA)

Department of English and Cultural Studies

Chester New Hall, Room 321, ext 24491

https://english.humanities.mcmaster.ca/

The Concurrent Certificate in Creative Writing and Narrative Arts (CWNA) is designed for students who wish to develop their creative writing skills through workshops, groups, public-facing community work, and individual projects. Students will also enrol in other English and Cultural Studies courses to ensure they gain exposure both to the creative practice, techniques, and possibilities to be found in a variety of genres and media, and to the perspectives and learning objectives of undergraduate study in English and Cultural Studies. In their final year of study, students will participate in a series of workshops, culminating in a creative writing capstone project.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the certificate at the time of graduation and upon completion of each of the following requirements:

- The student must be accepted by the Creative Writing and Narrative Arts (CWNA) Selection Committee. **Enrolment in this Certificate is limited and possession of the published minimum requirements does not guarantee admission.** The CWNA Selection Committee will consider supplemental applications in March of each year. Applicants must be enrolled in an undergraduate program at McMaster University and have completed at least one of ENGLISH 2CW3, 3CP3, or 3CW3 and three units of any other English and Cultural Studies course. The CWNA Selection Committee's selections will be made on the basis of the student's cumulative grades and their supplemental application. (See *Note 1* below.)
- The student must complete 18 units in accordance with the following requirements.

Notes

- Students must complete a supplemental application for admission, due in March for the next academic year. This application includes a writing portfolio of 10 double-spaced pages of original creative writing in more than one genre. Supplemental application information will be available on the English and Cultural Studies website when the application period is open.
- Students not accepted in the CWNA Concurrent Certificate may take open Level 2 and Level 3 Creative Writing courses as electives, as space permits; please note that enrolment in ENGLISH 3CR3 and 4CC3 are restricted to students accepted to the Certificate and enrolment in ENGLISH 4FW3 and 4SD3 is restricted to students in an English and Cultural Studies Honours or Combined Honours BA program.
- Any student wishing to also complete the Minor in English and Cultural Studies should make note that no more than 6 units may be double counted toward both the concurrent certificate and minor requirements.
- Note that acceptance by the Selection Committee is distinct from the successful declaration of the Certificate, and a student's acceptance does not imply that the candidate has satisfied all Certificate requirements. It is the student's responsibility to make sure that, at the time of graduation, all requirements of the Certificate have been fulfilled.

Requirements

18 units total

3 UNITS

- ENGLISH 2CW3 - Genre in Creative Writing

6 UNITS

from

- ENGLISH 3CP3 - Writing Practices
- ENGLISH 3CR3 - Writing Out
- ENGLISH 3CW3 - Creating Writing in/for/with Communities
- ENGLISH 4FW3 - Forms of Creative Writing
- ENGLISH 4SD3 - Sentenced to Death

3 UNITS

- ENGLISH 4CC3 - Creative Writing Capstone

6 UNITS

- Any Level II or III ENGLISH courses apart from the Creative Writing courses specified above

CONCURRENT CERTIFICATE IN CRITICAL CURATORIAL STUDIES (CCCS)

School of the Arts

Togo Salmon Hall (TSH), Room 414, ext. 27671

https://sota.humanities.mcmaster.ca/

The Concurrent Certificate in Curatorial Studies (CCCS) aims to broaden students' understanding of and provide training and mentoring in critical approaches to contemporary curatorial studies in the arts through a partnership with the School of the Arts, the McMaster Museum of Art, and the Art Gallery of Hamilton. The certificate will leverage the scale and strength of the Hamilton arts community to offer experiential, practical, and strategic learning initiatives. The certificate fills a critical need for students to learn about and gain professional knowledge for the pursuit of graduate studies, professional programs, and employment opportunities in the fields of in museum and gallery curating, museum education, and community and cultural arts administration. A key objective of the certificate is to help students develop skills and deeper understandings and knowledge of anti-oppressive, decolonialiality, and transformative frameworks through course work including a final capstone course that includes experiential learning in the field.

Centering transformative and re-distributive justice, the certificate in curatorial studies will consider the unmaking and remaking of art institutions and critically examine the role of curators in the future of art institutions.

The certificate in Curatorial Studies is designed for students across a range of disciplines in Humanities including but not limited to: iArts, Gender Studies, Global Peace and Social Justice, English & Cultural Studies, History, Classics, Greek and Roman Studies, Communications Studies, Media Arts, and Philosophy.

Note

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses.

Requirements

15 units total

3 UNITS

from

- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment

3 UNITS

- IARTS 2CP3 - Introduction to Critical Curatorial Perspectives

3 UNITS

from

- Any Level II or above course in Art, Art History, iArts or Theatre & Film, or:
- IARTS 1HA3 - Introduction to Histories of the Arts
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender *(if not previously taken)*
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment *(if not previously taken)*
- ENGLISH 2KA3 - Indigenous Futurisms and Wonderworks
- ENGLISH 2M03 - Concepts of Culture
- ENGLISH 2P03
- ENGLISH 2VC3 - Topics in Visual Culture
- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GENDRST 3BB3 - Gender and Visual Culture
- GENDRST 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- HISTORY 2PP3 - From Archive to History
- HISTORY 2V03 - Re-Making History
- MEDIAART 1A03 - Media Arts
- PHILOS 2H03 - Aesthetics

6 UNITS

- IARTS 4CS6 A/B - Critical Curatorial Studies

CONCURRENT CERTIFICATE IN CRITICAL HERITAGE STUDIES

Department of History

Chester New Hall, Room 619, ext. 24270

https://history.humanities.mcmaster.ca

The Concurrent Certificate in Critical Heritage Studies is designed to provide undergraduates with the intellectual skills and context necessary for ethical and critically rigorous engagement in the public history and cultural heritage sectors. By choosing courses for this certificate students will gain a grounding in the varied meanings and practice of heritage, which, depending on courses chosen, can include approaches to the study of tradition, collective remembrance, historic preservation, public history and archaeology, and heritage tourism. The certificate will be useful for students aiming to work in the heritage sector and/or as a foundation for graduate work in heritage conservation and management, public history, and museum studies.

Requirements

15 units total

3 UNITS

from

- HISTORY 1CC3 - Ten Empires that Shaped our World, 500 BCE to Present
- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 1EE3 - The Historical Roots of Contemporary Issues
- HISTORY 1M03 - History of Greece and Rome
- HISTORY 1MA3 - The Powers of Modern East Asia: Constitutional Politics and Historical Changes
- HISTORY 1P03 - A History of Magic
- HISTORY 1PP3 - Pop Goes the Past!
- HISTORY 1Q03 - History of Medicine

3 UNITS

- HISTORY 2CH3 - Introduction to Critical Heritage Studies

6 UNITS

from

- ANTHROP 2HE3 - Heritage, Economy, and Ethics
- ANTHROP 3TR3 - Tourism: Sex, Sun and Sightseeing
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- ENGLISH 2M03 - Concepts of Culture
- ENGLISH 3CW3 - Creating Writing in/for/with Communities
- GKROMST 2BB3 - Constructing the Ancient World
- GKROMST 2CC3 - Archaeology of the Roman Empire
- HISTORY 2PP3 - From Archive to History
- HISTORY 2PQ3 - Histories of the Written Word
- HISTORY 4HM3 - History, Heritage and Memory: How the Past is Used in Modern Western Culture
- HUMAN 2DH3 - Creative, Collaborative, Critical: Approaches to Digital Scholarship
- IARTS 2CP3 - Introduction to Critical Curatorial Perspectives
- IARTS 3IA3 - Indigenous Art and Visual Culture in Canada

3 UNITS

- HISTORY 4HP3 - Heritage Placement

CONCURRENT CERTIFICATE IN CRITICAL PRACTICE IN CHILD WELFARE

SCHOOL OF SOCIAL WORK

KENNETH TAYLOR HALL, ROOM 319

http://socialwork.mcmaster.ca

The Concurrent Certificate in Critical Practice in Child Welfare is designed to enhance preparedness and readiness of graduates of the Bachelor of Social Work (BSW) program to work in the areas of child welfare and child protection. The Certificate emphasizes knowledge, skills and attitudes that underpin child welfare work, and nurtures student attitudes and critical thinking abilities by drawing on current research and best practice from around the world. It is designed to strengthen students' capacities to practice from critical, decolonizing, and anti-oppressive standpoints, thereby increasing their accountability, community engagement skills, and capacity to focus on family and community wellbeing through less-intrusive social work interventions. The Certificate prepares BSW students for long-term careers in any child protection system in Canada and similar child protection settings internationally. Emphasis is placed on the policy and practice limitations and possibilities of various child welfare systems that students may work within. Course curricula, field education experiences, and collaborations with representatives from the child welfare sector are integrated to bridge classroom and practical field learning. Through these elements, attention is paid to producing social workers with the potential for future leadership within child welfare who can successfully work within the system while also having the ability to think outside the system.

Learning Outcomes

By completing the courses required for the Concurrent Certificate Critical Practice in Child Welfare, students will acquire enhanced knowledge and practice skills in the areas of child welfare and child protection. Specific learning outcomes include:

- Develop a working familiarity with child welfare law, policy, and practice as well as the roles and responsibilities of the child protection worker;
- Understand the strengths and limitations of current child welfare systems including the ways that whiteness, white supremacy, and colonization shape child welfare and create disproportionalities for specific communities; and
- Strengthen capacity to practice from critical, decolonizing, anti-racist, anti-oppressive and intersectional standpoints thereby increasing their accountability, community engagement skills, and capacity to focus on family and community well-being through less-intrusive and prevention-focused social work interventions.

Certificate Requirements

Any student* in the McMaster BSW program may declare the Concurrent Certificate in Critical Child Welfare, at the time of graduation and upon completion of the following courses. Non-McMaster credit may not be utilized in fulfilment of certificate requirements.

REQUIREMENTS

18 units total:

- SOCWORK 2A06 A/B - Theory, Process and Communication Skills for Social Work
- SOCWORK 4W03 - Child Welfare (to be taken before SOCWORK 4SA3
- SOCWORK 4SA3 - Critical Child Welfare: From Theory to Practice

(limited enrollment and taken upon completion of SOCWORK 4W03; see details below)

- SOCWORK 4DD6 A/B S - Field Practicum II - for students to complete the Certificate, this Practicum will take place in a specific setting: a child welfare agency partnered with the School of Social Work

**BSW Post-Degree students who only require completion of one Social and Political Context of Social Work course may need to take an additional course to complete the Concurrent Certificate. Students should consult with the Academic Department Manager in the School of Social Work.*

Access to Concurrent Certificate Courses/Field Placements

SOCWORK 4SA3 is taken after SOCWORK 4W03 and requires special permission as registration in this course is limited. In order to assess and grant permission for students to register for SOCWORK 4SA3, the School of Social Work will utilize evaluations completed as part of SOCWORK 4W03 when possible and also the SOCWORK 3DD6 Field Practicum and Seminar. If students are exempt from the SOCWORK 3DD6 Field Practicum due to relevant work and/or educational experiences, they will be considered for SOCWORK 4SA3 on a case-by-case basis. Students who have been granted an exemption are asked to contact the Academic Department Manager to determine what is required to confirm eligibility for the Concurrent Certificate. Students who wish to take SOCWORK 4SA3 should consult with the Academic Department Manager in the School of Social Work.

CONCURRENT CERTIFICATE IN ENVIRONMENTAL SUSTAINABILITY (ES)

School of Earth, Environment & Society

The Concurrent Certificate in Environmental Sustainability is administered by the School of Earth, Environment & Society (Faculty of Science) (formerly the School of Geography and Earth Sciences).

General Science Building, Room 206, ext. 23534

ugadmin@mcmaster.ca

The Concurrent Certificate in Environmental Sustainability (ES) will provide students with an opportunity to develop expertise in the related fields of environmental studies, environmental science, and sustainability. Students might also consider the Concurrent Certificate in Sustainability.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the ES Certificate at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS

15 units total

3 units

- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions

9 units
from
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 3CC3 - Earth's Changing Climate
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVIRSC 3IN3 - Internship in Earth and Environmental Sciences
- ENVSOCTY 2EK3 - Traditional Indigenous Ecological Knowledge
- ENVSOCTY 2TF3 - Food, Power and Place
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3EG3 - Politics of a Dying Planet
- ENVSOCTY 3EN3 - Northern Environments and Societies
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 3LT3 - Transport Geography and Planning
- ENVSOCTY 3MI3 - Internship in Environment and Society *
- ENVSOCTY 3UP3 - Urban Planning

* Note - if internship placement is related to environmental sustainability

6 units
from
- ENVIRSC 4EA3 - Environmental Assessment
- ENVIRSC 4MI3 - Independent Study in Earth and Environmental Sciences
- ENVSOCTY 4ET3 - Environmental Ethics and Policy
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4MS3 - Independent Study *
- ENVSOCTY 4US3 - Sustainable Cities

* Note - if on an environmental sustainability topic

CONCURRENT CERTIFICATE IN ESSENTIAL FRENCH

Department of French
Togo Salmon Hall, Room 532, ext. 24470
http://french.humanities.mcmaster.ca/
The Concurrent Certificate in Essential French is intended for those students seeking a solid foundation in essential French, including receptive linguistic skills (listening, reading, comprehension), and fundamental productive communication skills (speaking, writing). Students completing a degree program in French (Hons BA, BA, Minor) are not eligible for the concurrent Certificate in Essential French.

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses in French.

REQUIREMENTS
15 units total
- FRENCH 1Z06 A/B
- FRENCH 1ZA3 - Intensive French Beginner I
- FRENCH 1ZB3 - Intensive French Beginner II
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I *
- FRENCH 2M06 A/B *
- FRENCH 2Z06 A/B
- FRENCH 2ZA3 - Intensive French Elementary I
- FRENCH 2ZB3 - Intensive French Elementary II

Alternate Pathway to Certificate

Those students who begin their French Studies at McMaster with FRENCH 2Z06 A/B or FRENCH 2ZA3 and FRENCH 2ZB3 may complete the concurrent Certificate in Essential French, through fulfilment of the following alternate pathway.

REQUIREMENTS
15 units total
6 units
- FRENCH 2Z06 A/B
- FRENCH 2ZA3 - Intensive French Elementary I
- FRENCH 2ZB3 - Intensive French Elementary II

6 units
- FRENCH 2M06 A/B
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II

3 units
- Level II French, excluding:
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I *
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II *
- FRENCH 2M06 A/B
- FRENCH 2Q03 - Montreal, a City of Many Faces (Taught in English)
- FRENCH 2XX3 - French Movie Stars and Entertainers (Taught in English)
- FRENCH 2Z06 A/B
- FRENCH 2ZA3 - Intensive French Elementary I
- FRENCH 2ZB3 - Intensive French Elementary II

Note:

*****Students may replace FRENCH 2M06 A/B, FRENCH 2AA3 or FRENCH 2AB3 with equivalent language courses taken during the summer through the Explore program, or with other pre-approved exchange or study abroad courses. No more than 6 units of the Certificate, however, can come from non-McMaster courses.
The Department of French strongly recommends that an immersion experience be part of the work towards the certificate.

CONCURRENT CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCE (GIS)

School of Earth, Environment & Society
The Concurrent Certificate in Geographic Information Science is administered by the School of Earth, Environment & Society (Faculty of Science) (formerly the School of Geography and Earth Sciences).
General Science Building, Room 206, ext. 23534
ugadmin@mcmaster.ca
The Concurrent Certificate in Geographic Information Science (GIS) will train students in the use and application of geographic information systems and remote sensing relevant to a breadth of disciplines, including environment and earth sciences, geography, biology, anthropology, civil engineering, health science and business.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the GIS Certificate at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS
18 units total
12 units
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- ENVSOCTY 3GV3 - Advanced Vector GIS
- ENVSOCTY 3SR3 - Remote Sensing

6 units
from
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4GS3 - GIS Programming
- ENVSOCTY 4GT3 - Web GIS

- ENVSOCTY 4SR3 - Advanced Remote Sensing

CONCURRENT CERTIFICATE IN HEALTH HUMANITIES AND SOCIAL SCIENCES

The Concurrent Certificate in Health Humanities & Social Sciences (HHSS Certificate) is designed to provide students from many disciplines with an interest in the health humanities and social sciences with an opportunity to develop an academic focus in this area, with the HHSS Certificate serving to recognize that they have gained core knowledge in this area through their coursework. For these purposes, HHSS is understood as the application of creative or fine arts (art, music, performing arts) and humanities and social sciences disciplines (eg. literary studies, languages, law, history, philosophy, religion, sociology, anthropology, etc.) to discuss, express, understand, or promote human health and well-being.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the HHSS Certificate at the time of graduation provided that they satisfy the following requirements:

NOTE

- Transfer credits or substitutions may be considered for credit toward the HHSS Certificate by submitting a request to the Assistant Dean - Honours Health Sciences Program.

18 UNITS

from

- the following list; at least 9 units must be elective to the student's degree, and at least 9 units must be taken from

outside the student's home faculty.

Courses in the Arts & Science Program

- ARTSSCI 4CT3 - Medical Humanities Inquiry
- ARTSSCI 4HS3 - History of Science Inquiry

Courses in the Faculty of Health Sciences

- HTHSCI 2AE3 - Artistic Explorations of Community Issues
- HTHSCI 3CC3 - Theatre for Development
- HTHSCI 3DA3 - Decolonizing and Conceptualizing Anatomy Through Arts Practice
- HTHSCI 3EA3 - Introduction to Expressive Arts Therapy
- HTHSCI 3EE3 - Biomedical Graphics
- HTHSCI 3HL3 - Health Law: Current and Emerging Issues
- HTHSCI 3L03 - Introduction to Bioethics
- HTHSCI 3MU3 - Music, Health, & the Community
- HTHSCI 3N03 - Creative Writing in the Health Sciences
- HTHSCI 4DN3 - Dance in Health and Wellness
- HTHSCI 4MS3 - The Social Lives of Molecules
- HTHSCI 4NN3 - Advanced Creative Writing in Health Sciences
- HTHSCI 4TE3 - The Teaching Hospital

Courses in the Faculty of Humanities

- ARTHIST 2AA3
- ART 2AA3 - Introduction to the Practice of Art Therapy
- GKROMST 2MT3 - Ancient Roots of Medical Terminology
- GKROMST 3MT3 - Advanced Ancient Roots of Medical Terminology
- HISTORY 1Q03 - History of Medicine
- HISTORY 4FF3 - History of Health and Medicine in the Colonial World
- LINGUIST 3AS3 - Language and Communication in Autism Spectrum Disorder
- LINGUIST 3DS3 - ASL & Deaf Studies
- MUSIC 2MU3 - Introduction to Music Therapy Research
- MUSIC 2MT3 - Introduction to the Practice of Music Therapy
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4L03 - Peace, Environment and Health
- PEACEST 3B03
- PEACEST 4G03
- PEACEST 4L03
- PHILOS 2D03 - Bioethics
- PHILOS 2U03 - Philosophy of Health and Medicine
- PHILOS 3C03 - Advanced Bioethics
- PHILOS 3D03 - Philosophy of Science
- PHILOS 3GH3 - Global Health Ethics

Courses in the Faculty of Social Sciences

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- ANTHROP 3FA3 - Forensic Anthropology
- HLTHAGE 2C03 - Health Economics and its Application to Health Policy
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- LABRST 3D03
- SCAR 2ER3 - Religion, the Body, and the Machine
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2N03 - Death and Dying: The Western Experience
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SOCIOL 3G03 - Sociology of Health Care
- SOCIOL 4G03 - Advanced Topics in the Sociology of Health and Illness
- WORKLABR 3D03 - Workers' Health and Well-Being in a Changing World

CONCURRENT CERTIFICATE IN IMMUNOLOGY, MICROBIOLOGY, & VIROLOGY (IMV)

Faculty of Health Sciences

The Concurrent Certificate in Immunology, Microbiology, & Virology is administered by the Honours Health Sciences Program.

Michael G. DeGroote Centre for Learning and Discovery, Room 3300, ext. 22815.

bhsc.mcmaster.ca

The Concurrent Certificate in Immunology, Microbiology, & Virology (IMV Certificate) is designed to provide students from health sciences, biotechnology, biology, life sciences, or any other disciplines with an interest in immunology, host defense, microbiology, and virology with an opportunity to develop an academic focus in this area, with the IMV Certificate serving to recognize that they have gained core knowledge in this area through their coursework.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the IMV Certificate at the time of graduation provided that they satisfy the following requirements.

REQUIREMENTS

Completion of 15 units from *Course Lists A*, *B*, and *C*, with at least 3 units from *Course List A* and at least 3 units from *Course List B*.

COURSE LIST A

Foundational Immunology

- BIOTECH 3IV3 - Immunology and Virology
- HTHSCI 3I03 - Introductory Immunology

COURSE LIST B

Foundational Microbiology & Virology

- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOTECH 2MB3 - Microbiology

- HTHSCI 2HH3 - Introductory Microbiology
- HTHSCI 2MB3 - Microbiology in the Health Sciences
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 3MB3 - Introduction to Bacteriology in Health Sciences

COURSE LIST C

Specialized Courses in Immunology, Virology, & Microbiology

- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- ANTHROP 4S03 - The Anthropology of Infectious Disease
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOLOGY 4PP3 - Environmental Microbiology and Biotechnology
- BIOTECH 3FM3 - Food Microbiology
- HTHSCI 1DT3 - Discover Immunology Today
- HTHSCI 3DT3 - Donation & Transplantation
- HTHSCI 3SB3 - Superbugs: Bacterial Antibiotic Resistance
- HTHSCI 4BB3 - Neuroimmunology
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4J03 - Immunological Principles In Practice
- HTHSCI 4O03 - Principles of Virus Pathogenesis
- LIFESCI 4L03 - Our Invisible Body: Microbes and Human Health
- MOLBIOL 3O03 - Microbial Genetics
- MOLBIOL 4P03 - Medical Microbiology
- NEXUS 2A03 - Impact of Infectious Disease on Individuals and Society

Note

Transfer credits may be considered for credit toward the IMV Certificate by submitting a request to the Assistant Dean, Honours Health Sciences Program.

CONCURRENT CERTIFICATE IN INTERNATIONAL ENGAGEMENT

Faculty of Humanities

Chester New Hall, Room 107
http://www.humanities.mcmaster.ca
humanities@mcmaster.ca

This Certificate recognizes students' efforts to gain meaningful experiences outside the classroom while promoting the concept of international engagement through an emphasis on the development of linguistic and cultural awareness. The Certificate recognizes both academic and co-curricular efforts on the part of the student to gain an international perspective and to increase his or her knowledge of what it means to be a global citizen.

The Certificate is open to any student enrolled in an undergraduate program at the University and complements any undergraduate degree. Students may declare the Certificate in International Engagement at the time of graduation, and upon completion of the following courses.

Requirements

18 units total

12 UNITS

- Language courses other than English, or 6 units in each of two languages other than English. Students are encouraged to consider the diversity of language offerings at McMaster, including Indigenous languages

3 UNITS

- International experience at home or abroad *****
- Credit received from an International Exchange Program ('XCH')
- INTENG 2A03 - International Engagement at Home

3 UNITS

- INTENG 3A03 - International Engagement Capstone

Note

***** 3 units of pre-approved, alternative relevant study abroad experience may replace this requirement. This may include independent study abroad experiences, approved on Letter of Permission, or existing placement coursework, such as in HISTORY 3GH3. Previously approved experiential courses may also be substituted for the 'International Engagement at Home' requirement, where deemed to have met appropriate learning objectives. No more than 6 units of the Certificate can come from non-McMaster courses.

CONCURRENT CERTIFICATE IN KINESIOLOGY

Department of Kinesiology
The Concurrent Certificate in Kinesiology is administered by the Department of Kinesiology.
Ivor Wynne Centre, Room 219C, ext. 24462
kinug@mcmaster.ca

The Concurrent Certificate in Kinesiology provides non-kinesiology undergraduate students with an opportunity to develop and demonstrate knowledge and skills relevant to the field of kinesiology. The certificate recognizes students who have developed selected competencies in the interdisciplinary study of human movement and the impact of physical activity on health and disease.

Certificate Requirements

Any student in a non-Kinesiology undergraduate program at McMaster may declare the Concurrent Certificate in Kinesiology at the time of graduation provided they satisfy the following requirements:

REQUIREMENTS

18 units total

18 units

from

- KINESIOL 2C03 - Neuromuscular Exercise Physiology
- KINESIOL 2CC3 - Cardiorespiratory and Metabolic Exercise Physiology
- KINESIOL 2Y03 - Human Anatomy and Physiology I
- KINESIOL 2YY3 - Human Anatomy and Physiology II
- KINESIOL 3B03 - Adaptive Physical Activity
- KINESIOL 3HN3 - Human Neurophysiology
- KINESIOL 3V03 - Sport Psychology
- KINESIOL 4C03 - Integrative Exercise Physiology
- KINESIOL 4S03 - Exercise as Medicine
- KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences
- KINESIOL 4TT3 - Neurorehabilitation and Robotics
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 3J03 - Human Biomechanics
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 4Y03 - Applied Biomechanics

CONCURRENT CERTIFICATE IN LEADERSHIP, EQUITY & SOCIAL CHANGE

Faculty of Humanities

Chester New Hall, Room 107
http://www.humanities.mcmaster.ca
leader@mcmaster.ca

This Certificate provides students with interdisciplinary and experiential learning opportunities that enhance their leadership capabilities through foundational skills development, specialized training, and community service. This includes a rigorous academic framework that balances both theory and practice, and a curriculum that challenges students to think critically about their place in the world and how they can affect change around them. Students also develop professional skills that are highly desirable for the pursuit of

graduate studies, professional programs, and gainful employment.

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses.

NOTES

- Courses that are not listed below, such as relevant topics offered through INSPIRE, may be considered for eligibility toward the Concurrent Certificate in Leadership, Equity & Social Change. Students wishing to suggest an alternate course for use toward the 'Diversity, Equity and Social Change' course list requirement, or 'Leadership in Action' requirement, are invited to contact Dr. Alpha Abebe (abebea@mcmaster.ca).
- Eligible Wilson Leadership Scholars may replace HUMAN 4LC3 - Major Leadership Project: Theory and Practice with HUMAN 4WL3 A/B - Wilson Leadership Scholar Capstone toward this certificate requirement.
- Students must be aware that some courses in the Course List have their own disciplinary prerequisite, and it is the responsibility of students completing this certificate to meet other Faculties', departments' and programs' requirements. In addition, some courses in the Course List may be restricted to students from the associated program and may not be open to students from other programs; these courses will be listed as restricted.
- Students who previously began studies under the **Concurrent Certificate in Leadership & Cross-Cultural Literacy** requirements may continue to complete under this certificate's requirements and should consult the 2020-2021 Undergraduate Calendar for certificate requirements.

DIVERSITY, EQUITY AND SOCIAL CHANGE COURSE LIST

- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- ART 3EA3
- CMST 3DJ3 - Digital Justice
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3RR3 - Race, Religion, and Media
- ENGLISH 1CS3 - Studying Culture: A Critical Introduction
- ENGLISH 1H03 - Words in Place
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 2TS3 - Society and Space
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GENDRST 2AA3 - Feminist Thought
- HISTORY 1EE3 - The Historical Roots of Contemporary Issues
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- HISTORY 3XX3 - Human Rights in History
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 2T03 - Sex, Gender, & Health
- HTHSCI 3RH3 - Racism and Health
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 4CM3
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 3EA3 - Social Practice and Community-Engaged Art
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- LINGUIST 2S03 - Language and Society
- LINGUIST 3DS3 - ASL & Deaf Studies
- MUSIC 2A03
- MUSIC 2CU3 - Music and Culture
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PEACJUST 2A03
- PEACJUST 2B03
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3C03 - Researching Global Peace and Social Justice
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PHILOS 2D03 - Bioethics
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2N03 - Business Ethics
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 2YY3 - Ethics
- PHILOS 3CC3 - Advanced Ethics
- PHILOS 3GH3 - Global Health Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3T03 - Philosophy and Race
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3V03 - Gender and Politics
- SCAR 2RD3 - Religion and Diversity
- SOCPSY 2E03 - Psychology of Intergroup Relations
- SOCPSY 3B03 - Understanding Lived Experiences
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3VV3 - The Indian Act: A Social Problem
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development

- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SS3 - Advocating for Sustainability
- SUSTAIN 3S03 - Implementing Sustainable Change
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism
- WORKLABR 3E03 - Gender, Sexuality and Work

REQUIREMENTS

15 units total

3 units

from

Core Leadership Requirement

- HUMAN 3EL3 - Emotionally Intelligent Leadership
- HUMAN 3LM3

6 units

from

Diversity, Equity & Social Change Requirement

- Diversity, Equity & Social Change course list (see *Notes 1* and *3.)*

6 units

Leadership and Action Requirement

- HUMAN 3CM3
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders

CONCURRENT CERTIFICATE IN PROFESSIONAL FRENCH

Department of French

Togo Salmon Hall, Room 532, ext. 24470

http://french.humanities.mcmaster.ca/

The concurrent Certificate in Professional French provides students with substantial vocabulary from such fields as business, law, medicine, journalism and the hospitality industry. Through a focus on the study of sample cases, the certificate will help prepare students for possible real-life situations which they could encounter in their careers.

Notes

- No more than 6 units of the Certificate may be completed using non-McMaster courses.
- Students majoring in any French program who also wish to complete the certificate must take FRENCH 2I03 and FRENCH 3II3 as elective credit. These courses must then be taken in addition to the French (Honours B.A., Combined Honours B.A. or B.A.) degree requirements.
- Students uncertain as to whether language course prerequisites best reflect their linguistic ability are encouraged to consult the French department for a placement test.
- Students interested in further study may wish to review requirements for the Minor in French, however, should note that they would be unable to declare both the Concurrent Certificate in Professional French and the Minor in French.

Admission

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses in French.

Requirements

6 units

from

- FRENCH 1A06 A/B
- FRENCH 1AA3 - Introduction to French Studies: Intermediate I
- FRENCH 1AB3 - Introduction to French Studies: Intermediate II

or

- FRENCH 2M06 A/B
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II

12 units

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 2I03 - Professional French I
- FRENCH 3II3 - Professional French II

Alternate Pathway to Certificate

Those students who begin their French Studies at McMaster with FRENCH 2B03 may still complete the concurrent Certificate in Professional French, through fulfilment of the following alternate pathway.

REQUIREMENTS

15 units total

12 units

- FRENCH 2B03 - French Language Practice I: Upper Intermediate
- FRENCH 2BB3 - French Language Practice II: Upper Intermediate
- FRENCH 2I03 - Professional French I
- FRENCH 3II3 - Professional French II

3 units

- Level II or III French, excluding:
- FRENCH 2M06 A/B
- FRENCH 2AA3 - Introduction to French Studies: Intermediate I
- FRENCH 2AB3 - Introduction to French Studies. Intermediate II
- FRENCH 2Q03 - Montreal, a City of Many Faces (Taught in English)
- FRENCH 2XX3 - French Movie Stars and Entertainers (Taught in English)
- FRENCH 2Z06 A/B
- FRENCH 2ZA3 - Intensive French Elementary I
- FRENCH 2ZB3 - Intensive French Elementary II

CONCURRENT CERTIFICATE IN QUANTUM SCIENCE AND TECHNOLOGY

Department of Physics and Astronomy

The Concurrent Certificate in Quantum Science and Technology is administered by the Department of Physics and Astronomy (Faculty of Science).

A.N. Bourns Science Building, Room 241, ext. 24559

http://www.physics.mcmaster.ca/

Quantum science and technology is a business sector that is a strategic priority for Canada (and other countries) as it is a rapidly developing area of innovation. It has the potential to impact many industries and will likely create new business sectors. The Concurrent Certificate in Quantum Science and Technology aims to provide undergraduate students with the opportunity to develop skills necessary for a career in quantum technologies. The certificate allows students to develop skills in quantum computing, quantum communications, quantum sensing and quantum materials as these skills are particularly important for this sector.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the Concurrent Certificate in Quantum Science and Technology at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS

18 units total

3 units

from

- ENGPHYS 2QM3 - Introduction to Quantum Mechanics
- PHYSICS 2C03 - Modern Physics

3 units

- PHYSICS 3MM3 - Quantum Mechanics I

12 units

from

- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- ENGPHYS 3PD4 - Photonic Devices
- ENGPHYS 3PN4 - Semiconductor Junction Devices
- ENGPHYS 4MD3 - Nanoscale Semiconductor Devices
- ENGPHYS 4QC3 - Introduction to Quantum Computing
- ENGPHYS 4QM3 - Quantum Optics and Metrology
- ENGPHYS 4S04 - Lasers and Electro-Optics
- MATH 3QC3* - Introduction to Quantum Computing
- PHYSICS 3QI3 - Introduction to Quantum Information
- PHYSICS 4E03 - Particle and Nuclear Physics
- PHYSICS 4F03 - Quantum Mechanics II
- PHYSICS 4G03 - Computational Physics
- PHYSICS 4K03 - Physics of Quantum Matter
- PHYSICS 4LQ3 A/B - Literature Review
- PHYSICS 4PQ6 A/B - Senior Research Project - Quantum
- PHYSICS 4Q03 - Introduction to Quantum Field Theory

CONCURRENT CERTIFICATE IN REHABILITATION SCIENCES (RS)

Faculty of Health Sciences

The Concurrent Certificate in Rehabilitation Science (RS) is administered by the School of Rehabilitation Science (SRS), Institute of Applied Health Science, Room 403, irhbhsc@mcmaster.ca.

The Certificate of RS provides undergraduate students from various disciplines and faculties an opportunity to focus their knowledge and skill development in the field of rehabilitation science. This certificate will recognize students who have obtained foundational knowledge in rehabilitation science through their coursework and experiential learning.

Note:

- In order to obtain the Certificate of RS, students **must take** HTHSCI 3RS3 (3 units) - Foundations in Rehabilitation Science.
- Completion of an additional 15 units from the Requirements list below.
- Students are required to gain at least 60 hours of experiential learning in a clinical or research rehabilitation environment.
- No more than 6 units from Level 1 courses allowed.

Admission

The interdisciplinary Certificate of RS may be taken by students pursuing any undergraduate degree and requires completion of 18 units of course work.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the Certificate of RS at the time of graduation providing they satisfy the following requirements.

In addition to courses, students are required to gain at least 60 hours of experiential learning in a clinical or research rehabilitation environment. Students will be asked to write a one-page reflection on the experiential learning. Students will be asked to provide a log of the hours, types of experience, and verifying reference for these hours.

Requirements

18 units total

3 UNITS

- HTHSCI 3RS3 - Exploring the Foundations of Rehabilitation Sciences

15 UNITS

from

Life Sciences:

- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 3AA3 - Human Pathophysiology
- LIFESCI 3BB3 - Neurobiology of Disease
- LIFESCI 3K03 - Neural Control of Human Movement
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 4Y03 - Applied Biomechanics

Health, Aging & Society:

- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 2B03 - Social Identity, Health and Illness
- HLTHAGE 2D03 - Continuum of Care
- HLTHAGE 2J03 - Selected Topics in Aging and Society
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3HP3 - Population, Health and Aging
- HLTHAGE 3L03 - Embodied Aging
- HLTHAGE 3N03 - Aging and Mental Health
- HLTHAGE 4B03 - Death and Dying in Later Life
- HLTHAGE 4J03 - Narratives of Illness
- HLTHAGE 4P03 - Leisure and Recreation in Later Life

Linguistics (Humanities):

- LINGUIST 1A03 - Introduction to Linguistics: Speaking, Signing and Hearing
- LINGUIST 2SL3 - Introduction to American Sign Language
- LINGUIST 3F03 - Anatomy and Physiology for Speech, Language and Hearing
- LINGUIST 3NL3 - Cognitive Neuroscience of Language
- LINGUIST 3SL3 - Intermediate American Sign Language
- LINGUIST 4SL3 - SLP Practicum

Music:

- MUSIC 2MU3 - Introduction to Music Therapy Research

Art History:

- ART 2AA3 - Introduction to the Practice of Art Therapy

Integrated Business and Humanities:

- IBH 1BA3 - Organizational Behaviour
- IBH 1BC3 - Fundamentals of Ethics

Health Science:

- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3MU3 - Music, Health, & the Community

Psychology:

- PSYCH 1X03 - Introduction to Psychology, Neuroscience & Behaviour
- PSYCH 1XX3 - Foundations of Psychology, Neuroscience & Behaviour
- PSYCH 2AA3 - Child Development
- PSYCH 2AP3 - Psychological Perspectives on Mental Health
- PSYCH 2GG3 - Learning, Measuring, and Shaping Behaviour
- PSYCH 2H03 - Human Learning and Cognition
- PSYCH 3AG3 - Aging
- PSYCH 3B03 - Special Populations
- PSYCH 3BA3 - Positive Psychology
- PSYCH 3CB3 - Attitudes and Persuasion

Kinesiology:

- KINESIOL 3B03 - Adaptive Physical Activity
- KINESIOL 3E03 - Neural Control of Human Movement
- KINESIOL 3Q03 - Motor Development Across the Lifespan
- KINESIOL 3Y03 - Nutrition for Sport and Performance
- KINESIOL 3Z03 - Neuromuscular Plasticity in Health and Disease
- KINESIOL 4B03 - Cardiovascular Disease: Pathophysiology and Rehabilitation

- KINESIOL 4GG3 - Clinical and Applied Biomechanics
- KINESIOL 4H03 - Physical Activity Behaviour Change
- KINESIOL 4KK3 - Fundamentals of Rehabilitation
- KINESIOL 4S03 - Exercise as Medicine
- KINESIOL 4SS3 - Human Aging: Biological and Lifestyle Influences

Specific requirements for KINESIOLOGY students:

- Completion of KINESIOL 4EE3 - Professional Placement in Kinesiology Professional Placement course OR completion of 60 hours of volunteering in an approved rehabilitation setting

CONCURRENT CERTIFICATE IN SCIENCE COMMUNICATION

School of Interdisciplinary Science

The Concurrent Certificate in Science Communication is administered by the School of Interdisciplinary Science (Faculty of Science).
Arthur Bourns Building, Room C501, ext. 21181
Email: sis@mcmaster.ca
https//sis.mcmaster.ca/

This certificate fulfills a critical need for undergraduate students in science and health disciplines to be skilled at communicating science in various formats for diverse audiences and purposes. Students who complete the certificate will have a strong grounding in the theory of science communication and many work samples that connect theory to practice.

Students who complete this certificate will be able to:

- Engage critically with primary research in the sciences, science communication, and sociology of science
- Critically analyze science within its societal context, in particular its communication via mass media and social media
- Blend theory and practice to create communications that reach different audiences and achieve different goals
- Centre equity, diversity and inclusion in discussions about how scientific and other forms of knowledge are created, vetted and shared
- Apply principles of inclusive science communication to engage audiences with the process, potential and pitfalls of science
- Merge creative and analytical skills to communicate complex ideas

Science Communication Course List:

- BIOLOGY 3HD3 - Human Disasters
- CMST 2DD3 - Media Organizations
- CMST 2LW3 - Communication Policy and Law
- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- COMMERCE 2MA3 - Introduction to Marketing
- COMMERCE 3MB3 - Consumer Behaviour
- ENGLISH 3NH3 - Narratives of Health
- HISTORY 2EE3
- HISTORY 3TC3 - Science, Technology in World History
- HISTORY 4FF3 - History of Health and Medicine in the Colonial World
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 3DR3 - Demystifying Research
- HTHSCI 3EE3 - Biomedical Graphics
- HTHSCI 3HH3 - Deceptions in Decision Making
- HTHSCI 3HL3 - Health Law: Current and Emerging Issues
- HTHSCI 3L03 - Introduction to Bioethics
- HTHSCI 3N03 - Creative Writing in the Health Sciences
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- HTHSCI 4Y03 - Science, Culture and Identity
- HUMBEHV 4SC6 A/B - Science Communication in the Behavioural Sciences
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- INNOVATE 3X03 - Persuasion, Pitching Skills and Marketing
- INSPIRE 3MP3 - A World of Big Questions and Multiple Perspectives
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 3R03
- MATH 3Z03* - Inquiry: History of Mathematics
- MMEDIA 3Q03
- PEACEST 4L03
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PHILOS 2D03 - Bioethics
- PHILOS 2TT3 - Ethical Issues in Communication
- PHILOS 3C03 - Advanced Bioethics
- PHILOS 4V03 - Multidisciplinary Workshop in Applied Ethics and Policy
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- SCICOMM levels III, IV
- SCIENCE 2P03 - Impactful Initiatives in Health
- SOCIOL 2L03
- SOCSCI 2N03

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the Science Communication certificate at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS

18 units total

3 units
from

- ISCI 1A24 A/B - Integrated Science I
- LIFESCI 2AA3
- SCICOMM 2A03 - Foundations in Science Communication

3 units
from

- ISCI 2A18 A/B - Integrated Science II
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- SCICOMM 3P03 - Communicating Science for Public Audiences
- SCICOMM 3PP3 - Communicating Science for Professional Audiences

3 units
from

- HUMBEHV 4SC6 A/B - Science Communication in the Behavioural Sciences
- LIFESCI 4E03 - Science & Storytelling
- LIFESCI 4J03 - Science Communication in the Media
- HTHSCI 4KT3 - Demystifying Science - Advanced Knowledge Translation and Science Communication
- HTHSCI 4NN3 - Advanced Creative Writing in Health Sciences
- HTHSCI 4Y03 - Science, Culture and Identity
- PNB 4SC6 A/B - Science Communication in the Behavioural Sciences
- SCICOMM 4A03 - Independent Project in Science Communication

9 units

- *Science Communication Course List*

CONCURRENT CERTIFICATE IN SCIENTIFIC COMPUTING

Department of Physics and Astronomy

The Concurrent Certificate in Scientific Computing is administered by the Department of Physics and Astronomy (Faculty of Science).
A.N. Bourns Science Building, Room 241, ext. 24559
http://www.physics.mcmaster.ca/

The Concurrent Certificate in Scientific Computing aims to provide students in scientific disciplines with the computational skills that are an important aspect of a career in science. The aim is to provide students with a strong foundation in scientific programming with applications of programming to the analysis of scientific data. The certificate is aimed at increasing the computational skills of undergraduate students (from Level II and above) in the Faculty of Science but would also be open to students from other Faculties.

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the Concurrent Certificate in Scientific Computing at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS

18 units total, a minimum of 12 units must be from Levels III, IV

18 units

from

- ASTRON 4X03 - Data Analysis Project Course
- BIOLOGY 3PG3 - Population Genetics
- BIOLOGY 3S03 - An Introduction to Bioinformatics
- BIOLOGY 3SA3 - Applied Statistics for Biology
- BIOLOGY 3SS3 - Population Ecology
- BIOPHYS 3G03 - Modelling Life
- CHEM 3PA3 - Quantum Mechanics and Spectroscopy
- CHEM 3PC3 - Mathematical Tools for Chemical Problems
- CHEM 4PB3 - Computational Models for Electronic Structure and Chemical Bonding
- DATASCI 2G03 - Scientific Computing
- DATASCI 3ML3 - Introduction to Neural Networks and Machine Learning
- ENVIRSC 2W03 - Physical Hydrology
- ENVSOCTY 3MB3 - Data Analysis
- ENVSOCTY 4GA3 - Applied Spatial Statistics
- ENVSOCTY 4GS3 - GIS Programming
- KINESIOL 4Z03 - Scientific Computing and Wearable Technology
- LIFESCI 3LA3 - Introduction to Data Science
- LIFESCI 3LX3 - Applied Biostatistics and Scientific Writing
- MATH 1MP3 - Introduction to Mathematical Scientific Computation
- MATH 2LA3 - Applications of Linear Algebra
- MATH 3MB3 - Introduction to Modelling
- MATH 3NA3 - Numerical Linear Algebra
- MATH 4NA3* - Numerical Methods for Differential Equations
- MOLBIOL 3Y03 - Plant Responses to the Environment
- MOLBIOL 4ED3 - Evolutionary Developmental Biology
- NEUROSCI 3MN3 - Computational Models in Neuroscience
- PHYSICS 3P03 - Advanced Laboratory
- PHYSICS 4G03 - Computational Physics
- PNB 2A03 - Python for PNB
- PNB 2XE3 - Descriptive Statistics and Research Methods
- PNB 3A03 - Neuroimaging
- PNB 3EE3 - Perception Laboratory
- PNB 3XE3 - Inferential Statistics and Research Methods
- PSYCH 4KK3 - Bayesian Inference
- STATS 2DA3 - An Introduction to Data Science Methods
- STATS 2MB3 - Statistical Methods and Applications
- STATS 3A03 - Applied Regression Analysis with SAS
- STATS 3DA3 - Data Science Methods
- STATS 4CI3* - Computational Methods for Inference
- STATS 4M03 - Multivariate Analysis

CONCURRENT CERTIFICATE IN SOCIAL INNOVATION

Faculty of Social Sciences

Kenneth Taylor Hall, Room 129

http://socialsciences.mcmaster.ca

The concurrent certificate in Social Innovation is designed for students to develop an academic focus in the development and implementation of solutions for effective, long-term social impact. Completion of the Social Innovation Concurrent Certificate will indicate that students have developed knowledge and competencies in this area.

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses.

Non-McMaster credit may not be utilized in fulfilment of certificate requirements.

No more than 9 units of Level 1 courses may be applied towards the completion of the Concurrent Certificate. It is the student's responsibility to check for pre-requisites, co-requisites and enrolment restrictions of all courses in these lists. Up to 6 units can overlap with the *Interdisciplinary Minor in Community Engagement*.

NOTES

- Experiential units are to be completed after required foundation courses are completed to ensure that students have the necessary theoretical and methodological background prior to engaging with community partners.
- Visit the Intersession website at https://intersession.mcmaster.ca/ for current INSPIRE 3EL3 course offerings.
- For students interested in **Citizenship, Human Rights, and Diversity**, these are recommended courses:
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights (GLOBALZN 3A03)
- CMTYENGA 3A03 - The Art of Change
- GLOBALZN 1A03 - Global Citizenship
- INDIGST 2C03 - Current Issues in Indigenous Studies: Selected Topics
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- SCAR 2RD3 - Religion and Diversity
- SOCIOL 2R03 - Perspectives on Social Inequality
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism
- For students interested in **Social Movements, Community Engagement, and Advocacy**, these are recommended courses:
- CMTYENGA 3A03 - The Art of Change
- HLTHAGE 3G03 - Community Based Research
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4KK3 - Sociology through Community Engagement and Service

REQUIREMENTS

18 units total (of which no more than 9 units may be from Level I courses)

9 units

Course List A: Foundations

- CMTYENGA 2A03 - Foundations of Community Engagement
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II

3 units

from

Course List B: Experiential (See *Note 1* above.)

- HTHSCI 4ID3 - Innovation By Design I
- INSPIRE 3EL3 - Experiential Learning Opportunities (See *Note 2* above.)
- SOCSCI 3EL3

6 units

from

Course List C: Thematic

- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- CMTYENGA 3A03 - The Art of Change
- ECON 2D03 - Economic Issues
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- GLOBALZN 1A03 - Global Citizenship
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HLTHAGE 3AA3 - State, Civil Society and Health
- HLTHAGE 3G03 - Community Based Research
- INDIGST 2C03 - Current Issues in Indigenous Studies: Selected Topics
- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INNOVATE 2SI3 - Social Innovations
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- POLSCI 3LL3 - Development and Public Policy
- SCAR 2RD3 - Religion and Diversity
- SOCPSY 2C03 - Social Psychology of Popular Culture
- SOCPSY 3Y03 - Applied Social Psychology
- SOCSCI 4SI3 - Innovation for Social Impact
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 3MM3 - Political Sociology
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCIOL 4KK3 - Sociology through Community Engagement and Service
- WORKLABR 2G03 - Labour and Globalization

CONCURRENT CERTIFICATE IN SUSTAINABILITY

The Faculty of Engineering and the Academic Sustainability Programs Office

The Concurrent Certificate in Sustainability is administered by the Faculty of Engineering and overseen by the Academic Sustainability Programs Office. Questions can be directed to asp@mcmaster.ca.

With a focus on interdisciplinary, community-based, and experiential learning, this certificate helps prepare students to address complex issues of sustainability. This certificate recognizes students for having gained skills in critical thinking, interdisciplinary teamwork, community-engagement, and practical application.

Notes

- Please see the Course Listings section in the Undergraduate Calendar for a detailed description of the below courses.
- Students should note that not all courses listed are available each year. As well, it is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions.
- All courses have enrolment capacities, and enrolment in courses cannot be guaranteed for certificates, even when prerequisites have been met.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the Concurrent Certificate in Sustainability at the time of graduation providing they satisfy the following requirements.

Requirements

15 units total

3-15 UNITS

from

- SUSTAIN 2SS3 - Advocating for Sustainability
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 4S06 A/B - Leadership in Sustainability

0-12 UNITS

from

- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2GS3 - Global Questions in Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 3HC3 - Sustainability and Healthcare

Note:

- Students might also consider the Concurrent Certificate in Environmental Sustainability (ES).

CONCURRENT CERTIFICATE IN THE LANGUAGE OF MEDICINE AND HEALTH

Department of Greek and Roman Studies

Togo Salmon Hall, Room 706, ext. 24311

http://greekandromanstudies.humanities.mcmaster.ca

This concurrent certificate provides students with formal recognition of competency in the etymology, word formation, and logic of medical terminology.

Certificate Requirements

Any student in an undergraduate degree program at McMaster may declare the certificate, at the time of graduation, and upon completion of the following courses.

REQUIREMENTS

15 units total

6 units

- CLASSICS 2MT3
- GKROMST 2MT3 - Ancient Roots of Medical Terminology
- CLASSICS 3MT3
- GKROMST 3MT3 - Advanced Ancient Roots of Medical Terminology

6 units

from

- GREEK 1Z03 - Beginner's Intensive Ancient Greek I
- GREEK 1ZZ3 - Beginner's Intensive Ancient Greek II
- LATIN 1Z03 - Beginner's Intensive Latin I
- LATIN 1ZZ3 - Beginner's Intensive Latin II

3 units

from

- GREEK 1Z03 - Beginner's Intensive Ancient Greek I
- GREEK 1ZZ3 - Beginner's Intensive Ancient Greek II
- GREEK 2A03 - Intermediate Greek I
- LATIN 1Z03 - Beginner's Intensive Latin I
- LATIN 1ZZ3 - Beginner's Intensive Latin II
- LATIN 2A03 - Intermediate Latin I
- LINGUIST 1A03 - Introduction to Linguistics: Speaking, Signing and Hearing
- ENGLISH 2NH3
- ENGLISH 3NH3 - Narratives of Health

NOTES

- Any student seeking a Greek and Roman Studies or Classics program may satisfy no more than 2 courses (six units) of the program's requirements with courses that the student counts toward the satisfaction of the Certificate's requirements.
- Any student wishing to declare a Minor in Greek and Roman Studies, Latin, or Greek may satisfy no more than 2 courses (six units) of the Minor's requirements.
- Students who have Grade 12 Latin or Greek and are therefore not eligible to take Beginner's Intensive Latin or Greek can substitute the Intermediate Latin or Greek.

CONCURRENT CERTIFICATE IN URBAN STUDIES AND PLANNING (USP)

School of Earth, Environment & Society

The Concurrent Certificate in Urban Studies and Planning is administered by the School of Earth, Environment & Society (Faculty of Science) (formerly the School of Geography and Earth Sciences).
General Science Building, Room 206, ext. 23534
ugadmin@mcmaster.ca
The Concurrent Certificate in Urban Studies & Planning (USP) will provide students with an opportunity to develop expertise in the related fields of urban geography and urban planning.

Certificate Requirements

Any student in an undergraduate program at McMaster may declare the USP Certificate at the time of graduation providing they satisfy the following requirements:

REQUIREMENTS

18 units total

3 units

- ENVSOCTY 2UI3 - The Urban Experience

9-12 units

from

- ENVSOCTY 3MF3 - Urban Field Camp
- ENVSOCTY 3UP3 - Urban Planning
- ENVSOCTY 4UD3 - Special Topics in Urban Planning
- ENVSOCTY 4US3 - Sustainable Cities

3-6 units

from

- ENVSOCTY 3UW3 - Cities of the Developing World
- ENVSOCTY 3UR3 - Urban Social Geography
- ENVSOCTY 4LP3 - Transport Policy
- ENVSOCTY 4MS3 - Independent Study
- ENVSOCTY 4MT6 A/B - Senior Thesis
- HLTHAGE 4S03 - Urban Health Inequalities and the Housing Crisis
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- POLSCI 4UP3 - Urban Politics and Governance in the 21st Century: Canadian and Comparative Perspectives

CONCURRENT CERTIFICATE IN WORK AND LABOUR RELATIONS

Learning Objectives

By completing this certificate, students will be able to:

- Develop an understanding of the institutions, actors, legal regulations and politicaleconomic conditions that shape workplace labour relations;
- Become familiar with the different disciplinary perspectives on labour relations;
- Analyse labour relations as a dynamic system involving workers, employers, and the state, in which there is continual struggle, conflict, negotiation, resolution and renewal;
- Apply theoretical knowledge about work and labour relations in concrete, problem-based and experiential learning situations, including union decision-making, conflict resolution and collective bargaining; and
- Understand and demonstrate the qualities and transferable skills necessary for further study, employment, and involvement in labour relations related fields

The Certificate will be administered through the School of Labour Studies Undergraduate Program Office.

Structure

Any student in an undergraduate program at McMaster may declare the WLR Certificate at the time of graduation providing they satisfy the requirements below. Non-McMaster credit may not be utilized in fulfilment of certificate requirements. Students will take units from both the School of Labour Studies and the Degroote School of Business, providing an opportunity for cross-faculty and cross-program collaboration, and interdisciplinary learning amongst students.

Requirements

18 units total

3 UNITS FROM

- WORKLABR 1A03 An Introduction to Work and Labour in Canada
- WORKLABR 1E03 Navigating the World of Work

6 UNITS FROM

- WORKLABR 2A03 Unions in Action
- WORKLABR 3C03 or COMMERCE 4BF3 Labour and Employment Law
- WORKLABR 3D03 Workers' Health and Well-Being in a Changing World
- WORKLABR 3P03 Workers' Resistance - Past and Present

3 UNITS FROM

- COMMERCE 2BC3 Human Resource Management and Labour Relations
- COMMERCE 2NG3 Negotiations

6 UNITS FROM

- COMMERCE 4BC3 Collective Bargaining
- WORKLABR 4C03 Public Sector Collective Bargaining

THE HUMANITIES CONCURRENT CERTIFICATE: SKILLS FOR LIFE

The Faculty of Humanities cares deeply about the academic and post-academic success of its students. The courses are designed to provide a foundation for students to develop important academic and career-relevant skills such as oral and written communication, critical thinking, and digital literacy. The Humanities Skills certificate is designed to complement a student's disciplinary degree.

Certificate Requirements

NOTES

- All BA, Honours BA, and combined Honours BA students in the Faculty of Humanities who complete Humanities I will be required to complete a mandatory, concurrent skills certificate
- The following students will be exempt from completing the skills certificate:
- Students who enter Music I or Integrated Arts I
- Students who transfer into the Faculty of Humanities after Level I
- Single Honours BA students in the Faculty of Humanities who complete a Specialized Minor in Commerce
- Students who are exempt from the requirement to complete this skills certificate may nevertheless elect to do so by completing the above-mentioned courses. This concurrent skills certificate will be entered in the student's academic transcript upon graduation.

Requirements

18 units total

9 UNITS

- HUMAN 1DL3 - Digital Literacy for the Humanities
- HUMAN 1HL3 - Humanities for Life: The Value of a Humanities Degree
- HUMAN 1VV3 - Voice and Vision: Words to Change the World

3 UNITS

- HUMAN 2CP3 - Humanities Career Planning and Development

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency
- HUMAN 2DU1 - Diversity and Intercultural Understanding
- HUMAN 2IC1 - Social Change and Innovation
- HUMAN 2PS1 - Problem Solving
- HUMAN 2TC1 - Teamwork and Collaboration
- HUMAN 3IF1 A/B S - Full-time Internship *
- HUMAN 3IP1 A/B S - Part-time Internship *

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

3 UNITS

from

- HUMAN 2AR1 - Adaptability and Resiliency (if not previously taken)
- HUMAN 2DU1 - Diversity and Intercultural Understanding (if not previously taken)
- HUMAN 2IC1 - Social Change and Innovation (if not previously taken)
- HUMAN 2PS1 - Problem Solving (if not previously taken)
- HUMAN 2TC1 - Teamwork and Collaboration (if not previously taken)
- HUMAN 3IF1 A/B S - Full-time Internship (if not previously taken)
- HUMAN 3IP1 A/B S - Part-time Internship (if not previously taken)
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 3W03 A/B S - Applied Humanities I
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- HUMAN 4SI3 - Innovation for Social Impact
- HUMAN 4W03 A/B S - Applied Humanities II

*HUMAN 3IF1 and HUMAN 3IP1 can only be taken once for credit as part of this unit requirement

Other Diploma Programs

For information concerning other Diploma programs offered at the University, please refer to the relevant Faculty section in this Calendar.

Faculty of Health Sciences

- Health Professional Entrance Preparation (HPEP) Undergraduate Certificate
- Occupational Therapy Examination and Practice Preparation Project (OTEPP)

Indigenous Studies

- **Ogweho:weh** Language Diploma (for more information please contact the Indigenous Studies Program Office, L.R. Wilson Hall Room 1010. 905-525-9140 ext. 27426)

Faculty of Humanities

- Diploma in Music Performance
- McMaster English Language Development Diploma (MELD)
- McMaster English Readiness for Graduate Excellence Certificate

Interdisciplinary Minors and Thematic Areas

Interdisciplinary Minors

The following list constitute University-sanctioned minors. No degree is granted for these programs of study, but students registered in four- or five-level programs can receive a Minor designation on their transcripts following graduation if their chosen Minor program is successfully completed. Please see the *Minors* subsection in the *General Academic Regulations* section of this Calendar for further information.

NOTE:

Students should note that not all courses listed are available each year. As well, it is the student's responsibility to check carefully for prerequisites, corequisites and enrolment restrictions.

All courses have enrolment capacities. The Faculty cannot guarantee registration in courses for minors, even when prerequisites have been met.

Thematic Areas

The Thematic Areas are designed to assist you in choosing courses in areas of study, in which there is currently no B.A. program.

CANADIAN STUDIES

There is no B.A. in Canadian Studies, but students interested in this area may choose from among the following courses, subject to meeting the prerequisites.

Humanities

- ENGLISH 2C03 - Contemporary Canadian Fiction
- ENGLISH 3DD3
- FRENCH 2C03
- FRENCH 2E03 - Survey of Quebec Literature and Culture
- FRENCH 3AA3 - The Modern French-Canadian Novel
- FRENCH 4U03 - Topics in Literature and Culture of Quebec and Francophone Canada
- HISTORY 2T03 - Survey of Canadian History, Beginnings to 1885
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3NN3
- HISTORY 3P03
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- MUSIC 2T03

Science

- ENVSOCTY 2RC3 - Regional Geography of Canada
- ENVSOCTY 3UP3 - Urban Planning
- GEOG 2RC3
- GEOG 3UP3
- GEOG 4UH3

Social Sciences

- ANTHROP 2O03 - Local and Regional North American Archaeology
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 2K03 - Economic History of Canada
- INDIGST 2F03 - Indigenous Education in Canada

- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- POLSCI 2D03 - Canadian Democracy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POL SCI 2L03
- POLSCI 3FF3
- POLSCI 3GG3 - Federalism
- POLSCI 3J03 - Honours Issues in Canadian Politics and Canadian Public Policy
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3S03
- POLSCI 3SP3
- POLSCI 3NN6 A/B
- POLSCI 3Z03 - Canadian Public Sector Management
- POLSCI 4O06 A/B - Canadian Politics
- POLSCI 4T06 A/B
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4W03 - Child Welfare
- SOCIOL 3PP3 - Canadian Sociological Theory
- WORKLABR 1A03
- WORKLABR 3C03 - Labour and Employment Law

Note

Please see the *Course Listings* section for a detailed description of the above courses.

INTERDISCIPLINARY MINOR IN AFRICA AND BLACK DIASPORA STUDIES

The Interdisciplinary Minor in Africa and Black Diaspora Studies is made up of courses spanning across more than a dozen departments. A Minor in Africa and Black Diaspora Studies provides students with in-depth understanding of Black and African-diaspora peoples and societies around the world.

Notes

- Students who have previously completed INSPIRE 3EL3 where the topic was Topics in Black, African, and African Diaspora Studies, or Topics in the Black Caribbean and its Diasporas, may include these courses toward the minor's requirements, Course List A.
- Student requests for course substitution can be completed by emailing abld@mcmaster.ca.
- Students should note that not all courses listed are available each year. Furthermore, it is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions.
- Students are strongly encouraged to seek guidance from their academic advisor to ensure they are meeting all enrolment requirements, including Faculty-specific requirements for double counting courses required for a student's major.
- All courses have enrolment capacities. The Faculties cannot guarantee enrolment in courses for minors even when prerequisites have been met.

Requirements

24 units total (of which no more than 6 units may be from Level I courses)

6 UNITS

from

- Course List A: Foundations in Africa and Black Diaspora Studies

18 UNITS

from

- Thematic Course Lists: Thematic Area 1, Thematic Area 2, Thematic Area 3, Thematic Area 4

Course Lists

COURSE LIST A: FOUNDATIONS IN AFRICA AND BLACK DIASPORA STUDIES

- ABLD 2XX3 - Special Topics in Africa and Black Diaspora Studies
- ABLD 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ABLD 4XX3 - Special Topics in Africa and Black Diaspora Studies
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- ENGLISH 3BA3 - Caribbean Literature
- ENGLISH 4ED3 - Windrush Writing/Writing Windrush: Empire, Race and Decolonization
- ENVSOCTY 3RA3 - Human Geographies of Africa
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

THEMATIC COURSE LIST

Thematic Area 1: Politics of Race and Societies

- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- CMST 3RR3 - Race, Religion, and Media
- ENGLISH 3A03 - Critical Race Studies
- ENVSOCTY 1HB3 - Population, Cities and Development
- GENDRST 1A03 - Gender, Race, Culture, Power
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- PEACJUST 3RR3 - Race, Religion and Media
- PHILOS 3T03 - Philosophy and Race
- SCAR 3RC3 - Race, Religion, and Coloniality
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society

Thematic Area 2: Decolonization and Global Resistance

- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- ARTSSCI 3GJ3 - Global Justice Inquiry
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GENDRST 2AA3 - Feminist Thought
- GLOBALZN 1A03 - Global Citizenship
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2EN3 - The Post-Slavery Caribbean
- HISTORY 2G03 - Modern Latin America Since 1820
- HISTORY 3J03 - The United States in the 1960s
- HISTORY 3JR3 - Justice and Reparations in the Post-slavery World
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 2G03 - Beyond Borders: Race, Gender & Coloniality in

Migration
- PHILOS 2LA3 - Latin American Philosophy
- SOCWORK 2BB3 - Anti-Oppressive Social Work

Thematic Area 3: Cultures and Identities
- CMST 3JJ3 - The Rise of the Music Industry
- CMST 3WC3 - World Cinemas: Critical Media Approaches
- ENGLISH 3V03 - Global Anglophone Literature and Film
- ENVSOCTY 1HA3 - Society, Culture and Environment
- FRENCH 2AC3 - Introduction to Francophone Literatures and Cultures
- GENDRST 3RR3 - 'Cripping' Performance: Deaf, Mad and Disabled Performance in Canada
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LINGUIST 2S03 - Language and Society
- LINGUIST 4HL3 - Heritage Languages in the Hamilton Diaspora
- LINGUIST 4R03 - Cross-Cultural Communication
- MUSIC 2A03
- MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
- MUSIC 2U03
- PEACJUST 3V03 - Global Anglophone Literature and Film
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 3YY3 - Sociology of Globalization
- SOCWORK 4U03 - Immigration, Settlement and Social Work

Thematic Area 4: Health, Science and Technology
- ANTHROP 3ST3 - Anthropology of Postcolonial Science and Technology
- ANTHROP 4LL3 - Critical Global Health
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4G03 - Global Health
- HTHSCI 3RH3 - Racism and Health
- LIFESCI 4DD3 - Racism & Health Inequities in Science & Health Care
- SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

COORDINATOR
Spencer Pope *(Greek and Roman Studies)*
COMMITTEE OF INSTRUCTION
Martin Beckmann *(Greek and Roman Studies)*
Joe Boyce *(Geography and Earth Sciences)*
Aubrey Cannon *(Anthropology)*
Tristan Carter *(Anthropology)*
Michele George *(Greek and Roman Studies)*
Hendrik Poinar *(Anthropology)*
Spencer Pope *(Greek and Roman Studies)*
Tracy Prowse *(Anthropology)*
Eduard Reinhardt *(Geography and Earth Sciences)*
Andrew Roddick *(Anthropology)*
Henry Schwarcz *(Geography and Earth Sciences)*

The Interdisciplinary Minor in Archaeology is based on archaeology and archaeology-related courses offered in the School of Earth, Environment & Society, and in the Departments of Greek and Roman Studies and Anthropology. It requires students to gain knowledge and understanding of a broad range of arts and sciences relevant to the practice of archaeology, but also permits students the flexibility to specialize in topics of particular interest within related disciplines. Students planning a minor in Archaeology may wish to take GKROMST 1M03 - History of Greece and Rome.

Course List

- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 2C03 - Archaeology of Environmental Crisis and Response
- ANTHROP 2FF3 - Human Skeletal Biology and Bioarchaeology
- ANTHROP 2O03 - Local and Regional North American Archaeology
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology
- ANTHROP 2PC3 - Aliens, Curses and Nazis: Archaeology and Hollywood
- ANTHROP 2RP3 - Religion and Power in the Past
- ANTHROP 2WA3 - Neanderthals to Pyramids: Introduction to World Archaeology
- ANTHROP 3AS3 - Archaeology and Society
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3BF3
- ANTHROP 3CA3 - Ceramic Analysis
- ANTHROP 3CC6 - Archaeological Field School
- ANTHROP 3DD3 - Archaeology of Death
- ANTHROP 3E03 - Special Topics in Archaeology I
- ANTHROP 3EE3 - Special Topics in Archaeology II
- ANTHROP 3EM3 - Jericho to Mycenae: Eastern Mediterranean Prehistory in Context
- ANTHROP 3FF3 - Key Debates in Andean Archaeology
- ANTHROP 3K03 - Archaeological Interpretation
- ANTHROP 3LA3 - Lithics Analysis
- ANTHROP 3PP3 - Paleopathology
- ANTHROP 3X03 - Zooarchaeology
- ANTHROP 4AA3
- ANTHROP 4AH3 - Archaeology and Heritage: Ethics, Politics, and Practice
- ANTHROP 4CC3 - Archaeology of Foodways
- ANTHROP 4CL3 - Archaeology of Climate Change and Culture
- ANTHROP 4DN3 - Diet and Nutrition in Biocultural Perspective
- ANTHROP 4E03 - Advanced Topics in Archaeology I
- ANTHROP 4F03
- ANTHROP 4FF3 - Digging the City: The Archaeology of Urbanism
- ANTHROP 4HF3 - Archaeology of Hunter-Fisher-Gatherers
- ANTHROP 4HH3
- ANTHROP 4KK3 - The Archaeology of Neanderthals and Other Early Humans
- ANTHROP 4R03 - Advanced Bioarchaeology and Skeletal Biology
- CLASSICS 1A03
- CLASSICS 2B03
- CLASSICS 2BB3
- CLASSICS 2C03
- CLASSICS 2CC3
- CLASSICS 3MA3
- CLASSICS 3Q03
- CLASSICS 3S03
- EARTHSC 1G03 - Earth and the Environment
- EARTHSC 2B03
- EARTHSC 2E03 - Earth History
- EARTHSC 2GG3 - Natural Disasters
- EARTHSC 2GI3
- EARTHSC 3CC3 - Earth's Changing Climate
- EARTHSC 3E03 - Sedimentary Environments
- EARTHSC 3GI3
- EARTHSC 3P03
- EARTHSC 3V03
- EARTHSC 4E03
- EARTHSC 4FF3 - Topics of Field Research

- EARTHSC 4G03 - Glacial Sediments and Environments
- ENVIRSC 2B03 - Soils and the Environment
- ENVSOCTY 2GI3 - Geographic Information Systems
- ENVSOCTY 3GI3 - Advanced Raster GIS
- GKROMST 1A03 - Introduction to Greek and Roman Archaeology
- GKROMST 2B03 - Greek Art
- GKROMST 2BB3 - Constructing the Ancient World
- GKROMST 2C03 - Roman Art
- GKROMST 2CC3 - Archaeology of the Roman Empire
- GKROMST 3Q03 - Greek Sanctuaries
- GKROMST 3S03 - Pompeii, Herculaneum, and Ostia
- INDIGST 2B03 - Indigenous Sovereignty

Requirements

24 units total

3 UNITS

from

- Level I Anthropology

6 UNITS

from

- ANTHROP 2PA3 - Introduction to Anthropological Archaeology
- ANTHROP 2WA3 - Neanderthals to Pyramids: Introduction to World Archaeology
- EARTHSC 1G03 - Earth and the Environment

15 UNITS

from

- Course List (see above). At least nine of the 15 units must be selected from outside the student's own department

Notes

- Please see the *Course Listings* section for a detailed description of the above courses.
- In order to declare an Interdisciplinary Minor in Archaeology, at least 12 units (above Level I) must be elective to degree.

INTERDISCIPLINARY MINOR IN CIVIC VITALITY, DEMOCRACY AND ELECTORAL MANAGEMENT (CIV-DEM)

The CIVDEM Interdisciplinary Minor equips students to work towards strengthening civic vitality, democratic resiliency, and electoral integrity, as well as empowering the underrepresented to participate in the political and electoral process. Students gain the foundations of knowledge, focused thematic expertise, and research competencies with respect to core areas (Civic Vitality, Democracy, Elections) that are local, national and global in scope. They are encouraged to think beyond the walls of the classroom to prepare for a lifetime of civic learning and practice, built on connecting with a large and effective network of advocates, innovators, practitioners, researchers and policymakers who are working to advance civic engagement, democratic processes and institutions, electoral management and integrity.

Notes:

- A minimum of 9 units must be taken from approved courses outside the student's home Faculty. To declare a Minor in CIVDEM, at least 12 units above Level I must be elective to the degree.
- No more than 12 units of the student's Major program may be applied towards the completion of the Minor. Any cross-listed course between two or more Faculties and those of interdisciplinary programs will be counted as a course outside of the student's home Faculty.
- It is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions of all courses in this list. Students are encouraged to speak to their Faculty's Academic Advisors about Faculty-specific rules on double-counting courses for the Minor.

Thematic Areas:

COURSE LIST A (CIVIC VITALITY)

- ANTHROP 3F03 - Anthropology and the 'Other'
- CMST 1A03 - Introduction to Communication
- CMST 3DG3 - Digital Storytelling
- CMST 3DJ3 - Digital Justice
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3RR3 - Race, Religion, and Media
- CMST 3SM3 - Building Publics Using Social Media
- CMST 3Z03 - Mobile Practices, Technologies and Art
- CMST 4P03 - Social Activism and the Media
- CMST 4N03 - The News
- COMMERCE 2BC3 - Human Resource Management and Labour Relations
- ECON 2Q03 - Economics of Bad Behaviour
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- ENVSOCTY 1HA3 - Society, Culture and Environment
- FRENCH 1A06 A/B
- FRENCH 1AA3 - Introduction to French Studies: Intermediate I
- FRENCH 1AB3 - Introduction to French Studies: Intermediate II
- FRENCH 1Z06 A/B
- FRENCH 1ZA3 - Intensive French Beginner I
- FRENCH 1ZB3 - Intensive French Beginner II
- FRENCH 3HH3 - Francophone Voices in Canada
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GLOBALZN 1A03 - Global Citizenship
- GLOBALZN 3A03 / ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 2IS3 - Historical Roots of Current Social and Political Crises in the United States
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3J03 - The United States in the 1960s
- HISTORY 3N03 / IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- IARTS 1PB3 - Perspectives B: Arts in Society: Technology and the Environment
- IBH 1BC3 - Fundamentals of Ethics
- INDIGST 3CC3 - Contemporary Indigenous Societies: Selected Topics
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PHILOS 2N03 - Business Ethics
- PHILOS 2YY3 - Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3T03 - Philosophy and Race
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 3CC3 - Political Authority: 20th-Century Political Theory
- POLSCI 3PB3 - Politics from Below
- POLSCI 3V03 - Gender and Politics
- POLSCI 3Y03 - Democratization and Human Rights
- POLSCI 4PO3 - Public Opinion
- POLSCI 4UP3 - Urban Politics and Governance in the 21st Century: Canadian and Comparative Perspectives
- SCAR 3CC3 - Religion and Politics
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations

- SOCIOL 2VV3 - Law and Society
- SOCIOL 3MM3 - Political Sociology
- THTRFLM 3QA3 - Documentary, Politics, and Social Change
- WORKLABR 2A03 - Unions in Action
- WORKLABR 3L03 - Labour Policy and Advocacy
- WORKLABR 3P03 - Workers' Resistance - Past and Present

COURSE LIST B (DEMOCRATIC NORMS, PROCESSES, AND INSTITUTIONS)

- CMST 2K03 - Political Economy of the Media
- CMST 2LW3 / POLSCI 2LW3 - Communication Policy and Law
- COMMERCE 2FA3 / IBH 2BB3 - Introduction to Finance
- COMMERCE 3FM3 - The History of Finance
- COMMERCE 4BC3 - Collective Bargaining
- ENVSOCTY 1HB3 - Population, Cities and Development
- ENVSOCTY 3UR3 - Urban Social Geography
- HISTORY 2KK3 / IBH 2BF3 - History of Capitalism
- HISTORY 3XX3 - Human Rights in History
- INDIGST 3J03 / POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- PHILOS 1B03 - Philosophy, Law and Society
- PHILOS 3N03 - Political Philosophy
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- POLSCI 2D03 - Canadian Democracy
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- POLSCI 2O06 A/B - Political Theory
- POLSCI 2U03 - Public Policy and Administration
- POLSCI 2US3 - US Politics
- POLSCI 3CL3 - Constitutional and Public Law in Canada
- POLSCI 3H03 - Honours Issues in Comparative Politics
- POLSCI 3PG3 - Political Geography
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3VV3 - Democratic Theory
- POLSCI 4G06 A/B - Politics of Public Policy
- POLSCI 4KC3 - Comparative Democratization
- POLSCI 4O06 A/B - Canadian Politics
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- WORKLABR 3C03 / COMMERCE 4BF3 - Labour Law and Policy

COURSE LIST C (ELECTIONS MANAGEMENT AND INTEGRITY)

- CIVDEM 3Z03 / POLSCI 3Z03 - Canadian Public Sector Management
- CIVDEM 3CS3 / POLSCI 3CS3 - Campaign School
- CIVDEM 4EC6 A/B / POLSCI 4EC6 A/B - Partnered Learning in Elections and Democracy
- CIVDEM 4ED6 A/B / POLSCI 4ED6 A/B - Partnered Learning in Elections and Democracy
- CIVDEM 4EM3 / POLSCI 4EM3 - Elections Management
- CMST 4X03 - Communications for Campaigns and Elections
- COMMERCE 2OC3 / IBH 3BE3 - Operations Management
- ENVSOCTY 2GI3 - Geographic Information Systems
- POLSCI 3EL3 - Election Law and Policy

Requirements

24 units total from Course Lists (no more than 6 units from Level 1 courses)

- Selected from two or more Faculties; must include a minimum of 6 units from each of the 3 Thematic Areas (Course List A, B, and C) (See *Notes 1, 2, 3* above)

INTERDISCIPLINARY MINOR IN COMMUNITY ENGAGEMENT

The Interdisciplinary Minor in Community Engagement allows students to deepen their understanding of communities and develop skills for principled and effective engagement. The minor is designed to provide foundational knowledge and skills for participation in communities, regardless of the student's primary field of study. The interdisciplinary nature of the minor allows for a broad knowledge base from which to establish relationships with a range of communities both locally and globally. Students are required to take CMTYENGA 2A03 - Foundations of Community Engagement - plus 21 additional units chosen from the three course lists below. To ensure a mixture of theoretical and experiential courses, students must take a minimum of six units from Course List A (courses that focus on theory) and a minimum of three units from Course List B (courses that provide the student with relevant skills) and three units from Course List C (projects or capstone courses that involve an advanced community-engaged project and/or community-based research). The courses presented for the minor must include choices from at least two different Faculties (Social Sciences, Humanities, etc.). More information about Community Engagement can be found at http://community.mcmaster.ca.

Notes

- Students may submit a request to receive credit toward the Minor in Community Engagement if they successfully complete a course that is not listed in the course lists below but has a significant community engagement component. For example, a student undertaking a thesis course that normally does not require community engagement may elect to work in partnership with a community group as a central component of the thesis. A thesis structured in this way may be eligible for credit toward the Minor. Student requests for course substitution can be submitted by completing the form found at https://community.mcmaster.ca/our-programs-and-initiatives/ce-minor/#tab-content-course-substitutions.
- The following courses are offered directly through Community Engagement: CMTYENGA 2A03 (required for the Minor); CMTYENGA 2MC3 (List B); CMTYENGA 2MD3 (List B); CMTYENGA 3A03 (List B); CMTYENGA 3E03 (List B), CMTYENGA 4A06 (List C); CMTYENGA 4A09 (List C); CMTYENGA 4B06 (List C); CMTYENGA 4MM3 (List C). CMTYENGA courses are administered by the Faculty of Social Sciences.
- It is the student's responsibility to check carefully for prerequisites, co-requisites and enrollment restrictions.
- Students seeking course enrollment waivers must complete the Course Permission Form found at https://community.mcmaster.ca/our-programs-and-initiatives/ce-minor/#tab-content-course-permissions.
- Students are encouraged to speak to their Faculty academic advisors about Faculty-specific rules on double-counting courses for the minor. Students in Arts and Science and Integrated Business and Humanities must consult their academic advisors for information on program-specific pathways to this minor.
- Students who entered McMaster prior to September 2024 can use SUSTAIN 3S03 to satisfy either 3 units of List B or C.
- Students who completed CMTYENGA 4A06 and CMTYENGA 4A09 (CityLab Semester in Residence) are exempt from the requirement to complete CMTYENGA 2A03.
- Students enrolled in CMTYENGA 3E03 will require a police vulnerable sector check. Financial support to obtain this document is available as needed. Contact community@mcmaster.ca.

Course List A (Theory Courses)

- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice

- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2MA3 - Art and Activism
- ANTHROP 3F03 - Anthropology and the 'Other'
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4LL3 - Critical Global Health
- ARTSSCI 1C06 A/B - Global Challenges Inquiry
- ARTSSCI 3GJ3 - Global Justice Inquiry
- COMMERCE 1BA3 - Organizational Behaviour
- COMMERCE 1B03 - Business Environment & Organization
- ENGLISH 4QA3 - Queerness in the Archives: Lesbian and Gay Writing, Art and Activism in Canada, 1969-1989
- ENGSOCTY 3Y03 - Technology and Society
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- ENVSOCTY 2TS3 - Society and Space
- ENVSOCTY 2UI3 - The Urban Experience
- ENVSOCTY 3UR3 - Urban Social Geography
- ENVSOCTY 3UW3 - Cities of the Developing World
- ENVSOCTY 4HD3 - Disability, Society and Environment
- HISTORY 4MM3
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 1CC3 - Introduction to Mental Health and Illness
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 3AA3 - State, Civil Society and Health
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3K03 - Social Determinants of Population Health in Canada
- HTHSCI 4AA3 - Group Dynamics and Processes
- HTHSCI 2RR3
- HTHSCI 2T03 - Sex, Gender, & Health
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3DM3 - Demystifying Medicine
- HTHSCI 3RH3 - Racism and Health
- HTHSCI 4SS6 A/B - Group Process Practicum
- HTHSCI 4Y03 - Science, Culture and Identity
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- INDIGST 2C03 - Current Issues in Indigenous Studies: Selected Topics
- INDIGST 2D03 - Traditional Indigenous Ecological Knowledge
- INDIGST 2K03 - Indigenous Futurisms and Wonderworks
- INDIGST 2M03 - Indigenous Research Methods and Ethics
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory
- INDIGST 3CC3 - Contemporary Indigenous Societies: Selected Topics
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INNOVATE 1X03 - The World of Entrepreneurship
- LIFESCI 2A03 - Research Methods in Life Sciences
- LIFESCI 2AA3
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 4E03 - Science & Storytelling
- MATH 2UU3 - Numbers for Life
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PHILOS 2CT3 - Critical Thinking
- PHILOS 2YY3 - Ethics
- PHILOS 4YY3 - Topics in Ethics
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2U03 - Public Policy and Administration
- POLSCI 3F03
- POLSCI 3FG3 - Public Service Leadership
- POLSCI 3V03 - Gender and Politics
- SCAR 2RD3 - Religion and Diversity
- SCICOMM 2A03 - Foundations in Science Communication
- SCICOMM 2M03 - Engaging Your World: Science for the Global Citizen
- SCICOMM 3P03 - Communicating Science for Public Audiences
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 1Z03 - An Introduction to Sociology
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 4E03 - Self and Identity
- SOCIOL 4QQ3 - Women, Sexuality and the Welfare State
- SOCIOL 4XX3 - Youth in Society: Challenge and Change
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 2J03 - Work and Racism
- WORKLABR 3E03 - Gender, Sexuality and Work

Course List B (Skills Development)

- ARTSSCI 3EH3 - Exploring Hamilton Inquiry
- ARTSSCI 4VC3 - Visual Culture Inquiry
- BIOLOGY 3EP3 A/B S - Applied Biology Placement
- CHEM 3EP3 A/B S - Advanced Chemistry Placement
- CHEMBIO 3EP3 A/B S - Advanced Chemical Biology Placement
- CMTYENGA 2MC3 - Design and Creation of Engaged Learning for Community Youth
- CMTYENGA 2MD3 - Community-Based Learning with McMaster Children and Youth University
- CMTYENGA 3A03 - The Art of Change
- CMTYENGA 3E03 - Community Engagement in Practice with Empowerment Squared
- COMMERCE 4EL3 - Experiential Learning in Business
- COMMERCE 4MG3 - Strategic Philanthropy and Leadership
- COMMERCE 4SG3 - Sustainability: Corporations and Society
- ENGINEER 3CX3 A/B - Emerging Leaders and Mentors
- ENGINEER 4A03 - Ethics, Equity and Law in Engineering
- ENGINEER 4EX3 A/B - Experiential Engineering Design
- ENVIRSC 3IN3 - Internship in Earth and Environmental Sciences
- ENVSOCTY 3MI3 - Internship in Environment and Society
- EXPLORE 3IE1
- EXPLORE 3IE2
- EXPLORE 3IE3 - Interdisciplinary Experiences
- EXPLORE 3IS0 - Interdisciplinary Science Field Work
- EXPLORE 3IS3 - Interdisciplinary Science Field Camp
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- HLTHAGE 3BB3 - Field Experience
- HLTHAGE 3EE3 - The Practice of Everyday Life: Observations and Inquiry
- HLTHAGE 3G03 - Community Based Research
- HLTHAGE 4D03 - Health, Culture and Diversity

- HTHSCI 1K03
- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 3DD6 A/B - Engaging the City: An Introduction to Community-Based Research in Hamilton
- HTHSCI 3HN3
- HTHSCI 3MH3 - Critical Examination of Mental Health
- HTHSCI 3MU3 - Music, Health, & the Community
- HTHSCI 3PH3 - The Politics of Help
- HTHSCI 3S03 - Communication Skills
- HTHSCI 3WT3 - What Trauma Teaches: Lessons from Listening
- HTHSCI 4AC3 - Advanced Communication Skills
- HTHSCI 4D03 - Special Topics in Health Sciences
- HTHSCI 4F03
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- HTHSCI 4PA3 - Global Health Innovation
- HTHSCI 4WW3 A/B - Education Practicum - Community Engagement
- HTHSCI 4YY3
- HTHSCI 4ZZ3 - Global Health Advocacy
- HUMAN 3CL3 - Community Leadership at McMaster
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- INDIGST 4L03 - Indigenous Community Research Experience
- INNOVATE 3EX3 - Experiential Learning in Innovation
- INNOVATE 3ZZ3 - Imagining and Navigating the Future
- LIFESCI 3N03 - Human Nutritional Toxicology
- LIFESCI 3XX3 - Peer Mentoring
- LIFESCI 4W03 - Advanced Topics in Nutrition
- LIFESCI 4X03 - The Biopsychology of Sex
- MATH 3ET3 A/B S - Mathematics Teaching Placement
- PEACJUST 3P03 - Practicum: Practical Peace Building
- PHYSICS 3ET3 A/B S - Physics Teaching Placement
- POLSCI 3PR3 - Practice of Politics
- POLSCI 3WP3 - Working in Politics
- PSYCH 2NF3 - Clinical Neuropsychology
- SCAR 4AE3 - Academic Engagement in Society, Culture & Religion
- SCIENCE 1P03
- SCIENCE 2A03 - Peer Mentoring in Science
- SCIENCE 2P03 - Impactful Initiatives in Health
- SCIENCE 3EP3 A/B S - Applied Science Placement
- SCIENCE 3EX6 A/B S - Applied Science Placement
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SS3 - Advocating for Sustainability
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice
- WORKLABR 4A03 - Work and Labour Studies Practicum

Course List C (Community Engaged Project/ Capstone Courses)

- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- CMTYENGA 4B06 - Urban Innovation and Policy with CityLAB
- CMTYENGA 4MM3 - Collaborative Learning with Young People: An Applied Approach
- COMMERCE 4SI3 - Innovation for Social Impact
- ENGLISH 3RW3 - Reading and Writing in the Field: Experiential Learning in Theory and Practice
- ENGSOCTY 4Y03 - Society Capstone Design
- HISTORY 4HP3 - Heritage Placement
- HLTHAGE 4BC3 - Civic Engagement and Applied Research
- HTHSCI 3HN3
- HTHSCI 4D06 A/B S - Senior Project in Engaging the City
- HTHSCI 4D09 A/B S - Thesis in Engaging the City
- HTHSCI 4D12 A/B S - Thesis in Engaging the City
- INNOVATE 4EX6 A/B - Founders Startup
- INSPIRE 4B06 - Urban Innovation and Policy with CityLAB
- SOCSCI 3EP3 - Social Sciences Experiential Project
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability
- SUSTAIN 4S06 A/B - Leadership in Sustainability

Requirements

24 units total (no more than 6 units from Level 1 courses)

3 UNITS

- CMTYENGA 2A03 - Foundations of Community Engagement

21 UNITS

- Selected from two or more Faculties; must include a minimum of 6 units from *Course List A* and a minimum of 3 units from *Course List B* and a minimum of 3 units from *Course List C*. **(See** *Note 1* **above.)**

INTERDISCIPLINARY MINOR IN FOOD, NUTRITION, AND ENVIRONMENTAL HEALTH

This minor is made up of courses across four Faculties and over a dozen programs. A minor in Food, Nutrition, and Environmental Health provides students with an opportunity to learn about food production, food cultures, food systems, human nutrition, and how food is constrained by and in turn impacts human and environmental health.
Students wishing to pursue an Interdisciplinary Minor in Food, Nutrition, and Environmental Health may obtain more information from the Department of Anthropology.

Notes

- It is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions of all courses in this list.
- Students should note that not all courses listed are available each year.
- Students are encouraged to seek guidance from their academic advisor to ensure they are meeting all enrolment requirements, including Faculty-specific requirements for double counting courses required for a student's major.
- All courses have enrolment capacities. The Faculties cannot guarantee enrolment in courses for minors even when prerequisites have been met.

Course List

- ANTHROP 2DA3 - Traditional Indigenous Ecological Knowledge
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3CF3 - Climate Change, Changing Foodways and Politics
- ANTHROP 3HD3 - Children's Health and Development
- ANTHROP 3PA3 - Dish with One Spoon Health, Diet and Traditional Botany
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4CC3 - Archaeology of Foodways
- ANTHROP 4CL3 - Archaeology of Climate Change and Culture
- ANTHROP 4CP3 - Cultural Politics of Food and Eating
- ANTHROP 4DN3 - Diet and Nutrition in Biocultural Perspective
- BIOLOGY 3HD3 - Human Disasters
- BIOTECH 2BC3 - Biochemistry
- BIOTECH 2CB3 - Cell Biology
- BIOTECH 2MB3 - Microbiology
- BIOTECH 3FM3 - Food Microbiology

- CIVENG 3L03 - Water Quality
- CIVENG 4V04 - Biological Aspects of Wastewater Treatment
- EARTHSC 1G03 - Earth and the Environment
- ENGLISH 3NH3 - Narratives of Health
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2EK3 - Traditional Indigenous Ecological Knowledge
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 2TF3 - Food, Power and Place
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 3RA3 - Human Geographies of Africa
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4LW3 - Work and the Environment
- HISTORY 3CH3 - Climate History
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- HLTHAGE 2HI3 - Health & Place
- HLTHAGE 3HP3 - Population, Health and Aging
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HLTHAGE 4M03 - Environment and Health
- INDIGST 2D03 - Traditional Indigenous Ecological Knowledge
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INDIGST 3Y03 - Indigenous Community Health and Wellbeing
- INDIGST 4HH3 - Indigenous Health and Interdisciplinary Approaches
- KINESIOL 1F03 - Human Nutrition and Health
- KINESIOL 3CN3 - Clinical Nutrition
- KINESIOL 3Y03 - Nutrition for Sport and Performance
- LIFESCI 2N03 - Human Nutrition for Life Sciences
- LIFESCI 2X03 - Environmental Change and Human Health
- LIFESCI 3N03 - Human Nutritional Toxicology
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 4L03 - Peace, Environment and Health
- PHILOS 2U03 - Philosophy of Health and Medicine
- PHILOS 3L03 - Environmental Philosophy
- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- WORKLABR 4F03 - Work and the Environment

Requirements

24 units total (of which no more than 6 units may be from Level I courses)

6 UNITS

- ANTHROP 1AA3 - Introduction to Anthropology: Sex, Food and Death
- ANTHROP 2AN3 - Food and Nutrition in Society
- HLTHAGE 2AN3 - Food and Nutrition in Society

18 UNITS

- from the course list

INTERDISCIPLINARY MINOR IN GLOBALIZATION STUDIES

The minor in Globalization Studies provides students with the opportunity to explore the complex idea of globalization from a multi-disciplinary perspective. Students will have the opportunity to complete courses from the Social Sciences, Humanities, Health Sciences and Science faculties that cover a wide variety of themes related to globalization, and will be able to tailor their course selection according to their interests.

Notes

- Students who began studies prior to September 2024 may choose to complete the Minor under previous guidelines based on the Undergraduate Calendar in effect in their year of entry to McMaster.
- In order to declare a Minor in Globalization Studies, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total (of which no more than 6 units may be from Level 1 courses)

6 UNITS

from

- GLOBALZN 1A03 - Global Citizenship
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights

18 UNITS

- from *Course Lists 1, 2, 3* and 4 (see below). At least 9 of these units must be selected from outside the student's own program. (See *Note 1)*

Thematic Course Lists

LIST 1 - ENVIRONMENT, SUSTAINABILITY, AND DEVELOPMENT

- ANTHROP 3CF3 - Climate Change, Changing Foodways and Politics
- BIOLOGY 3DD3 - Communities and Ecosystems
- BIOLOGY 3HD3 - Human Disasters
- BIOLOGY 4AA3 - Conservation Biology
- EARTHSC 3CC3 - Earth's Changing Climate
- ECON 3H03 - International Monetary Economics
- ECON 3HH3 - International Trade
- ECON 3T03 - Economic Development
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 3B03 - Ecosystems and Global Change
- ENVSOCTY 1HB3 - Population, Cities and Development
- ENVSOCTY 2RW3 - World Regional Geography
- ENVSOCTY 2UI3 - The Urban Experience
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3LT3 - Transport Geography and Planning
- ENVSOCTY 3TG3 - Geographies of Globalization
- ENVSOCTY 3UW3 - Cities of the Developing World
- LIFESCI 2X03 - Environmental Change and Human Health
- POLSCI 2J03 - Global Political Economy
- POLSCI 2XX3 - Politics of the Developing World
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3LL3 - Development and Public Policy
- WORKLABR 1C03
- WORKLABR 2E03
- WORKLABR 2G03 - Labour and Globalization
- WORKLABR 3G03
- WORKLABR 3K03 - On the Move: Workers in a Global World
- WORKLABR 4E03

LIST 2 - PEACE, HUMAN RIGHTS, AND GLOBAL CITIZENSHIP

- ANTHROP 4MM3 - Borders, Migration, Refuge
- ARTSSCI 3GJ3 - Global Justice Inquiry
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 2UV3
- HISTORY 3UV3 - American Foreign Relations since 1898
- HISTORY 3XX3 - Human Rights in History

- HISTORY 4G03
- HISTORY 4JJ3 - U.S. Foreign Relations
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 3Y03 - Special Topics in Peace and Justice
- PHILOS 3N03 - Political Philosophy
- POLSCI 2H03
- POLSCI 2I03 - Global Politics
- POLSCI 3B03 - Honours Issues in International Relations and Global Public Policy
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 3X03
- POLSCI 3Y03 - Democratization and Human Rights
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives
- SOCIOL 3Z03
- SOCIOL 4A03 - Ethnic/Racial Tensions

LIST 3 - GLOBALIZATION AND CULTURE

- ANTHROP 2RP3 - Religion and Power in the Past
- ANTHROP 2WA3 - Neanderthals to Pyramids: Introduction to World Archaeology
- ANTHROP 3F03 - Anthropology and the 'Other'
- CMST 3II3 - Intellectual Property
- CMST 4D03 - International Communication
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 3V03 - Global Anglophone Literature and Film
- ENVSOCTY 1HA3 - Society, Culture and Environment
- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2G03 - Modern Latin America Since 1820
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 2MC3 - Modern China
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- HISTORY 3UA3 - The History of the Future
- HTHSCI 4MS3 - The Social Lives of Molecules
- HTHSCI 4Y03 - Science, Culture and Identity
- PEACJUST 2C03 - Peace, Justice, and Popular Culture
- PHILOS 2G03 - Social and Political Issues
- SCAR 1B03 - What on Earth is Religion?
- SCAR 2Q03 - What Is Islam?
- SCAR 3C03 - Islam in the Modern World
- SCAR 3RC3 - Race, Religion, and Coloniality
- SCAR 2TA3 - Islam in North America
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 4UU3 - Global Family and Sexual Politics

LIST 4 - GLOBALIZATION AND HEALTH

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3HI3
- ANTHROP 4LL3 - Critical Global Health
- ANTHROP 4S03 - The Anthropology of Infectious Disease
- ECON 2CC3 - Health Economics and its Application to Health Policy
- ECON 3Z03 - Health Economics
- ENVSOCTY 2HI3 - Health and Place
- ENVSOCTY 3HP3 - Population, Health and Aging
- ENVSOCTY 4HH3 - Environment and Health
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 4D03 - Health, Culture and Diversity
- HLTHAGE 4G03 - Global Health
- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3L03 - Introduction to Bioethics
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- HTHSCI 4PA3 - Global Health Innovation
- HTHSCI 4TE3 - The Teaching Hospital
- HTHSCI 4ZZ3 - Global Health Advocacy
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4L03 - Peace, Environment and Health
- PHILOS 2D03 - Bioethics (or RELIGST 2C03)
- POLSCI 4RR3 - Health Policy in the Industrialized World
- SCAR 3GH3 - Interdisciplinary Global Health Field Course: Maternal and Infant Health in Morocco
- SCAR 2M03 - Death and Dying: Comparative Views

Please see the *Course Listings* section for a detailed description of the above courses. For additional information, please contact globalhc@mcmaster.ca or extension 27556.

INTERDISCIPLINARY MINOR IN INNOVATION

The minor in innovation is a partnership between the Faculty of Engineering and the DeGroote School of Business and is intended for students from all Faculties who wish to learn more about innovation and develop a level of innovation literacy, as well as those who are themselves innovators and wish to develop skills to create their own enterprise. To meet these varied needs, the minor includes a wide range of courses in innovation and may be taken as a course only option, or may include a practicum.

Requirements

24 units total

6-9 UNITS

from

- INNOVATE 1C03 - Cases in Entrepreneurship and Innovation
- INNOVATE 1X03 - The World of Entrepreneurship
- INNOVATE 2X03 - Lean Startup

6-9 UNITS

from

- INNOVATE 2C03 - Creative Innovation for the Modern World
- INNOVATE 2Z03 - Sprint Methodologies
- INNOVATE 3X03 - Persuasion, Pitching Skills and Marketing
- INNOVATE 3Z03 - From Founder to CEO

9-12 UNITS

from

- COMMERCE 3MA3 - Marketing Research
- COMMERCE 3MC3 - Applied Marketing Management
- COMMERCE 3MD3 - Introduction to Contemporary Applied Marketing
- COMMERCE 3S03 - Management Skills Development
- COMMERCE 4AK3 - Accounting Information for Decision Making
- COMMERCE 4BB3 - Recruitment and Selection
- COMMERCE 4BK3 - The Management of Technology
- COMMERCE 4BN3 - Leadership Development
- COMMERCE 4FO3 - Small Business and Entrepreneurial Finance
- COMMERCE 4FV3 - Venture Capital
- COMMERCE 4FW3 - Finance for Entrepreneurs

- COMMERCE 4KF3 - Project Management
- COMMERCE 4KH3 - Strategies for Electronic and Mobile Business
- COMMERCE 4KI3 - Business Process Management
- COMMERCE 4MC3 - New Product Marketing
- COMMERCE 4ME3 - Sales Management
- COMMERCE 4PA3 - Business Policy: Strategic Management
- COMMERCE 4SA3 - International Business
- COMMERCE 4SD3 - Commercial Law
- COMMERCE 4SE3 - Entrepreneurship
- COMPSCI 4EN3 - Software Entrepreneurship
- ENGNMGT 4A03 - Innovation Driven Project Development and Management
- ENGSOCTY 4Y03 - Society Capstone Design
- GENTECH 2EE3 - Engineering Economics
- GENTECH 2MP3 - Management Principles
- GENTECH 3EE3 - Engineering Economics
- GENTECH 3FF3 - Financial Systems
- GENTECH 3FS3 - Financial Systems
- GENTECH 3MB3 - Fundamentals of Marketing
- GENTECH 3MP3 - Management Principles
- GENTECH 3MT3 - Project Management
- GENTECH 4EP3 - Entrepreneurial Thinking and Innovation
- GENTECH 4FT3 - Strategic Management
- GENTECH 4PM3 - Project Management
- GENTECH 4MK3 - Fundamentals of Marketing
- GENTECH 4SF3 - Strategic Management
- GENTECH 4EN3 - Entrepreneurial Thinking and Innovation
- HISTORY 3TC3 - Science, Technology in World History
- HISTORY 3UA3 - The History of the Future
- HTHSCI 3PP3 - Health Ventures
- HTHSCI 4ID3 - Innovation By Design I
- HTHSCI 4LA3 - Innovation By Design II
- HTHSCI 4PA3 - Global Health Innovation
- IBEHS 3E03 - Fundamentals of Business Strategy
- IBEHS 3EE3 - Project Management
- INNOVATE 1Z03 - Artificial Intelligence - Innovative Technologies
- INNOVATE 2SI3 - Social Innovations
- INNOVATE 3EX3 - Experiential Learning in Innovation
- INNOVATE 3ZZ3 - Imagining and Navigating the Future
- INNOVATE 4EX6 A/B - Founders Startup
- SFGNTECH 3EE3 - Engineering Economics
- SFGNTECH 3FS3 - Financial Systems
- SFGNTECH 3MP3 - Management Principles
- SFGNTECH 4EN3 - Entrepreneurial Thinking and Innovation
- SFGNTECH 4MK3 - Fundamentals of Marketing
- SFGNTECH 4PM3 - Project Management
- SFGNTECH 4SF3 - Strategic Management
- SUSTAIN 3S03 - Implementing Sustainable Change

INTERDISCIPLINARY MINOR IN JEWISH STUDIES

Jewish Studies is an international, multidisciplinary field devoted to the study of Judaism, Jewish history, thought, culture and community. The Minor in Jewish Studies is open to all students registered in a four- or five-level program in any Faculty. Students will be required to complete a minimum of 24 units from the lists below. At least 12 of these units will be taken from List A, comprised of courses focusing directly on an area of Jewish Studies. Students are urged to take at least six units of Hebrew language as part of their List A requirements. A minimum of six units will be taken from List B, comprised of courses which provide crucial background for understanding important issues in Jewish Studies. Students are also encouraged to engage in a year of study in Israel, normally done in the third year of a four-year program. Details are available through the Department of Religious Studies, University Hall, Room 123, ext. 23109, or the Office of International Affairs, Alumni Memorial Hall, Room 203.

Students wishing to pursue a Minor in Jewish Studies may obtain more information from the Jewish Studies Minor Area Coordinator in the Department of Religious Studies, University Hall, Room 123.

List A

- HEBREW 2A03 - Introduction to Biblical Hebrew I
- HEBREW 2B03 - Introduction to Biblical Hebrew II
- HEBREW 3A03 - Intermediate Hebrew I
- HEBREW 3B03 - Intermediate Hebrew II
- HISTORY 2X03
- HISTORY 3DD3 - Jews and Jesus
- HISTORY 3ZZ3 - Judaism in the Modern World
- PHILOS 2JP3
- SCAR 2AM3 - Abraham in Judaism, Christianity, and Islam
- SCAR 2EE3 - Prophets, Priests, and Sorcerers
- SCAR 2HB3 - Introduction to the Jewish Scriptures/Old Testament
- SCAR 2HC3 - Introduction to Biblical Hebrew I
- SCAR 2HD3 - Introduction to Biblical Hebrew II
- SCAR 2J03 - Introduction to Judaism
- SCAR 2YY3 - The Bible and Film
- SCAR 3BW3 - Gender in Ancient Eastern Mediterranean
- SCAR 3DD3 - Jews and Jesus
- SCAR 3EP3 - Jewish Ethics and Politics
- SCAR 3R03 - Death and the Afterlife in Early Judaism and Christianity
- SCAR 3RB3 - Ethnicity, Race, and Religion
- SCAR 3RC3 - Race, Religion, and Coloniality
- SCAR 3RL3 - Religion and Law
- SCAR 3SM3 - Secular Modernity?
- SCAR 3ZZ3 - Judaism in the Modern World

List B

- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 3I03 - The International Relations of the European Powers, 1870-1945
- PHILOS 2P03 - Ancient Greek Philosophy
- PHILOS 2D03 - Bioethics
- PHILOS 3H03
- PHILOS 3VV3 - Kant
- PHILOS 3YY3 - Hegel
- POLSCI 3AA3
- POLSCI 3KK3 - Genocide: Sociological and Political Perspectives
- POLSCI 4D06 A/B - International Politics
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 3KK3 - Genocide: Sociological and Political Perspectives
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3Z03

Notes

- Please see the *Course Listings* section for a detailed description of the above courses.
- In order to declare an Interdisciplinary Minor in Jewish Studies, at least 12 units (above Level I) must be elective to degree.

INTERDISCIPLINARY MINOR IN LATIN AMERICAN AND LATINX STUDIES

Engaging, learning, and working with and for diverse international communities provides students with essential skills and knowledge to be engaged citizens of the world. Latin American Studies is the interdisciplinary approach used to explore the histories, linguistic traditions, literatures, cultures, societies, geographies, archaeologies, identities, migrations, and diasporas of Latin America and its peoples. Latinx Studies is the interdisciplinary approach used to explore the histories, migration patterns, race and ethnicities, identity-formation, geographies, and experiences of the Latinx/Latin American communities inhabiting diasporic locations in Canada and elsewhere in the world. This course of study centres the multivalent experiences of Latin American peoples in Latin America and Latinx peoples within the context of the diaspora in Canada. The goal of the Interdisciplinary Minor in Latin American and Latinx Studies is to expose students to methodologies, knowledge, and theoretical frameworks for understanding "What is Latin America?" and "What are Latinx Studies?"

The primary responsibility for governance of the Minor is held by the Interdisciplinary Minor in Latin American and Latinx Studies Committee, comprised of an interdisciplinary group of faculty, administrators, and students from the Faculties of Business, Engineering, Health Sciences, Humanities, Science, Social Sciences, and the Arts & Science Program. Responsibility for advising each student rests with the student's home Faculty. More information on the Interdisciplinary Minor in Latin American and Latinx Studies can be found by contacting latam@mcmaster.ca.

Notes

- Student requests for course substitution can be completed by emailing the Minor Committee Co-Chair at latam@mcmaster.ca.
- Students should note that not all courses listed are available each year. Furthermore, it is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions.
- Students are strongly encouraged to seek guidance from their academic advisor to ensure they are meeting all enrolment requirements, including Faculty-specific requirements for double counting courses required for a student's major.
- All courses have enrolment capacities. The Faculties cannot guarantee enrolment in courses for minors even when prerequisites have been met.

Course List A: Foundations in Latin American and Latinx Studies

- ABLD 3CD3 - Topics in the Black Caribbean and its Diasporas
- ANTHROP 2BB3 - Ancient Mesoamerica: Aztecs to Zapotecs
- ANTHROP 2MA3 - Art and Activism
- ANTHROP 3FF3 - Key Debates in Andean Archaeology
- ENVSOCTY 3RW3 - Regional Geography of a Selected World Region (if the topic was Regional Geography of Latin America)
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2EN3 - The Post-Slavery Caribbean
- HISTORY 2G03 - Modern Latin America Since 1820
- PHILOS 2LA3 - Latin American Philosophy
- SPANISH 1A03 - Intermediate Spanish I (or 2Z03)
- SPANISH 1AA3 - Intermediate Spanish II (or 2ZZ3)
- SPANISH 1Z06 A/B - Beginner's Intensive Spanish

Course List B: Cultures, Histories, and Migrations

- ABLD 2XX3 - Special Topics in Africa and Black Diaspora Studies
- ABLD 3BA3 - Topics in Black, African and African Diaspora Studies
- ABLD 4XX3 - Special Topics in Africa and Black Diaspora Studies
- ANTHROP 2DA3 - Traditional Indigenous Ecological Knowledge
- ANTHROP 2F03 - Introduction to Sociocultural Anthropology: Listening Across Difference
- ANTHROP 2PA3 - Introduction to Anthropological Archaeology
- ANTHROP 3BB3 - Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- ANTHROP 3LL3 - Of Beauty and Violence
- ANTHROP 3TR3 - Tourism: Sex, Sun and Sightseeing
- ANTHROP 4FF3 - Digging the City: The Archaeology of Urbanism
- ANTHROP 4MM3 - Borders, Migration, Refuge
- ARTSSCI 1C06 A/B - Global Challenges Inquiry
- CMTYENGA 2A03 - Foundations of Community Engagement
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 4IW3 - Twenty-First Century Indigenous Writing and Film
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- ENVSOCTY 2RW3 - World Regional Geography
- ENVSOCTY 3TG3 - Geographies of Globalization
- ENVSOCTY 3UW3 - Cities of the Developing World
- GLOBALZN 1A03 - Global Citizenship
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- HISTORY 3AR3 - Atlantic Revolutions, 1750-1804
- HISTORY 3UA3 - The History of the Future
- HLTHAGE 3S03
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 3RH3 - Racism and Health
- HTHSCI 4SR3 - Global Sexual and Reproductive Health and Rights
- LINGUIST 4R03 - Cross-Cultural Communication
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PEACJUST 2B03
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3D03 - Globalization and Peace
- PHILOS 3GH3 - Global Health Ethics
- PHILOS 3T03 - Philosophy and Race
- POLSCI 1AB3 - Politics and Power in a Globalizing World
- POLSCI 2I03 - Global Politics
- POLSCI 2J03 - Global Political Economy
- POLSCI 3EE3 - International Relations: North-South
- POLSCI 3G03 - Politics of Diversity: Race, Ethnicity, and Multiculturalism
- POLSCI 3JR3 - The Rule of Law and Legal and Judicial Reforms in the Developing World
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 4CF3 - Canadian Foreign Policy
- POLSCI 4D06 A/B - International Politics
- POLSCI 4GC3 - Advanced Issues in Global Citizenship
- POLSCI 4GG3 - Conceptual Issues in Global Politics
- POLSCI 4KB3 - Non-Western International Relations
- POLSCI 4LA3 - Politics in Latin America
- POLSCI 4Y03 - Domination and Decolonization
- POLSCI 4YR3 - Child/Youth Rights and Security in Global Political Perspective
- SCAR 3RC3 - Race, Religion, and Coloniality

- SCIENCE 2AR3 - Foundations of Science: Equity, Justice and Anti-Racism in Science
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3YY3 - Sociology of Globalization
- SOCIOL 4A03 - Ethnic/Racial Tensions
- SUSTAIN 2GS3 - Global Questions in Sustainability

Requirements

24 units total (no more than 6 units from Level I courses)

6 UNITS

- ABLD 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies
- LATAM 2A03 - Introduction to Latin American and Latinx Studies
- LATAM 3A03 - Critical Contemporary Issues in Latin American and Latinx Studies

6 UNITS

from

- *Course List A*

12 UNITS

from

- *Course List A* and *B*

INTERDISCIPLINARY MINOR IN MUSLIM STUDIES

The minor in Muslim Studies provides the opportunity to study Muslim beliefs, practices, thought, and history in a variety of geographic locales and timeframes.

Students are required to complete 24 units in total for the minor. A minimum of six units are required from list A, which includes courses focused wholly on Muslims and Islam. A minimum of six units are required from list B, which includes courses that provide key background for understanding Islamic history and Muslims in wider contexts. The remaining 12 units are to be taken from list A or B. It is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions for all courses on these lists.

Students wishing to pursue a Minor in Muslim Studies may obtain more information from the Muslim Studies Minor Area Coordinator in the Department of Religious Studies, University Hall, Room 123.

Note:

In order to declare an Interdisciplinary Minor in Muslim Studies, at least 12 units (above Level I) must be elective to degree.

Requirements

24 units total

A MINIMUM OF 6 UNITS FROM LIST A:

- SOCIOL 4SR3
- SCAR 2Q03 - What Is Islam?
- SCAR 2TA3 - Islam in North America
- SCAR 3C03 - Islam in the Modern World
- SCAR 3IL3 - Islamic Law
- SCAR 3XI3 - Selected Topics in Mysticism [when offered on Islamic material]

A MINIMUM OF 6 UNITS FROM LIST B:

- ANTHROP 3ET3 - Ethics of Hope and Despair
- ANTHROP 4MM3 - Borders, Migration, Refuge
- ARTHIST 2Y03 - Performance, Art and Visual Culture in the Middle East
- CMST 3RR3 - Race, Religion, and Media
- CMST 4D03 - International Communication
- ENGLISH 3R06 A/B
- HISTORY 1CC3 - Ten Empires that Shaped our World, 500 BCE to Present
- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2HH3 - Pirates, Pilgrims and the Enslaved in the Mediterranean, 1450-1750 (or SCAR 2FF3)
- HISTORY 2J03 - Africa up to 1800
- HISTORY 2JJ3 - Africa since 1800
- PEACEST 3B03
- PEACEST 3D03
- PEACJUST 3B03 - Peace-Building and Health Initiatives
- PEACJUST 3D03 - Globalization and Peace
- SCAR 1B03 - What on Earth is Religion?
- SCAR 2M03 - Death and Dying: Comparative Views
- SCAR 2RN3 - Science, Religion, and Human Futures
- SCAR 2WW3 - Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 - Health, Healing and Religion: Comparative Views
- SCAR 3AR3 - Culture and Religion (or ANTHROP 3AR3)
- SCAR 3CC3 - Religion and Politics (or POLSCI 3LA3)
- SCAR 3EE3 - Sacred Journeys (or ANTHROP 3SS3)
- SCAR 3F03 - Approaches to the Study of Religion
- SCAR 3FF3 - Gender and Religion (or GENDRST 3FF3)
- SCAR 3GH3 - Interdisciplinary Global Health Field Course: Maternal and Infant Health in Morocco (or ANTHROP 3GH3) in combination with ARABIC 3GH3
- SCAR 3RC3 - Race, Religion, and Coloniality
- SOCIOL 2DD3 - Immigration and the Canadian Mosaic
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3Z03

INTERDISCIPLINARY MINOR IN NUCLEAR STUDIES AND SOCIETY

Overview

The Interdisciplinary Minor in Nuclear Studies and Society is intended for students from all Faculties who wish to develop an essential understanding of the interdisciplinary nature of nuclear technology in society today. Nuclear studies play important roles in our society, including nuclear medicine, which contributes to advancements in medical imaging and cancer treatment through radioisotopes. Nuclear energy plays a substantial role in providing clean, reliable, and safe electricity. Students can also explore opportunities in nuclear engineering, focusing on the design, construction, and operation of nuclear reactors. The social side of nuclear studies requires professionals who can facilitate meaningful engagement between individuals and communities with the nuclear sector around issues of peace, ethics, and sustainability. This interdisciplinary approach prepares students to address complex challenges and harness opportunities within the nuclear sector, contributing to sustainable development and innovative solutions.

The minor has areas of specialization that will be noted on transcripts as follows:

- Interdisciplinary Minor in Nuclear Studies and Society: Nuclear Engineering
- Interdisciplinary Minor in Nuclear Studies and Society: Nuclear Applications in Applied and Medical Science
- Interdisciplinary Minor in Nuclear Studies and Society

The core courses for the minor will provide foundational knowledge across all areas of specialization to instill a truly interdisciplinary approach. A large selection of courses is available for inclusion in the minor to allow students the flexibility to tailor the minor to complement their major. Students will be able to focus on an area of specialization or take courses from any or all areas,

allowing them to direct their own learning experience.

Notes

- Students should note that not all courses listed are available each year.
- It is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions.
- Students are strongly encouraged to seek guidance from their Academic Advisor to ensure they are meeting all enrolment requirements, including Faculty-specific requirements.
- All courses have enrolment capacities and enrolment in courses cannot be guaranteed for minors, even when prerequisites have been met.
- To declare an Interdisciplinary Minor in Nuclear Studies and Society, at least 12 units (above Level I) must be elective to the degree.
- Students specializing in Nuclear Engineering must take 15 units from Course List 1 that includes ENGPHYS 3D04 and ENGPHYS 4NE3.
- Students specializing in Nuclear Applications in Applied and Medical Science must take 15 units from Course List 2.
- Students wishing to obtain the Interdisciplinary Minor in Nuclear Studies and Society must take 15 units that include any combination of courses from Lists 1, 2, and 3.

Requirements

24 units total

6 UNITS

- NUCLST 1N03 - Nuclear Technology Applications
- NUCLST 2N03 - Nuclear Technology & Society

3 UNITS

from

- NUCLST 4N03 - Interdisciplinary Projects in Nuclear Studies
- NUCLST 4NN3 - Nuclear Energy in Practice

15 UNITS

from

- Course List 1: Nuclear Engineering *(See Note 6)*

OR

- Course List 2: Nuclear Applications in Applied and Medical Science

OR

- Any combination of Course Lists 1, 2, and 3

Course Lists

COURSE LIST 1: NUCLEAR ENGINEERING

- AUTOTECH 3TS3 - Fluid Mechanics
- AUTOTECH 3CT3 - Control Theory
- BIOTECH 3BC3 - Bioprocess Control and Dynamics
- CHEMENG 2O04 - Fluid Mechanics
- CHEMENG 3A04 - Heat Transfer
- CHEMENG 4A03 - Energy Systems Engineering
- CHEMENG 4EC3 - Electrochemistry and Electrochemical Engineering
- CIVENG 2A03 - Surveying and Measurement for Transportation and Construction
- CIVENG 2B04 - Principles of Environmental Engineering
- CIVENG 2J03 - Engineering Geology
- CIVENG 2O04 - Fluid Mechanics
- CIVENG 3G04 - Structural Analysis
- CIVENG 3P04 - Civil Engineering Materials and Design
- CIVENG 4K04 - Modern Methods of Structural Analysis
- CIVTECH 4RC3 - Reinforced Concrete and Masonry Design
- CIVTECH 4UM3 - Asset Management
- ELECENG 3CL4 - Introduction to Control Systems
- ELECENG 3PI4 - Energy Conversion
- ELECENG 4PM4 - Electrical Power Systems
- ELECENG 4PP4 - Smart and Micro Grids
- ENRTECH 3EP3 - Power Systems and Electrical Machines
- ENRTECH 3PD3 - Power Distribution I
- ENGPHYS 2NE3 - Thermal Systems Design
- ENGPHYS 3D04 - Principles of Nuclear Engineering
- ENGPHYS 3L04 - Engineering Metrology
- ENGPHYS 3O04 - Introduction to Fluid Mechanics and Heat Transfer
- ENGPHYS 4D04 - Nuclear Reactor Physics
- ENGPHYS 4NE3 - Advanced Nuclear Engineering
- ENGPHYS 4P03 - Nuclear Power Plant Systems and Operation
- ENGPHYS 4PP3 - Plasma Physics Applications
- ENGTECH 4CT3 - Systems and Control
- GENTECH 3LS3 - Quality Control and Assurance Methods
- GENTECH 4LM3 - Lean Thinking and Practices
- GENTECH 4OM3 - Operations Management
- MANTECH 3LS3 - Quality Control and Assurance Methods
- MANTECH 4MM3 - Design and Manufacturing of Machine Elements
- MATLS 2A04 - Introduction to Materials Engineering
- MATLS 2B03 - Introduction to the Thermodynamics of Materials
- MATLS 3E04 - Mass Transfer
- MATLS 3M03 - Mechanical Behaviour of Materials
- MATLS 3T04 - Phase Transformations
- MATLS 4D03 - Corrosion and its Control
- MATLS 4MS4 - Materials Selection in Design
- MECHENG 2P04 - Statics and Mechanics of Materials
- MECHENG 2W04 - Thermodynamics
- MECHENG 3C03 - Manufacturing Engineering
- MECHENG 3E03 - Mechanical Engineering Design Theory
- MECHENG 3O04 - Fluid Mechanics
- MECHENG 3R03 - Heat Transfer
- MECHENG 4S03 - Incompressible Flow
- MECHENG 4U03 - Compressible Flow and Turbomachinery
- MECHENG 4V03 - Thermo-Fluids Systems Design and Analysis
- PROCTECH 2IC3 - Instrumentation and Control
- PROCTECH 4IC3 - Industrial Networks and Controllers
- PROCTECH 4CT3 - Advanced Control Theory II
- SFWRENG 3K04 - Software Development
- SFWRENG 3RA3 - Software Requirements and Security Considerations
- SFWRTECH 3CS3 - Introduction to Cyber Security
- SFWRTECH 4NS3 - Advanced Cyber Security
- SFWRTECH 4SS3 - Software Security

COURSE LIST 2: NUCLEAR APPLICATIONS IN APPLIED AND MEDICAL SCIENCE

- CHEM 3RC3 - Radioisotopes in Medicine
- EARTHSC 4CC3 - Stable Isotopes in Earth and Environmental Systems
- ENVSOCTY 3EC3 - Environmental Catastrophes
- MEDPHYS 1A03 - Physics in Medicine and Biology
- MEDPHYS 3C03 - Operational Health Physics: Laboratory & Communication
- MEDPHYS 4B03 - Radioactivity and Radiation in Medical Physics
- MEDPHYS 4F03 - Fundamentals of Health Physics
- MEDPHYS 4RA3 - Radiation and Radioisotope Methodology I
- MEDPHYS 4T03 - Clinical Applications of Physics in Medicine
- MEDPHYS 4U03 - Radiation Biology
- MEDRADSC 2W03 - Physics and Instrumentation for Radiation Therapy
- MEDRADSC 2X03 - Radiobiology and Protection
- MEDRADSC 2Y03 - Radiographic Imaging and Instrumentation I
- MEDRADSC 3B03 - Quality Management in Medical Radiation Sciences
- MEDRADSC 3G03 - Radiographic Imaging and Instrumentation II
- MEDRADSC 3H03 - Quality Control in Radiography
- MEDRADSC 3X03 - Research Methods in Medical Radiation Sciences
- MEDRADSC 3Y03 - Ethics for Medical Radiation Sciences
- PHYSICS 4E03 - Particle and Nuclear Physics

COURSE LIST 3: NUCLEAR STUDIES AND SOCIETY

- CHALLENG 2CC3 - Critical Challenges for Humanity
- CMTYENGA 2A03 - Foundations of Community Engagement
- ENGLISH 2SL3 - Social Justice, Literature and the Rhetoric of Science and Technology
- HISTORY 2GW3 - A History of Global War
- HISTORY 3TC3 - Science, Technology in World History
- HISTORY 3UA3 - The History of the Future
- HISTORY 4JJ3 - U.S. Foreign Relations
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PHILOS 2CT3 - Critical Thinking
- PHILOS 2D03 - Bioethics
- PHILOS 2YY3 - Ethics
- PHILOS 3L03 - Environmental Philosophy
- PHILOS 3N03 - Political Philosophy
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3Q03 - The Causes of War
- POLSCI 4SS3 - Public Opinion and Policy

INTERDISCIPLINARY MINOR IN SOCIAL JUSTICE AND INCLUSIVE COMMUNITIES

The minor in Social Justice and Inclusive Communities provides students with the opportunity to understand structures and processes underlying social marginalization, and to explore the range of ways people and communities work to bring about social justice, equity, and inclusion.

Students will complete courses from the Faculties of Science, Social Sciences and Humanities that address these themes and they will be able to select courses based on their own specific interests.

Students should note that this minor is not accredited by the Canadian Association for Social Work Education and it is not a social work credential. It is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions of all courses in this list. Students are encouraged to speak to their Faculty academic advisors about Faculty-specific rules about double-counting courses for the minor.

Requirements

24 units total

3 UNITS

From

- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II

3 UNITS

From

- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- SOCWORK 1BB3 - Re-Imagining Help: Introduction to Social Work II
- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- GENDRST 1A03 - Gender, Race, Culture, Power
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 1B03 - Reconciling What? Indigenous Relations in Canada
- PEACJUST 1A03 - Peace, Justice, Human Rights
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law

18 UNITS

from

- *Course List* (see below)

Course List

- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 3F03 - Anthropology and the 'Other'
- ANTHROP 4LL3 - Critical Global Health
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ENVSOCTY 4HD3 - Disability, Society and Environment
- ENVSOCTY 4UF3 - The Geography of Gender
- GENDRST 2AA3 - Feminist Thought
- GENDRST 3BB3 - Gender and Visual Culture
- HLTHAGE 2GG3 - Mental Health and Society
- HLTHAGE 3D03 - Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3E03 - Ethical Issues in Health and Aging
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 3YY3 - Indigenous Community Health and Wellbeing
- HISTORY 2EN3 - The Post-Slavery Caribbean
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- HISTORY 3XX3 - Human Rights in History
- INDIGST 2F03 - Indigenous Education in Canada
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- PHILOS 2D03 - Bioethics
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2YY3 - Ethics
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3T03 - Philosophy and Race
- POLSCI 2C03 - Force and Fear, Crime and Punishment
- POLSCI 2XX3 - Politics of the Developing World
- POLSCI 3K03 - Migration and Citizenship: Canadian, Comparative and Global Perspectives
- POLSCI 3PB3 - Politics from Below
- POLSCI 3V03 - Gender and Politics
- POLSCI 3Y03 - Democratization and Human Rights
- POLSCI 4Y03 - Domination and Decolonization
- SCAR 2RD3 - Religion and Diversity
- SOCWORK 3I03 - Social Work and Indigenous Peoples
- SOCWORK 3O03 - Social Work and Sexualities
- SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
- SOCWORK 3T03 - Poverty and Homelessness
- SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
- SOCWORK 4I03
- SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
- SOCWORK 4U03 - Immigration, Settlement and Social Work
- SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2FF3 - The Sociology of 'Race' and Ethnicity
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 3MM3 - Political Sociology
- SOCIOL 3NN3 - Popular Culture and Inequality
- SOCIOL 3U03 - Sociology of Sexualities
- SOCIOL 4DD3 - Social Movements and Social Change
- WORKLABR 2W03 - Human Rights and Social Justice

Notes:

- Please see the *Course Listings* section for a detailed description of the above courses.
- In order to declare a Minor in Social Justice & Inclusive Communities, at least 12 units (above Level I) must be elective to degree.

INTERDISCIPLINARY MINOR IN SUSTAINABILITY

Addressing sustainability in our society poses complex challenges that require interdisciplinary solutions. Sustainability is frequently taught in silos within individual disciplines, and most often within individual and isolated courses. The goal of the Minor is to alter this pedagogy and teach sustainability both within and across disciplines. The Minor provides a path for students to study diverse aspects of sustainability from different disciplines and integrate them into a cohesive whole. The scope and definition of sustainability used for the Minor are guided jointly by the United Nations Sustainable Development Goals and the Association for the Advancement of Sustainability in Higher Education. The primary responsibility for governance of the Minor is held by the Interdisciplinary Minor in Sustainability Committee comprised of an interdisciplinary group of faculty and administrators from the Faculties of Business, Engineering, Health Sciences, Humanities, Science, Social Sciences, and the Arts & Science Program. The Arts & Science Program hosts the Minor by managing administrative obligations such as the submission of curricular revisions. Responsibility for advising students rests with the student's home Faculty.

More information on the Interdisciplinary Minor in Sustainability can be found at https://asp.mcmaster.ca/academic-programs/minor or by contacting asp@mcmaster.ca.

Course List

- ANTHROP 2AN3 - Food and Nutrition in Society
- ANTHROP 2C03 - Archaeology of Environmental Crisis and Response
- ANTHROP 3C03
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- ANTHROP 4CL3 - Archaeology of Climate Change and Culture
- ANTHROP 4CP3 - Cultural Politics of Food and Eating
- ARTSSCI 3GJ3 - Global Justice Inquiry
- ARTSSCI 4CA3
- ARTSSCI 4CK3
- ARTSSCI 4CM3
- ARTSSCI 4EP3 - Environmental Policy Inquiry
- ART 2ER3 - Environmentally Responsible Art
- BIOLOGY 3HD3 - Human Disasters
- CHALLENG 2CC3 - Critical Challenges for Humanity
- CHEM 2BC3 - Making Chemistry More Sustainable
- CHEM 2SC3 - Sustainable Chemistry - Green Chemistry
- CHEM 3I03 - Industrial Chemistry
- CHEMENG 4A03 - Energy Systems Engineering
- CMST 2EM3 - Environmental Media
- CMST 4P03 - Social Activism and the Media
- CMTYENGA 2A03 - Foundations of Community Engagement
- COMMERCE 1B03 - Business Environment & Organization
- COMMERCE 1E03 - Business Environment and Organization
- COMMERCE 3FL3 - Sustainable and Social Finance
- COMMERCE 4BL3 - Occupational Health and Safety Management
- COMMERCE 4BM3 - Strategic Human Resource Planning
- COMMERCE 4MG3 - Strategic Philanthropy and Leadership
- COMMERCE 4SG3 - Sustainability: Corporations and Society
- COMMERCE 4SI3 - Innovation for Social Impact
- CSCT 2Z03
- EARTHSC 2GG3 - Natural Disasters
- ECON 2J03 - Environmental Economics
- ECON 3W03 - Natural Resources
- ENGLISH 1H03 - Words in Place
- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENGLISH 4E03 - Literature, Culture and Climate Catastrophe
- ENGNMGT 5EL3
- ENGPHYS 3ES3 - Introduction to Energy Systems
- ENGPHYS 4X03 - Introduction to Photovoltaics
- ENGSOCTY 2X03 - Inquiry in an Engineering Context I
- ENGSOCTY 3Z03 - Preventive Engineering: Environmental Perspectives
- ENGSOCTY 4Y03 - Society Capstone Design
- ENVIRSC 1C03 - Climate, Water and Environment
- ENVIRSC 2WW3 - Water and the Environment
- ENVIRSC 4EA3 - Environmental Assessment
- ENVSOCTY 1HA3 - Society, Culture and Environment
- ENVSOCTY 1HB3 - Population, Cities and Development
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2UI3 - The Urban Experience
- ENVSOCTY 3EC3 - Environmental Catastrophes
- ENVSOCTY 3EE3 - Energy and Society
- ENVSOCTY 3EG3 - Politics of a Dying Planet
- ENVSOCTY 3ER3 - Sustainability and the Economy
- ENVSOCTY 3UP3 - Urban Planning
- ENVSOCTY 4EA3 - Environmental Assessment
- ENVSOCTY 4HH3 - Environment and Health
- ENVSOCTY 4US3 - Sustainable Cities
- GEOG 1HA3
- GEOG 1HB3
- GEOG 2EI3
- GEOG 2UI3
- GEOG 3EC3
- GEOG 3EE3
- GEOG 3ER3
- GEOG 3UP3
- GEOG 4EA3
- GEOG 4HH3
- GLOBALZN 1A03 - Global Citizenship
- HLTHAGE 2AN3 - Food and Nutrition in Society
- HLTHAGE 4M03 - Environment and Health
- HISTORY 2EH3
- HISTORY 3CH3 - Climate History
- HISTORY 3UA3 - The History of the Future
- HISTORY 4K03
- HTHSCI 1RR2 - Introduction to the Social Determinants of Health
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- HTHSCI 4PA3 - Global Health Innovation
- HTHSCI 4ZZ3 - Global Health Advocacy
- HUMAN 4SI3 - Innovation for Social Impact
- IBH 1AD3 - IBH in the Community
- IBH 1BD3 - Introduction to Peace Studies for IBH
- IBH 3BA3 - Understanding Entrepreneurship and Social Entrepreneurship From a Historical and Theoretical Lens
- IBH 3BB3 - Organizational Strategy
- INDIGST 2D03 - Traditional Indigenous Ecological Knowledge
- INDIGST 3P03 - Dish with One Spoon Health, Diet and Traditional Botany
- INDIGST 3R03 - Experiential Land-Based Learning
- INDIGST 4A03 - Indigenous Climate Justice
- LIFESCI 2X03 - Environmental Change and Human Health

- LIFESCI 4F03 - Emerging Paradigms in Environmental Change and Health
- MATLS 4I03 - Sustainable Manufacturing Processes
- MECHENG 4O04 - Sustainable Energy Systems
- PEACEST 1A03
- PEACEST 3D03
- PEACEST 4G03
- PEACEST 4L03
- PEACEST 4FC3
- PEACEST 4J03
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 3D03 - Globalization and Peace
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- PEACJUST 4G03 - Peace Through Health: Praxis
- PEACJUST 4L03 - Peace, Environment and Health
- PHILOS 2N03 - Business Ethics
- PHILOS 3L03 - Environmental Philosophy
- POLSCI 3GC3 - Politics of a Dying Planet
- POLSCI 3LB3 - Globalization and the World Order
- POLSCI 4PE3 - Global Political Ecology
- RELIGST 2W03
- SCICOMM 2M03 - Engaging Your World: Science for the Global Citizen
- SCIENCE 2M03
- SEP 4A03
- SEP 4EL3
- SEP 4X03 - Livable Cities, the Built and Natural Environment
- SOCIOL 4NN3 - Meeting the Challenge of a Changing Climate
- SOCSCI 4SI3 - Innovation for Social Impact
- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2GS3 - Global Questions in Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 2SS3 - Advocating for Sustainability
- SUSTAIN 3HC3 - Sustainability and Healthcare
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 3SS3 - Community Engagement and Prototyping for Sustainability
- SUSTAIN 4S06 A/B - Leadership in Sustainability

Requirements

24 units total (no more than 6 units from Level 1 courses)

3 UNITS

from

- SUSTAIN 1S03 - Introduction to Sustainability
- SUSTAIN 2GS3 - Global Questions in Sustainability
- SUSTAIN 2IS3 - Intersectionality and Sustainable Development
- SUSTAIN 2S03 - Evaluating Problems & Sustainable Solutions
- SUSTAIN 2SD3 - Exploring the United Nations Sustainable Development Goals
- SUSTAIN 3S03 - Implementing Sustainable Change
- SUSTAIN 4S06 A/B - Leadership in Sustainability

21 UNITS

from

- *Course List* (selected from two or more Faculties/Arts & Science Program as outlined in the Undergraduate Course Calendar). Any cross-listed course between two or more Faculties/Arts & Science Program and those of interdisciplinary programs will be counted as a course outside of the student's home Faculty. SUSTAIN courses do not count towards units outside a student's home Faculty.

Notes

Please see the *Course Listings* section for a detailed description of the above courses. Student requests for course substitution can be completed using the request template and sent to asp@mcmaster.ca.

- Students should note that not all courses listed are available each year. As well, it is the student's responsibility to check carefully for prerequisites, co-requisites and enrolment restrictions.
- Students are strongly encouraged to seek guidance from their academic advisor to ensure they are meeting all enrolment requirements, including Faculty-specific requirements for double counting courses required for a student's major.
- All courses have enrolment capacities and enrolment in courses cannot be guaranteed for minors, even when prerequisites have been met.
- ENVIRSC and EARTHSC courses are administered by the Faculty of Science.
- ENVSOCTY and GEOG courses are counted as Social Sciences courses.

MINOR IN IMPACT OF INFECTIOUS DISEASE ON INDIVIDUALS AND SOCIETY

From the HIV/AIDS epidemic to the coronavirus pandemic, infectious disease outbreaks have highlighted the need for an integrated response that considers both the health and social impacts of these crises. The interdisciplinary minor in the Impact of Infectious Disease on Individuals and Society focuses on understanding challenges and issues that arise from the spread of infectious diseases. The program is built around three interconnected themes: (1) Diseases, pandemics, and public health (2) Social and economic impacts of infectious disease and (3) Community involvement and policy development. The core course for the minor will introduce these themes and introduce the concepts of infection and disease in a manner accessible to students from various disciplines. A large selection of courses is available for inclusion in the minor to allow students the flexibility to tailor the minor to complement their major.

The primary responsibility for the governance of the Minor is held by the Department of Biochemistry and Biomedical Sciences. Responsibility for advising each student rests with the student's home Faculty. For more information on the minor contact Dr. Lesley MacNeil, macneil@mcmaster.ca.

Notes:

- Students should note that not all courses listed are available each year. Furthermore, it is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions. Some courses are restricted to students within a specific major.
- Students are strongly encouraged to seek guidance from their academic advisor to ensure they meet all enrolment requirements, including Faculty-specific requirements for double counting courses required for a student's major.
- All courses have enrolment capacities. Enrollment cannot be guaranteed in courses for minors even when prerequisites have been met.
- No more than 6 units may be counted towards both the Minor in Global Nexus and the Concurrent Certificate in Immunology, Microbiology, and Virology

Requirements

24 units total (of which no more than 6 units may be from Level 1 courses), 9 units must be outside of the student's faculty

9 UNITS

- NEXUS 2A03 - Impact of Infectious Disease on Individuals and Society
- NEXUS 4A06 A/B - How to Survive a Pandemic: Capstone Project for Nexus Minor

3 UNITS
- Thematic Course List: Theme 1

3 UNITS
- Thematic Course List: Theme 2

3 UNITS
- Thematic Course List: Theme 3

6 UNITS
- Thematic Course Lists 1, 2, 3

Thematic Course Lists

THEME 1: DISEASE, PANDEMICS, PUBLIC HEALTH
- ANTHROP 2HI3 - Medical Anthropology
- ANTHROP 2U03 - Plagues and People
- ANTHROP 3BD3 - The Black Death
- ANTHROP 4S03 - The Anthropology of Infectious Disease
- BIOCHEM 3AB3 - Antibiotics are the Cornerstone of Medicine
- BIOCHEM 3MI3 - Microbial Interactions
- BIOCHEM 4H03 - Biotechnology and Drug Discovery
- BIOCHEM 4J03 - Immunological Principles in Practice
- BIOLOGY 2EE3 - Introduction to Microbiology and Biotechnology
- BIOLOGY 3HD3 - Human Disasters
- CHEM 2BC3 - Making Chemistry More Sustainable
- CHEM 3RC3 - Radioisotopes in Medicine
- CHEMBIO 3BM3 - Implanted Biomaterials
- HLTHAGE 1ZZ3 - Inquiry: Introduction to Health and Society
- HLTHAGE 2A03 - Research Methods in Health and in Aging I
- HLTHAGE 2D03 - Continuum of Care
- HTHSCI 1DT3 - Discover Immunology Today
- HTHSCI 3I03 - Introductory Immunology
- HTHSCI 3K03 - Principles of Virology
- HTHSCI 3SB3 - Superbugs: Bacterial Antibiotic Resistance
- HTHSCI 4II3 - Advanced Concepts in Immunology
- HTHSCI 4J03 - Immunological Principles In Practice
- HTHSCI 4MS3 - The Social Lives of Molecules
- HTHSCI 4O03 - Principles of Virus Pathogenesis
- INDIGST 3H03 - Indigenous Medicine I: Philosophy
- INDIGST 3HH3 - Indigenous Medicine II: Practical
- LIFESCI 3Q03 - Global Human Health and Disease
- LIFESCI 4U03 - Mechanisms of Disease
- MOLBIOL 3O03 - Microbial Genetics
- MOLBIOL 4P03 - Medical Microbiology
- PHILOS 2U03 - Philosophy of Health and Medicine

THEME 2: SOCIAL AND ECONOMIC IMPACTS OF INFECTIOUS DISEASE
- ANTHROP 4LL3 - Critical Global Health
- CMST 3RR3 - Race, Religion, and Media
- ECON 3Q03 - The Economics of Aging
- ECON 3Z03 - Health Economics
- HLTHAGE 1AA3 - Introduction to Health and Society
- HLTHAGE 1BB3 - Introduction to Aging and Society
- HLTHAGE 2BB3 - Perspectives in Health, Aging and Society
- HLTHAGE 2F03 - Aging and Health Care Systems
- HLTHAGE 3K03 - Social Determinants of Population Health in Canada
- HLTHAGE 3R03 - Health Inequalities
- HLTHAGE 4G03 - Global Health
- HLTHAGE 4I03 - Aging and Health
- HLTHAGE 4R03 - Beyond the Social: Determinants of Indigenous Peoples Health
- HLTHAGE 4T03 - Gender, Sex and Health
- HTHSCI 2DS3 - Global Health and the Complexities of Disease
- HTHSCI 2T03 - Sex, Gender, & Health
- HTHSCI 3AH3 - Indigenous Health
- HTHSCI 3RH3 - Racism and Health
- HTHSCI 4LD3 - Global Health Governance, Law and Politics
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 2C03 - Current Issues in Indigenous Studies: Selected Topics
- PEACJUST 1VM3 - Pass the Mic: Conversations on Justice
- PEACJUST 2XX3 - Social & Structural Determinants of Health
- PHILOS 2D03 - Bioethics
- SOCIOL 2HH3 - Sociology of Gender
- SOCIOL 2JJ3 - Race, Class, Gender, and Sexuality
- SOCIOL 3RI3 - Racial Politics and Resistance
- SOCIOL 3G03 - Sociology of Health Care

THEME 3: COMMUNITY INVOLVEMENT AND POLICY DEVELOPMENT
- ANTHROP 3Y03 - Indigenous Community Health and Wellbeing
- CMST 1A03 - Introduction to Communication
- CMST 2HM3 - Human Communication
- CMST 3DJ3 - Digital Justice
- ECON 2CC3 - Health Economics and its Application to Health Policy
- HLTHAGE 2C03 - Health Economics and its Application to Health Policy
- HTHSCI 3DD6 A/B - Engaging the City: An Introduction to Community-Based Research in Hamilton
- HTHSCI 4CU3 - Cultural Competency in Health Sciences
- HTHSCI 4ZZ3 - Global Health Advocacy
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 2MM3 - Indigenous Ways of Knowing: Theory
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- LIFESCI 3P03 - Communicating Science for Public Audiences
- LIFESCI 3PP3 - Communicating Science for Professional Audiences
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2YY3 - Ethics
- PHILOS 3C03 - Advanced Bioethics
- PHILOS 3GH3 - Global Health Ethics
- POLSCI 2I03 - Global Politics
- POLSCI 2U03 - Public Policy and Administration
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- POLSCI 3PA3 - Politics of Pandemics
- SCICOMM 3P03 - Communicating Science for Public Audiences
- SCICOMM 3PP3 - Communicating Science for Professional Audiences
- SOCIOL 2R03 - Perspectives on Social Inequality
- SOCIOL 2RR3 - Case Studies of Social Inequality
- SOCIOL 2UU3 - Indigenous Ontologies and Ways of Knowing

MINOR IN LEADERSHIP AND CIVIC STUDIES

The Wilson College Minor in Leadership and Civic Studies is designed for students who are interested in the complex social challenges facing Canada, and how they can meaningfully engage with public and private institutions to help shape policies and enact social change for the public good.

Notes

- To declare a Minor in Leadership and Civic Studies, at least 12 units above Level I must be elective to the degree.
- No more than 6 units of the student's Major program may be applied towards the completion of the Minor.
- It is the student's responsibility to check carefully for prerequisites, co-requisites, and enrolment restrictions of all courses in this list. Students are encouraged to speak to their Faculty's Academic Advisors about Faculty-specific rules on double-counting courses for the Minor

Requirements

24 units total (of which no more than 6 units may be from Level 1 courses), 9 units must be outside of the student's home faculty.

3 UNITS

- WILSON 1A03 - Introduction to Leadership and Civic Studies

6 UNITS

- Thematic Area A: Leadership in Action

6 UNITS

- Thematic Area B: Institutions, Governance, and Civil Society

6 UNITS

- Thematic Area C: Human Rights, Social Movement, and Civic Action

3 UNITS

- Any thematic area

Thematic Areas

THEMATIC AREA A: LEADERSHIP IN ACTION

- ART 3EA3
- CMTYENGA 2A03 - Foundations of Community Engagement
- CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry
- CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience
- HLTHAGE 3G03 - Community Based Research
- HUMAN 3LM3
- HUMAN 4LC3 - Major Leadership Project: Theory and Practice
- HUMAN 4RM3 - Boundaries and Bridges: Relationship Skills for Effective Leaders
- INSPIRE 1PL3 - Personal Leadership Through University Transition
- PEACJUST 4FC3 - Community Engaged Experiential Learning
- POLSCI 3FG3 - Public Service Leadership
- SOCWORK 1AA3 - So You Think You Can Help? Introduction to Social Work I
- WORKLABR 3Q03 - Connecting Knowledge, Policy, and Advocacy for Worker Justice

THEMATIC AREA B: INSTITUTIONS, GOVERNANCE, AND CIVIL SOCIETY

- CMST 2K03 - Political Economy of the Media
- CMST 2LW3 - Communication Policy and Law
- ENGLISH 1CS3 - Studying Culture: A Critical Introduction
- FRENCH 3HH3 - Francophone Voices in Canada
- GLOBALZN 1A03 - Global Citizenship
- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- INDIGST 1AA3 - Introduction to Contemporary Indigenous Studies
- INDIGST 3CC3 - Contemporary Indigenous Societies: Selected Topics
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- PHILOS 1B03 - Philosophy, Law and Society
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2YY3 - Ethics
- PHILOS 3N03 - Political Philosophy
- PHILOS 3Q03 - Philosophy of Law
- POLSCI 1AA3 - Government, Politics, and Power
- POLSCI 2D03 - Canadian Democracy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- POLSCI 3VV3 - Democratic Theory
- SCAR 3CC3 - Religion and Politics
- SOCIOL 1C03 - Canadian Society: Social Problems, Social Policy, and the Law
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- SOCIOL 2VV3 - Law and Society
- SOCIOL 3MM3 - Political Sociology

THEMATIC AREA C: HUMAN RIGHTS, SOCIAL MOVEMENTS, AND CIVIC ACTION

- ANTHROP 1AB3 - Introduction to Anthropology: Race, Religion, and Social Justice
- ANTHROP 2MA3 - Art and Activism
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- CMST 3DJ3 - Digital Justice
- CMST 3PM3 - Public Memory, Media, and African Diaspora Studies
- CMST 3RR3 - Race, Religion, and Media
- CMTYENGA 3A03 - The Art of Change
- COMMERCE 4SI3 - Innovation for Social Impact
- ENGLISH 2CC3 - Settler Colonialism and Writing in Canada
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- ENGLISH 2Z03 - Reading Environmental Humanities
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- GENDRST 1A03 - Gender, Race, Culture, Power
- GENDRST 1AA3 - Gender, Feminism and Social Justice
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HISTORY 3XX3 - Human Rights in History
- HUMAN 4SI3 - Innovation for Social Impact
- IARTS 1PA3 - Perspectives A: Arts in Society: Social Constructions of Class, Race and Gender
- INDIGST 1A03 - Introduction to Indigenous Studies
- INDIGST 2G03 - Indigenous Perspectives on Peace and Conflict
- INDIGST 3K03
- INDIGST 3N03 - Indigenous Women: Land, Rights, and Politics
- PEACJUST 1A03 - Peace, Justice, Human Rights
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3XX3 - Human Rights in History
- PHILOS 3I03 - Philosophy and Feminism
- PHILOS 3L03 - Environmental Philosophy
- PHILOS 3T03 - Philosophy and Race
- POLSCI 3KA3
- POLSCI 3PR3 - Practice of Politics
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3Y03 - Democratization and Human Rights
- SCAR 2RD3 - Religion and Diversity
- SCAR 3JJ3 - Social Justice
- SCAR 3RL3 - Religion and Law
- SOCIOL 4DD3 - Social Movements and Social Change
- SOCPSY 1Z03 - An Introduction to Social Psychology
- SOCPSY 3C03 - Regimes of Social Control
- SOCSCI 4SI3 - Innovation for Social Impact
- SOCWORK 4J03 - Social Change: Social Movements and Advocacy
- WORKLABR 2A03 - Unions in Action
- WORKLABR 2W03 - Human Rights and Social Justice
- WORKLABR 3P03 - Workers' Resistance - Past and Present

Bachelor of Health Sciences (Honours) Integrated Rehabilitation and Humanities Program

Institute of Applied Health Sciences, Room 403
https://srs.healthsci.mcmaster.ca/irh/
DIRECTOR
B.H. Vrkljan, B.A. (Hons.), M.Cl.Sc., Ph.D., O.T. Reg. (Ont.)

Program Overview

The Bachelor of Health Science (B.H.Sc.) (Honours) Integrated Rehabilitation and Humanities (IRH) undergraduate program at McMaster University is the first of its kind in Canada and globally. This unique program combines critical and foundational elements of the creative arts for which the Humanities is known with the clinical and evidence-based approaches of Rehabilitation Science. Recent evidence highlights the benefits of including arts-based approaches in the training of health professionals, which can improve their communication, reflexivity, and observation skills. Professionals who understand the complex nature of health and well-being are better positioned to address the needs of individuals and their communities.

Courses from the Faculty of Humanities address a range of topics focused on foundational knowledge necessary for understanding health. Examples include the history of medicine and healthcare, linguistics, philosophy, ethics, and other areas related to peace and cultural studies. In coursework focused on Rehabilitation Science, students will explore key underpinnings of rehabilitation practice and research, including evidence-based rehabilitation, communication, and observation skills, as well as clinical reasoning. Across all IRH courses there is a strong focus on the social determinants of health. Issues specific to equity, diversity, inclusion, and Indigenous reconciliation will be explored in the context of past and current conceptualizations of health, function, and disability, as reflected in local (provincial/national) and global approaches to quality of life and well-being. Students in the B.H.Sc. (Honours) IRH program will have experiential learning components alongside options for contributing to clinical and applied research, as well as opportunities for community engagement, including fieldwork placements.

In this degree, just over half of the content will be offered by the Faculty of Health Sciences (FHS) through the School of Rehabilitation Science and other FHS programs, just over one-third by the Faculty of Humanities, and the remaining one-sixth from other university courses.

B.H.Sc. (Honours) IRH Program Objectives

The B.H.Sc. (Honours) IRH program aims to integrate principles and courses from the Faculties of Humanities and Health Sciences (School of Rehabilitation Science) to accomplish the following objectives:

- Teach students what it means to be human at its most fundamental level, as reflected in the various aspects of humanities, including history, philosophy, literature, and the creative arts.
- Introduce students to the multiple interfaces between the humanities, health, and rehabilitation that can help them engage and transform their communities.
- Engage students in experiential learning and critical reflection that advances their understanding of the complex nature of health and well-being to ensure they have the knowledge and skills to address such complexity by combining humanities and rehabilitation perspectives.
- Prepare students for future excellence through critical thinking and collaborative problem-solving in the classroom and beyond.

  To accomplish the above objectives, the program will emphasize interprofessional interactions, knowledge-informed decision making, community engagement, experiential learning, and exposure to research.

Admissions

Admission Policy

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement but requires, as a minimum, completion of any Level 1 program with a cumulative Grade Point Average of at least 6.0, Grade 12 Biology or BIOLOGY 1P03, and submission of a supplemental application to the School of Rehabilitation Science.

Notes:

- The program has limited enrolment.
- Selection will be based on academic achievement in Level 1, alongside a supplemental application. Further details are available on the program website (Future Students - Integrated Rehabilitation & Humanities (mcmaster.ca)).
- Before choosing courses, students should be familiar with prerequisites to determine course selection in subsequent years.

Academic Regulations

Student Academic Responsibility

Students are responsible for adhering to the statement on student academic responsibility found in the *General Academic Regulations* of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases, priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in MOSAIC.

Minor

This information is directed to B.H.Sc. (Honours) IRH students who are interested in completing a minor in another subject area. A minor is not available in the B.H.Sc. (Honours) Integrated Rehabilitation and Humanities Program.

A Minor is an option available to a student enrolled in a four- or five-level program. A Minor consists of a minimum of 24 units in the Minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the Minor. A student is responsible for registering for courses to be applied towards a Minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the Minor designation. Those who have the necessary requirements may apply for recognition of that Minor when they graduate. If recognition for a Minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a Minor, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section of this Calendar.

Continuation in the Program

You must have a Grade Point Average (GPA) of at least 6.0 to continue in the program. If your GPA is 5.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once.

If your GPA is 3.5 to 5.4, you must transfer to another program for which you qualify, or you may enroll in the Bachelor of Heath Science Program as a transition student for one reviewing period. During that period, with permission, you can take B.H.Sc. IRH required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration academic advising session in the Faculty of Humanities Academic Advising. At the end of the probation period, you may apply for readmission to the B.H.Sc. (Honours) IRH Program; a minimum GPA of 6.0 is required.

If your GPA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as a transition student.

During that period, with permission, you can take B.H.Sc. IRH required courses (for which all course prerequisites have been met). Students in this situation must attend a mandatory preregistration academic advising session in the Faculty of Humanities Academic Advising. The purpose of this period is to prepare yourself for a program outside the B.H.Sc. (Honours) Program. You may be on academic probation only once.
If your GPA is less than 3.0 you may not continue at the University.
A student previously on Academic Probation who fails to achieve good standing (minimum GPA of 3.5) at a subsequent review, cannot continue at the university unless granted reinstatement. Please refer to the *General Academic Regulations* section in the undergraduate calendar.

Concurrent Certificates

Concurrent certificates are an option available to any student in an undergraduate degree program and may be completed as part of a student's elective credit. Some concurrent certificates will require a student be admitted to this option, while others may involve completion of the course requirements and declaring the certificate at the time of graduation. Students should refer to the course requirements and details available in the Certificate and Diploma Programs section of the Calendar. One concurrent certificate program is currently administered by the School of Rehabilitation Science: Concurrent Certificate in Rehabilitation Science.

Letter of Permission

Students enrolled in the B.H.Sc. - (Honours) IRH Program may apply to take courses at another university on a Letter of Permission via MOSAIC. Students must achieve a grade of at least C- to receive credit.
Students are responsible for forwarding the transcript from the other university directly to the Program Director (IAHS 403). If a grade of C- or better is attained, the transcript designation reads *T* indicating *transfer credit*, or *NC* indicating *not complete* if less than a C- grade is attained.
Courses taken at another university cannot be used to satisfy the university's minimum residence requirements, will not be included in the calculation of the Cumulative or Fall/Winter Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission.
Students must be in good standing to be eligible to take courses on a Letter of Permission.

Level of Registration

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the B.H.Sc. (Honours) IRH Program Office.

Deferred Examinations and Deferred Term Work

Students who have been granted more than one deferred examination or term-work privilege may be required by their Faculty/Program office to reduce their course load during the term in which the deferred examinations are being written. The decision on a reduced load will be made and communicated with the decision on the application for deferred examinations.

Reinstatement to the B.H.Sc. (Honours) IRH Program

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $100 fee must be submitted to the Office of the Registrar by July 15 for September entry and November 30 for January entry.
The form should explain the reasons for the student's inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician's letter documenting an illness that may have impacted upon the student's prior academic performance. Reinstatement cases will be carefully screened, and the evidence considered will include the student's academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support, and the accompanying documentation. **Reinstatement is not guaranteed.**
If students are reinstated to the University, their GPA will be re-set to 0.0 on zero units, although students may, at the discretion of the faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must complete a minimum of 60 units of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the GPA. If at any review after reinstatement the student's GPA falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Registration and Course Changes

It is the responsibility of the student to ensure that the program of work undertaken meets the requirements for the degree. It is highly recommended that you review your advisement report in MOSAIC each time you drop or add courses and seek academic counselling from the Faculty of Humanities Program Office if you have any questions. Dates for final registration and course changes appear in the Sessional Dates section of this Calendar and are enforced.

Academic Counselling

Academic counselling is available throughout the year from the Faculty of Humanities Advising Office. It is recommended that students make an appointment with an advisor from the program office if they have any questions.

Graduation

A GPA of 5.0 or greater is required for graduation. Students who successfully completed 90 units, including the first three levels of the B.H.Sc IRH program may request permission from the B.H.Sc. (Honours) IRH Program Office to transfer to graduate with a non-honours three-year B.H.Sc (exit) degree. Please refer to the General Academic Regulations section in this Calendar for additional information related to graduation.

BACHELOR OF HEALTH SCIENCES (HONOURS) INTEGRATED REHABILITATION AND HUMANITIES PROGRAM

Admission

Enrolment in this program is limited. Admission is by selection, and possession of the published minimum requirements does not guarantee admission. Selection is based on academic achievement and a supplemental application to the School of Rehabilitation Sciences. As a minimum:

- Completion of any Level 1 program
- and a cumulative GPA of at least 6.0
- and Grade 12 Biology or completion of BIOLOGY 1P03

Notes:

- The program has limited enrolment.
- Selection will be based on academic achievement in Level 1, alongside

a supplemental application. Further details are available on the program website (Future Students - Integrated Rehabilitation & Humanities (mcmaster.ca)).
- Before choosing courses, students should be familiar with prerequisites to determine course selection in the subsequent year(s).

Course Lists

COURSE LIST A (HUMANITIES)

- ART 2AA3 Introduction to the Practice of Art Therapy
- ARTHIST 2AA3
- ENGLISH 2NH3
- ENGLISH 3AA3 Theories of Gender and Sexuality
- ENGLISH 3GS3 Reading the Embodied Past: Gender and Sexuality
- ENGLISH 3NH3 Narratives of Health
- GENDRST 2AA3 Feminist Thought
- GKROMST 2MT3 Ancient Roots of Medical Terminology
- GKROMST 3MT3 Advanced Ancient Roots of Medical Terminology
- HISTORY 1Q03 History of Medicine
- HUMAN 3LM3
- LINGUIST 1A03 Introduction to Linguistics: Speaking, Signing, and Hearing
- LINGUIST 1AA3 Introduction to Linguistics: Words, Sentences, and Meaning
- LINGUIST 2L03 Phonetics
- LINGUIST 2LC3 Historical Linguistics: Language Evolution and Change
- LINGUIST 2LL3 Languages of the World and Linguistic Universals
- LINGUIST 2PH3 Phonology
- LINGUIST 2PS3 Psycholinguistics
- LINGUIST 2S03 Language and Society
- LINGUIST 2SL3 Introduction to American Sign Language
- LINGUIST 2SY3 Syntax
- LINGUIST 3AA3 Applied Linguistics
- LINGUIST 3AS3 Language and Communication in Autism Spectrum Disorder
- LINGUIST 3C03 Child Language Acquisition
- LINGUIST 3DS3 ASL and Deaf Studies
- LINGUIST 3F03 Anatomy and Physiology for Speech, Language, and Hearing
- LINGUIST 3II3 Semantics
- LINGUIST 3LA3 Introduction to Second Language Acquisition
- LINGUIST 3M03 Morphology
- LINGUIST 3NL3 Cognitive Neuroscience of Language
- LINGUIST 3P03 Pragmatics
- LINGUIST 3PG3 Introduction to Programming for Linguistics
- LINGUIST 3SL3 Intermediate American Sign Language
- LINGUIST 3TT3
- MUSIC 2MT3 Introduction to the Practice of Music Therapy
- MUSIC 2MU3 Introduction to Music Therapy Research
- PEACJUST 2B03
- PEACJUST 2LS3 Language and Society
- PEACJUST 2XX3 Social and Structural Determinants of Health
- PEACJUST 3B03 Peacebuilding and Health Initiatives
- PEACJUST 3XX3 Human Rights in History
- PHILOS 2CT3 Critical Thinking
- PHILOS 2G03 Social and Political Issues
- PHILOS 2U03 Philosophy of Health and Medicine
- PHILOS 2YY3 Ethics
- PHILOS 3C03 Advanced Bioethics
- PHILOS 3GH3 Global Health Ethics

COURSE LIST B (HEALTH SCIENCES AND OTHER PROGRAMS)

- ANTHROP 2HE3 Heritage, Economy, and Ethics
- ANTHROP 2HI3 Medical Anthropology
- ANTHROP 2U03 Plagues and People
- ANTHROP 2MA3 Art and Activism
- ANTHROP 3ET3 Anthropology of Ethics
- ANTHROP 3HH3 Globalization, Social Justice, and Human Rights
- ANTHROP 3Y03 Indigenous Community Health and Wellbeing
- ARTSSCI 3GJ3 Global Justice Inquiry
- ENVSOCTY 2HI3 Health and Place
- GLOBALZN 3A03 Globalization, Social Justice, and Human Rights
- HLTHAGE 2C03 Health Economics and its Application to Health Policy
- HLTHAGE 2GG3 Mental Health and Society
- HLTHAGE 2HI3 Health & Place
- HLTHAGE 2M03 Aging in Modern (and Post-Modern) Families
- HLTHAGE 2N03 Treatment Within the World of Mental Illness: Desperation and Debate
- HLTHAGE 3AB3 Kindred Spirits: Animals, Health and Society
- HLTHAGE 3D03 Perspectives on Disability, Chronic Illness and Aging
- HLTHAGE 3E03 Ethical Issues in Health and Aging
- HLTHAGE 3HP3 Population, Health and Aging
- HLTHAGE 3K03 Social Determinants of Population Health in Canada
- HLTHAGE 3M03 Approaches to Mental Health and Resilience
- HLTHAGE 3N03 Aging and Mental Health
- HLTHAGE 3R03 Health Inequalities
- HLTHAGE 3S03 Global Health and Environmental Policy
- HLTHAGE 3T03 Health and Incarceration
- HLTHAGE 3YY3 Indigenous Community Health and Wellbeing
- HTHSCI 2AE3 Artistic Explorations of Community Issues
- HTHSCI 2DS3 Global Health and the Complexities of Disease
- HTHSCI 2T03 Sex, Gender, and Health
- HTHSCI 3AH3 Indigenous Health
- HTHSCI 3CC3 Theater for Development
- HTHSCI 3DD6 A/B Engaging the City: An Introduction to Community-Based Research in Hamilton
- HTHSCI 3DM3 Demystifying Medicine
- HTHSCI 3DR3 Demystifying Research
- HTHSCI 3EA3 Introduction to Expressive Arts Therapy
- HTHSCI 3EE3 Biomedical Graphics
- HTHSCI 3E03 Inquiry III: Advanced Inquiry in Health Sciences
- HTHSCI 3HL3 Health Law: Current and Emerging Issues
- HTHSCI 3L03 Introduction to Bioethics
- HTHSCI 3MH3 Critical Examinations of Mental Health
- HTHSCI 3MU3 Music, Health, and the Community
- HTHSCI 3N03 Creative Writing in the Health Sciences
- HTHSCI 3PH3 The Politics of Health
- HTHSCI 3RH3 Racism and Health
- HTHSCI 3WT3 What Trauma Teaches Us: Lessons from Listening
- PSYCH 1F03 Survey of Psychology
- PSYCH 1FF3 Survey of Biological Basis of Psychology
- PSYCH 1N03 Introduction to Psychology, Neuroscience and Behaviour
- PSYCH 1NN3 Foundations of Psychology, Neuroscience and Behaviour
- PSYCH 1X03 Introduction to Psychology, Neuroscience and Behaviour
- PSYCH 1XX3 Foundations of Psychology, Neuroscience and Behaviour
- PSYCH 2AA3 Child Development
- PSYCH 2B03 Personality
- PSYCH 2H03 Human Learning and Cognition
- PSYCH 2E03 Sensory Processes
- PSYCH 2NF3 Clinical Neuropsychology
- PSYCH 3BN3 Cognitive Neuroscience
- PSYCH 3C03 Child Language Acquisition
- PSYCH 3GG3 Essentials of Developmental Psychology
- SCAR 2ER3 Religion, the Body, and the Machine

- SCAR 2HA3 Religion and Health in Antiquity
- SCAR 2M03 Death and Dying: Comparative Views
- SCAR 2N03 Death and Dying: The Western Experience
- SCAR 2WW3 Health, Healing and Religion: Western Perspectives
- SCAR 2WX3 Health, Healing and Religion: Comparative Views

COURSE LIST C (LEVEL IV COURSES ACROSS HUMANITIES, HEALTH SCIENCES, AND OTHER PROGRAMS)

- ENVSOCTY 4HD3 Disability, Society, and Environment
- ENVSOCTY 4HH3 Environment and Health
- PEACJUST 4G03 Peace Through Health Praxis
- PEACJUST 4L03 Peace, Environment, and Health
- HLTHAGE 4M03 Environment and Health
- HTHSCI 4CU3 Cultural Competency in Health Sciences
- HTHSCI 4DN3 Dance in Health and Wellness
- HTHSCI 4IH3 Indigenous Health Research
- HTHSCI 4KT3 Demystifying Science: Advanced Knowledge Translation and Science Communication
- HTHSCI 4LD3 Global Health Governance, Law, and Politics
- HTHSCI 4MS3 The Social Lives of Molecules
- HTHSCI 4NN3 Creative Writing in Health Sciences II
- HTHSCI 4PA3 Global Health Innovation
- HTHSCI 4SC3 Social Determinants of Child Health
- HTHSCI 4SR3 Global Sexual and Reproductive Health and Rights
- HTHSCI 4TE3The Teaching Hospital
- HTHSCI 4Y03 Science, Culture, and Identity
- HTHSCI 4ZZ3 Global Health Advocacy
- HISTORY 4FF3 History of Health and Medicine in the Colonial World
- HUMAN 4CM3 Cross-Cultural Mentoring and Coaching Practicum
- HUMAN 4LC3 Major Leadership Project: Theory and Practice
- HUMAN 4RM3 Boundaries and Bridges: Relationship Skills for Effective Leaders

Requirements

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses.

30 UNITS

- From the Level I program completed prior to admission into the program.

LEVEL II: 30 UNITS

21 Units

- HTHSCI 2F03 - Human Physiology and Anatomy I
- HTHSCI 2FF3 - Human Physiology and Anatomy II
- IRH 2CS3 - Communication Skills in Rehabilitation and Humanities
- IRH 2HI3 - Rehabilitation and Humanities Inquiry I
- IRH 2RM3 - Evidence-based Rehabilitation and Measurement Theory for Rehabilitation
- IRH 2ST3 - Introduction to Statistics for Rehabilitation Science
- PHILOS 2D03 - Bioethics

6 Units

- Course List A (Must be level I or II courses)

3 Units

- Electives which may include courses from Course List B

LEVEL III: 30 UNITS

9 Units

- IRH 3EP3 A/B S - Experiential-Focused Practicum
- IRH 3HI3 - Rehabilitation and Humanities Inquiry II
- IRH 3UD3 - Understanding Disability

6 Units

- Course List A (Must be level II or III courses)

6 Units

- Course List B

9 Units

- IRH 3TR3 - Selected Topics in Rehabilitation and Humanities
- Course List C
- Electives which may include courses from Course List A and B

LEVEL IV: 30 UNITS

9 Units

- IRH 4ER3 - Entrepreneurship and Commercialization in Health and Rehabilitation
- IRH 4HI3 - Rehabilitation and Humanities Inquiry III
- IRH 4IR3 - Innovations in Rehabilitation

6 Units

- IRH 4RT6 - Research Thesis Project
- Course List C

6 units

- Electives which may include courses from Course List A, B, and C

9 Units

- Course List A (Must be Level III courses)

Wilson College of Leadership & Civic Engagement

Wilson College of Leadership and Civic Engagement
Togo Salmon Hall, Room 721, extension 20500
http://wilsoncollege.mcmaster.ca/
wilsoncollege@mcmaster.ca

ACADEMIC DIRECTOR

Stephen R.G. Jones *(Acting)*, B.A. *(Cambridge)*, Ph.D. *(California-Berkeley)*

AFFILIATED FACULTY AS OF JANUARY 15, 2025

K. Lewellyn *(History)*, B.A., B.Ed. *(Queen's)*, M.A. *(Toronto)*, Ph.D. *(UBC)*
Z. Luo *(Sociology)*, B.A. *(Fudan)*, Ph.D. *(SUNY at Albany)*

STAFF

C. Arsenault/B.Kin
M. Hinic/B.A., M.A.
N. Owusu Ampofo/B.A., M.A.
D. Rasanathan/B.A.
M. Van Impe/B.A., M.Ed.

The Wilson College Combined Honours Bachelor of Arts of Leadership and Civic Studies and Another Subject offers a dynamic blend of leadership training and a secondary focus on a subject from the Faculty of Humanities or the Faculty of Social Sciences. The four-year program allows students to gain insightful education and experience in the fields of leadership and civic studies, while pursuing a second program of their choice. Throughout the program, students will engage in experiential learning, including guest lectures, hands-on projects, and co-curricular activities. All students complete a capstone project in the fourth year, which includes an un-paid work placement.
The degree is made up of a combination of Wilson-specific courses in the following three themes, taught by affiliated faculty from both Humanities and Social Sciences:

- Leadership and civic studies
- Ethics, governance, and democracy
- Justice, human rights, and communities

Degree Programs

Combined Honours Bachelor of Arts of Leadership and Civic Studies and Another Subject

After level one, all students must select a second subject from the following options for their second major. Students will then complete a set of core Wilson courses, along with approximately 36 units of work beyond Level I in their second program (normally 12 units per level in each subject). Students will apply online through Mosaic during the level II program selection window

(April) at the end of their first year to declare their second major. The combined honours options include:

FACULTY OF HUMANITIES

Cognitive Science of Language
Communication Studies
English and Cultural Studies
French
Global Peace and Social Justice
Greek and Roman Studies
History
iArts (Integrated Arts) (B.A.)
Linguistics
Media Arts
Music
Philosophy

FACULTY OF SOCIAL SCIENCES

Aging and Society
Anthropology
Economics
Environment and Society
Health and Society
Indigenous Studies
Political Science
Psychology, Neuroscience and Behaviour
Society, Culture and Religion
Sociology
Work and Labour Studies

MINORS

A Minor is an option available to all students in Wilson College. Normally students must complete a minimum of 24 units in the Minor subject. Students are responsible for ensuring that the courses taken meet the requirements for a Minor. Students who have the necessary requirements may apply for recognition of that Minor when they graduate. If granted, this recognition will be recorded on the student's transcript.

Within Wilson College, minors are available to students provided that the subject area of the Minor is not integral to the requirements of their degree program. At least 12 units (above Level 1) toward the Minor must be considered elective to the degree. At least 18 units must be completed at McMaster. A maximum of 6 units can be counted towards two separate Minors. No single course may be counted toward program requirements and two separate Minors.

Please see Minors in the General Academic Regulations section of this Calendar for further information. All courses have an enrolment capacity and Wilson College cannot guarantee registration in courses, even when all requisites have been met. Therefore, the completion of a Minor is not guaranteed.

Minors offered by Wilson College include:

- Leadership and Civic Studies

The minor in Leadership and Civic Studies is not eligible for students enrolled in the Combined Honours BA in Leadership and Civic Studies and Another Subject.

CONCURRENT & AFFILIATED CERTIFICATES

Concurrent Certificates are open to all undergraduate students at McMaster. These certificates are designed to fill a critical need for undergraduate students to learn about and develop professional skills that are highly desirable for the pursuit of graduate programs, professional programs, and employment opportunities following undergraduate studies. Normally students must complete a minimum of 15 to 18 units of course requirements. Concurrent certificates may include co-curricular activities to complement the academic requirements. Some concurrent certificates will require a student to be admitted to this option, while others may involve completion of course credit and declaring certificate completion at the time of graduation. Students should consult the relevant certificate's guidelines for admission and completion, and/or the department offering the concurrent certificate for additional information. Please see *Concurrent Certificates* in the Certificates and Diploma Programs section of this Calendar for further information.

Affiliated Certificates are offered through the Faculty of Social Sciences, in partnership with Mohawk College. See *Affiliated Certificates* in the Faculty of Social Sciences section of this Calendar for further information.

INTERNSHIP

Paid internship opportunities are available to all Wilson College students through the respective Faculties of Humanities and Social Sciences. Eligibility in each program is determined based on the student's combined program of choice. Internship placements provide students with intense work experience and allow students to explore careers, develop employability skills and make important contacts for both now and after graduation.

Students must successfully complete either HUMAN 2CP3 - Humanities Career Planning and Development or SOCSCI 2EL3 - Career Preparation in the Social Sciences to be eligible to participate in an internship.

Further details of internship options may be obtained from:

Faculty of Humanities: https://humcareers.humanities.mcmaster.ca/student-resources/internships/

Faculty of Social Sciences: https://socialsciences.careers.mcmaster.ca/internships/

Study Abroad

There are two ways to undertake international studies during Level III: (i) a Formal Exchange Program or (ii) Independent Study Abroad through a Letter of Permissions.

Students interested in applying to study abroad should consult the International Student Services Office, the Wilson College Academic Director, or an Academic Advisor approximately one year before they anticipate studying abroad (December of level II). Note: acceptance to the University-wide Exchange Programs is by application and recommendation.

For further information on the McMaster Exchange Program or Independent Study Abroad process, please visit the Faculty of Humanities or Faculty of Social Sciences regulation sections in this calendar.

Letter of Permission

Students in good academic standing, who wish to attend another university to take courses for credit toward their second subject portion of the degree, must first request a Letter of Permission in the Student Centre in Mosaic. A Letter of Permission is automatically cancelled if a student is placed on academic probation, program probation, or required to withdraw from the University. Students should take note of any conditions on the Letter of Permission that might apply, including the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the University's minimum residence requirement, will not be included in the calculation of the averages at McMaster, and therefore cannot be used to raise standing. The transcript designation will read T, indicating transfer credit has been granted, when a C- or better is attained. It is the student's responsibility to ensure that an official transcript from the host university is sent to the Academic Advising Office to receive credit for work taken.

Note: Letter of Permission is not applicable towards any WILSON courses.

Academic Regulations

Student Academic Responsibility

You are responsible for adhering to the statement on student academic responsibility found in the General Academic Regulations of this calendar.

Access to Courses

All undergraduate courses at McMaster have an enrolment capacity. The University is committed to making every effort to accommodate students in required courses so that their program of study is not extended. Unless otherwise specified, registration is on a first-come basis and in some cases, priority is given to students from particular programs or Faculties. Students will be informed of their enrolment periods and are encouraged to enroll as soon as online enrolment is available to them in the Student Centre in Mosaic.

Student Communication Responsibility

It is the student's responsibility to:

- maintain current contact information with the University, including address, phone numbers, and emergency contact information.
- use the university provided e-mail address or maintain a valid forwarding e-mail address.
- regularly check the official University communications channels. Official University communications are considered received if sent by postal mail, by fax, or by e-mail to the student's designated primary e-mail account via their @mcmaster.ca alias.
- accept that forwarded e-mails may be lost and that e-mail is considered received if sent via the student's @mcmaster.ca alias.

Wilson College is governed by the General Academic Regulations of the University (see the General Academic Regulations section in this Calendar) and the regulations described below.

Minimum Requirements for Entering and Continuing in the Program Beyond Level I

You must have a Grade Point Average (GPA) of at least 5.0 to continue in the Combined Honours B.A. program. If your GPA is 4.5 to 4.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on program probation only once. If your GPA is 3.0 to 4.4, you must transfer to another B.A. program for which you qualify from Humanities or Social Sciences. If your GPA is less than 3.0, you may not continue at the University.

Applying for Combined Honours subject in Level II

All students enrolled must submit an Application for Admission to Level II through the *Mosaic* Student Centre ("My Academics"; Program/Plan Selection application) no later than **April 30**. Students who have completed a minimum of 24 units in Level I will be eligible to apply for a Level II program (subject to meeting program requirements). The application allows students to rank four program choices, in order of preference. Students are advised to rank program choices carefully, especially when seeking admission to limited enrolment programs. If admitted to the first program choice, admission to other program choices will not be evaluated. If a student is not admitted for the first program, the second program choice will be evaluated, followed by third and then fourth choices. Students ineligible for an Honours-level program of choice will be considered for the corresponding B.A. program. Students must check the *Mosaic* Student Centre in late May/early June to confirm their program for the following Fall and Winter terms.

Transferring to Graduate with a Three-level B.A. Degree from the Combined Honours B.A. Program

Students who successfully complete at least 90 units including all expected course requirements up to the end of Level III of their second subject, with a minimum Grade Point Average (GPA) of 3.5, may request permission from the appropriate Office of the Associate Dean, Undergraduate Studies (Humanities or Social Sciences) to transfer to graduate with the corresponding three-level B.A. degree only.

Reinstatement

A student who may not continue at the University may apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the application deadline for the session. See the *Application Procedures* section of this Calendar. Reinstatement forms will be carefully reviewed, and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation and documentation of any extenuating circumstances. **Reinstatement is not automatic or guaranteed. Decisions are normally made after June 30 for September entry. The Grade Point Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. NOTE: If at a review after reinstatement the Grade Point Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months**.

Failure to comply with the conditions outlined at the time of reinstatement may result in withdrawal from the university at the following reviewing period. Reinstated students are on academic probation until they achieve good standing at the next academic review, and normally they are permitted to enrol in a maximum of 18 units of course work in the Fall/Winter term.

Course Selection and Course Changes

Students are responsible for ensuring that their course selection meets the requirements of the degree program in which they are enrolled, that prerequisites have been met, and that, where necessary, permission to take courses has been obtained. They should review their personal academic advisement report on Mosaic each time they drop, cancel or add courses, and contact an Academic Advisor if they have questions, **particularly if the advisement report shows unused courses**. Students should also be aware that changes to their course load may affect their fees and their eligibility for scholarships or sources of financial aid such as OSAP.

Overload

Normally students may not register in more than 30 units during the Fall/Winter Term. A student with outstanding deferred examinations or incomplete term work will not be permitted to overload in the following term. Students make take an overload of up to six units under the following circumstances:

- if a student has a Fall-Winter Average of at least 7.0 in the immediately preceding review period.
- if the student is registered in the final level of his/her program.

Students wishing to register in more than 12 units during the Spring/Summer term, or more than six units in either term of that term may do so only with permission. Requests to enroll in an overload of units should be directed to the Academic Director, Wilson College.

Deferred Examinations and Deferred Term Work

Students who have been granted more than one deferred examination or term-work privilege may be required by the College Office to reduce their course load during the term in which the deferred examinations are being written. The decision on reduced load will be made and communicated with the decision on the application for deferred examinations or the request for deferred term-work.

Withdrawal

Students who wish to withdraw from the University may cancel courses on *Mosaic* and must surrender their McMaster Identification Card validation sticker to the Financial Services Office to ensure the processing of any fee refunds. Students who fail to withdraw formally from any course(s) by the stated deadlines will remain registered whether or not they attend classes and will be assigned a grade.

Bachelor of Arts (Honours)

COMBINED HONOURS IN LEADERSHIP AND CIVIC STUDIES AND ANOTHER SUBJECT (B.A.)

Admission

Completion of Leadership and Civic Studies I with a Grade Point Average of at least 5.0 and satisfaction of admissions requirements for the Honours program in the other B.A. subject.

Notes

- Of the total 18 units from course lists A and B, 9 units must be from Humanities subjects and 9 units must be from Social Sciences subjects.
- Students are responsible for ensuring that they meet the prerequisites for any course they wish to take from the course lists.
- Students should note that not all courses on course lists A and B are offered every year and should plan accordingly.

Course Lists

AREA A: ETHICS, GOVERNANCE, AND DEMOCRACY

- ANTHROP 3ET3 - Ethics of Hope and Despair
- ECON 2D03 - Economic Issues
- ECON 2K03 - Economic History of Canada
- FRENCH 3HH3 - Francophone Voices in Canada
- HISTORY 2TT3 - Survey of Canadian History, 1885 to the Present
- HISTORY 3CG3 - Canadians in a Global Age, 1914 to the Present
- INDIGST 3J03 - Government, Politics, and Indigenous Peoples Rights
- PHILOS 2G03 - Social and Political Issues
- PHILOS 2YY3 - Ethics
- PHILOS 3N03 - Political Philosophy
- POLSCI 2F03 - Politics, Power and Influence in Canada
- POLSCI 2M03 - Governance, Representation, and Participation in Democracies
- POLSCI 2U03 - Public Policy and Administration
- POLSCI 3C03 - Government, Politics, and Indigenous Peoples Rights
- SCAR 3ET3 - Ethics of Hope and Despair
- SCAR 3LL3 - Being Human in the Anthropocene
- SOCIOL 2EE3 - Decolonizing Canada: Indigenous-Settler Relations
- WORKLABR 2A03 - Unions in Action
- WORKLABR 3P03 - Workers' Resistance - Past and Present

AREA B: JUSTICE, HUMAN RIGHTS, AND COMMUNITIES

- ANTHROP 2DA3 - Traditional Indigenous Ecological Knowledge
- ANTHROP 3HH3 - Think Globally, Act Locally: Globalization, Social Justice and Human Rights
- CMST 3DJ3 - Digital Justice
- CMST 3RR3 - Race, Religion, and Media
- ENGLISH 2CL3 - Canadian Literature of Dissent and Social Justice
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3GG3 - Theories of Decolonization and Resistance
- ENVSOCTY 2EI3 - Environment & Society: Challenges and Solutions
- ENVSOCTY 2EK3 - Traditional Indigenous Ecological Knowledge
- GLOBALZN 3A03 - Think Globally, Act Locally: Globalization, Social Justice, and Human Rights
- HISTORY 3XX3 - Human Rights in History
- HISTORY 3N03 - Poverty, Privilege and Protest in Canadian History
- HLTHAGE 3K03 - Social Determinants of Population Health in Canada
- IARTS 2PC3 - Perspectives C: Arts in the Community
- IBH 3BC3 - Poverty, Privilege and Protest in Canadian History
- INDIGST 2D03 - Traditional Indigenous Ecological Knowledge
- PEACJUST 2CS3 - Decolonization and Activism: Creating Social Change
- PEACJUST 3GG3 - Theories of Decolonization and Resistance
- PEACJUST 3XX3 - Human Rights in History
- POLSCI 3RF3 - The Charter of Rights and Freedoms
- POLSCI 3Y03 - Democratization and Human Rights
- SCAR 3JJ3 - Social Justice
- SOCIOL 2R03 - Perspectives on Social Inequality

Requirements

120 units total (Levels I to IV), of which 48 units may be at Level 1

30 UNITS

from

- Leadership and Civic Studies I

9 UNITS

- WILSON 2C03 - Leadership, Civic Engagement and Contemporary Communication
- WILSON 2D03 - Deconstructing Leadership: Leadership and Diversity
- CMTYENGA 2A03 - Foundations of Community Engagement

6 UNITS

- WILSON 3E03 - Future of Canada Challenges
- WILSON 3F03 - Leadership and Civic Engagement Skills and Methods

9 UNITS

from

- *Wilson College course list Area A*

(see Notes 1, 2 & 3)

9 UNITS

from

- *Wilson College course list Area B*

(see *Notes 1, 2 & 3)*

6 UNITS

- WILSON 4A06 - Civic Leadership Placement & Project

36 UNITS

- Courses specified for the other subject

15 UNITS

- Electives

LEADERSHIP AND CIVIC STUDIES I

Requirements

30 units total

Notes

- A full course load for Leadership and Civic Studies I is 30 units. (The unit value of a course is determined by the last number of the course code. 3-unit courses are normally one term in duration and offered either September to December or January to April. 6-unit A/B courses are typically taught over two terms, from September to April.)
- Students should select courses based on their academic interests and anticipated Level II program of study. Admission to the Combined Honours BA program typically requires completion of three to six units of the second subject in Level I, with an applicable Grade Point Average. Students should consult the admission statements for relevant Level II combined programs when selecting their Level I courses.

- Elective courses may be taken from other Faculties, where requisites are met.

6 units

- WILSON 1A03 - Introduction to Leadership and Civic Studies
- WILSON 1B03 - Inquiry and Contemporary Issues

18 units

from

- *Level 1 Humanities*
- *Level 1 Social Sciences*

(see Note 2)

6 units

from

- *Electives*

(see Note 3)

Course Listings

Africa and Black Diaspora Studies 517
Anthropology 517
Arabic 524
Art 525
Art History 525
Arts & Science 527
Astronomy 531
Automotive and Vehicle Tech 532
Biochemistry 534
Biology 537
Biomedical Discovery & Commercialization 541
Biophysics 542
Biosafety 543
Biotechnology 543
Cayuga 545
Chemical Biology 545
Chemical Engineering 547
Chemistry 550
Chinese 554
Civic Vitality & Democratic Engagement 555
Civil Eng Infrastructure Tech 555
Civil Engineering 556
Collaborative 559
Commerce 560
Communication Studies 573
Community Engagement 576
Computer Engineering 577
Computer Science 579
Critical Challenges 584
Data Science 584
Earth Sciences 585
Economics 587
Electrical Engineering 591
Energy Engineering Tech 593
Engineering 594
Engineering and Society Program 596
Engineering and Management Program 596
Engineering Physics 597
Engineering Technology 600
English 603
Environmental Science 609
Environment & Society 611
EXPLORE (Interdisciplinary Experiences) 616
Farsi 617
French 617
Social Work 621
Gender Studies 623
General Technology 624
German 626
Global Peace and Social Justice 628
Globalization Studies 631
Greek 631
Greek and Roman Studies 632
Health, Aging and Society 635
Health Sciences 640
Health Sciences (Engineering, Midwifery, Nursing) 655
Hebrew 656
History 657
Human Behaviour 664
Humanities 669
IBH (Integrated Business and Humanities) 671
Indigenous Studies 675
Innovation 680
INSPIRE (INSPIRE Office of Flexible Learning) . . 681
Integrated Arts 683
Integrated Biomedical Engineering and Health Sciences (IBEHS) 690
Integrated Chemical & Biomedical Engineering . 693
Integrated Civil & Biomedical Engineering 693
Integrated Electrical & Biomedical Engineering . 693
Integrated Engineering Physics & Biomedical Engineering 693
Integrated Materials & Biomedical Engineering 693
Integrated Mechanical & Biomedical Engineering 694
Integrated Mechatronics & Biomedical Engineering 694
Integrated Science 694
Integrated Software & Biomedical Engineering . 695
International Engagement 695
IRH (Integrated Rehabilitation and Humanities) . 695
Italian 696
Japanese 697
Kinesiology 698
Korean 703
Labour Studies (See Work and Labour Studies) . 704
Latin 704
Latin American and Latinx Studies at McMaster 705
Life Sciences 705
Linguistics 711
Manufacturing Technology 716
Materials 717
Mathematics 720
McMaster English Language Development 726
Mechanical Engineering 727
Mechatronics 731
Media Arts 732
Medical Physics 734
Medical Radiation Sciences 735
Midwifery 740
Molecular Biology 741
Mohawk 743
Music 743
Music Cognition 749
Neuroscience 750
NEXUS 751
NUCLST 751
Nursing 752
Ojibwe 756
Pharmacology 756
Philosophy 757
Physics 761
Psychology, Neuroscience & Behaviour 765
Political Science 768
Process Automation Technology 776
Psychology 778
Russian 782
Sanskrit 782
School for Eng Practice 783
Science 783
Science Communication 786
Smart Engineering Technology 787
Social Psychology 788
Social Sciences 790
Social Work 793
Society, Culture & Religion 795
Sociology 801
Software Engineering 807
Software Engineering General Technology 811
Software Engineering Technology 812
Spanish 814
Statistics 815
Sustainability 817
Theatre & Film 818
VSR 820
WHMIS 820
Wilson 821
Work and Labour Studies 821
Social Science 824

The courses listed in this section include all courses approved for the undergraduate curriculum for the 2025-2026 academic year. Not all courses in the approved curriculum will be offered during the year. Students are advised to refer to the course timetables available annually in Mosaic in March and June to determine which specific courses will be offered in the upcoming sessions.

Note: An **A/B** suffix appearing in a course number indicates that the course may be delivered across more than one term (see *Multi-Term Course* in the *Glossary* of this calendar). The *A/B S* suffix indicates that the course may be delivered as *either* a multi-term course or within a single term.

Effective 2023-24:

Looking for **CLASSICS** (Classics) courses?

- The subject GKROMST (Greek and Roman Studies) has replaced CLASSICS

Please use the revised subject area when searching for courses. Most courses use the same code but with the revised subject area (e.g. CLASSICS 2H03 is now known as GKROMST 2H03). Students having credit in courses using the old subject area may not take the corresponding course under the new designation.

Effective 2022-23:

Looking for **LABRST** (Labour Studies) courses?

- The subject WORKLABR (Work and Labour Studies) has replaced LABRST

Please use the revised subject area when searching for courses. Most courses use the same code but with the revised subject area (e.g. LABRST 2H03 is now known as WORKLABR 2H03). Students having credit in courses using the old subject area may not take the corresponding course under the new designation.

Africa and Black Diaspora Studies

https://aads.humanities.mcmaster.ca/
abld@mcmaster.ca

ABLD 2XX3 - SPECIAL TOPICS IN AFRICA AND BLACK DIASPORA STUDIES

An introductory course allowing for the exploration of a special topic in Africa and Black Diaspora Studies. Topics will vary from year to year.
Three hours (lecture); one term

ABLD 3A03 - CRITICAL CONTEMPORARY ISSUES IN LATIN AMERICAN AND LATINX STUDIES

This course provides in-depth exposure to critical topics, providing an interdisciplinary framework for understanding contemporary Latin America and the Latin American Diaspora. We critically address how race, ethnicity, class, gender and sexuality, politics, geography, history, colonialism, and/or environmental science intersect within the fields of Latin American Studies and Latinx Studies. We engage different mediums including peer-reviewed articles, popular media such as music and literature, and/or community publications to critically address the complexity of race, ethnicity, and identity within Latin America, and examine how the Latin American diaspora is connected with and has shaped the landscapes and environments of Canadian society. Specific topics of the course vary by instructor, depending on the needs of the program, interests of students, and emerging contemporary issues.
Lectures (three hours); one term
Registration or completion of ABLD 3CD3 or LATAM 2A03 is strongly recommended.
Cross-list(s): LATAM 3A03

ABLD 3BA3 - TOPICS IN BLACK, AFRICAN AND AFRICAN DIASPORA STUDIES

This interdisciplinary course will explore selected topics from Black, African, and African Diaspora Studies, as determined by the instructor. Topics will focus on historical and contemporary issues that connect Black and African communities around the world. This course will interrogate the intersections of race with other concepts and experiences including gender, class, sexuality, culture, power, politics, violence, and globalization.
Lectures (three hours); one term
Not open to students with credit or registration in INSPIRE 3EL3 if the topic was Topics in Black, African and African Diaspora Studies.

ABLD 3CD3 - TOPICS IN THE BLACK CARIBBEAN AND ITS DIASPORAS

This interdisciplinary course will introduce students to topics that demonstrate the Caribbean region's rich and nuanced Black histories and cultures. Focusing on short, contemporary cultural productions-including written and spoken-word poetry, short stories, music, and news publications created by Afro-Caribbean artists-this course will offer a grounding in the rich geographies, multi-linguistic traditions, and socio-political landscapes of the Black Caribbean and its diasporas in Canada, the United States, and England.
Lectures (three hours); one term
Not open to students with credit or registration in INSPIRE 3EL3 if the topic was Topics in the Black Caribbean and its Diasporas.

ABLD 4XX3 - SPECIAL TOPICS IN AFRICA AND BLACK DIASPORA STUDIES

An advanced course allowing the detailed study of selected topics in Africa and Black Diaspora Studies. Topics will vary from year to year.
Three hours (seminar); one term
Registration or completion of an ABLD course is recommended.

Anthropology

Courses in Anthropology are administered by the Department of Anthropology.
Chester New Hall, Room 524, ext. 24423
http://www.anthropology.mcmaster.ca

Department Notes

1. Not all Anthropology courses listed in this Calendar are taught every year. Students are advised to consult the department's webpage and the timetable which is published annually by the Registrar's Office to determine whether a course is offered.
2. Students seeking permission as required to enroll in an independent study course (ANTHROP 3IS3, 4G03, 4GG3) must discuss their enrollment request with a Faculty member at least 30 days prior to the term enrollment deadline and are required to submit a proposal of their intended research topic at this time.
3. To identify Anthropology courses by subdiscipline, students should refer to the lists of courses under *Anthropology Subfields* in the Department of Anthropology in the Faculty of Social Sciences section of this Calendar.

ANTHROP 1AA3 - INTRODUCTION TO ANTHROPOLOGY: SEX, FOOD AND DEATH

This course examines major issues in Anthropology in contemporary and past societies from archaeological, biological, cultural and linguistic perspectives. It will focus on sex, food, illness, death and related themes.
Lectures, discussion (three hours)
This course is required of all students wishing to receive an Interdisciplinary Minor in Food, Nutrition and Environmental Health

ANTHROP 1AB3 - INTRODUCTION TO ANTHROPOLOGY: RACE, RELIGION, AND SOCIAL JUSTICE

This course introduces students to Anthropology and its sub-disciplines through a discussion of some of the big questions and issues that anthropologists investigate in contemporary and past societies. These include issues of religion and worldview, race and racism, power and inequality, and social justice from archaeological, biological, and sociocultural perspectives. Through this course you will develop an understanding of how anthropological approaches can be used to better understand humanity, past and present.
Lectures, discussion (three hours); one term
Antirequisite(s): RELIGST 1R03, SCAR 1R03

ANTHROP 2AN3 - FOOD AND NUTRITION IN SOCIETY

Sociocultural and biological perspectives on nutrition at the community and population levels. Prehistoric, historic and contemporary food and human nutrition, emphasizing links with the environment.
Two hours (lecture), one hour (tutorial); one term
Prerequisite(s): Registration in Level II or above in any program or permission of the instructor. ANTHROP 1AA3 is recommended.
Cross-list(s): HLTHAGE 2AN3
This course is required of all students wishing to receive an Interdisciplinary Minor in Food, Nutrition and Environmental Health.

ANTHROP 2BB3 - ANCIENT MESOAMERICA: AZTECS TO ZAPOTECS

This course addresses the lifeways of ancient Mesoamerican societies through the material traces of daily and ritual practices, using diverse scientific methods and theoretical perspectives.
Lectures and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program.
Antirequisite(s): ANTHROP 2VV3 and 2W03

ANTHROP 2C03 - ARCHAEOLOGY OF ENVIRONMENTAL CRISIS AND RESPONSE

The influence of natural (drought, flood, volcanic eruption, earthquakes, and tsunamis) and human-induced (deforestation, soil exhaustion) environmental crises on long term culture histories. Examples include ancient civilizations (e.g., Egypt, Mesopotamia, Maya) and smaller-scale societies (e.g. Rapa Nui/ Easter Island).
Lecture (two hours). tutorial (one hour); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program.

ANTHROP 2D03 - 23 AND YOU: THE ARCHAEOLOGY OF YOUR DNA

In this course, students with little to no science background will learn about our genome and how past events have shaped its content. Students will learn how its code (sequence) can be used to uncover our evolutionary history, migrations, disease, and relationships to other relatives, e.g., great apes and Neanderthals. Students discuss the use/misuse of genomics in forensics, identity politics, the media and private industry.
Lectures and tutorial/computer lab(three hours); one term
Prerequisite(s): Three units of Level I Anthropology, registration in Level II or above in any program.

ANTHROP 2DA3 - TRADITIONAL INDIGENOUS ECOLOGICAL KNOWLEDGE

This course is a study of the ecological teachings of Indigenous peoples and of their relationships with the natural environment in historical and contemporary times.
Lectures and seminars (three hours); one term
Cross-lists(s): ENVSOCTY 2EK3, INDIGST 2D03
This course is administered by the Department of Indigenous Studies.

ANTHROP 2E03 - INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY

The course examines the biological and cultural basis for human variation, past and present.
Lectures (two hours), tutorial (one hour); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program
This course is required of all students enrolled in an Honours Program in Anthropology, and is a prerequisite for advanced courses in Physical Anthropology.

ANTHROP 2EE3 - SPORT AND/AS RELIGION

An examination of relationships between sport and religion, including ritual aspects of sport, connections between social collectivities and sports teams, and sport as meaning-making activity.
Three hours (lecture and discussion); one term
Cross-list(s): SCAR 2SP3
This course is administered by the Department of Religious Studies.

ANTHROP 2F03 - INTRODUCTION TO SOCIOCULTURAL ANTHROPOLOGY: LISTENING ACROSS DIFFERENCE

Students will learn about anthropology's core concepts, theories, methods, and debates. Students will reflect on their own cultural biases and enhance their understanding of, and appreciation for, human difference. Students will apply the tools of anthropology to the analysis of current social problems and imagining of alternative futures: personal and societal.
Lecture (two hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II or above in any program.

ANTHROP 2FF3 - HUMAN SKELETAL BIOLOGY AND BIOARCHAEOLOGY

Study of the human skeleton (bones and dentition) for application in archaeology and forensic anthropology. Includes determination of sex, age, stature and other individual characteristics.
Lectures, labs (three hours); one term
Prerequisite(s): Registration in an Anthropology program or permission of the instructor.

ANTHROP 2G03 - READINGS IN INDO-EUROPEAN MYTH

This course will acquaint students with the myths of Ancient Greece, Ancient India, the Kelts and the Norse. Other traditions may also be examined.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above in any program

ANTHROP 2HE3 - HERITAGE, ECONOMY, AND ETHICS

This course examines the ethics and reasons for the current heritage boom. It will be of interest to students in anthropology, public history, and museum work.

Lecture and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program

ANTHROP 2HI3 - MEDICAL ANTHROPOLOGY

This course is an introduction to the sub-discipline of medical anthropology, and cultivates an understanding of the intersection between disease, health, society, bodies, culture, and global political economy.
Lecture (three hours); one term
Antirequisite(s): ANTHROP 3HI3, 3Z03 and 3ZZ3

ANTHROP 2MA3 - ART AND ACTIVISM

Why do people summon art to mobilize against violence and oppression? This course explores how is art has historically been summoned in activism, from opposing dictatorships in Latin America to present-day political movements, such as BLM, the #metoo movement, among others. We will study why people appeal to the arts to find shelter from or mobilize against racism, sexism, and political repression. This course builds on academic scholarship, podcasts, and films, and in-class interviews with invited guests.
Lecture (two hours), tutorial (one hour); one term
Antirequisite(s): ANTHROP 3MA3
This course also includes experiential learning methods, e.g. in the form of museum visits; the creation of small exhibits, and so forth.

ANTHROP 2O03 - LOCAL AND REGIONAL NORTH AMERICAN ARCHAEOLOGY

The archaeological histories of Indigenous North America with a focus on migrations, including initial movement into the continent, patterns of local and regional environmental and cultural interaction, and social and political trends and developments. Content includes broader regional developments and local case studies, including examples from Ontario and the rest of Canada.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above in any program.

ANTHROP 2PA3 - INTRODUCTION TO ANTHROPOLOGICAL ARCHAEOLOGY

An introduction to the theory, methods and ethics of anthropological archaeology with a focus on specific problems in the human past.
Lectures, labs, discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program
This course is required of all students registered in an Honours Program in Anthropology.

ANTHROP 2PC3 - ALIENS, CURSES AND NAZIS: ARCHAEOLOGY AND HOLLYWOOD

This course uses popular representations of archaeology from Agatha Christie to Indiana Jones to critically review the discipline's practice and practitioners from past to present.
Lectures, tutorials (three hours); one term
Prerequisite(s): Registration in Level II or above in any program.

ANTHROP 2PP3 - PETS AND THEIR PEOPLE

This course explores the relationships that humans have cultivated with animals, both in the past and in the present. Topics include: domestication and the development of human/animal bonds, personhood and pets/companion animals, pets and health, the rise of celebrity pets on social media, and gendered relationships with pets, among others.
Lectures, online content (three hours)
Prerequisite: Registration in Level II or above in any program.

ANTHROP 2R03 - RELIGION, MAGIC AND WITCHCRAFT

Selected issues in the study of religion, magic and witchcraft, science and the supernatural. Perspectives from history, psychology and sociology also will be discussed.
Lectures and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program
Antirequisite(s): RELIGST 2MW3
Cross-list(s): SCAR 2MW3

ANTHROP 2RP3 - RELIGION AND POWER IN THE PAST

- critical examination of the relationship between religion, political power and warfare in a sample of prehistoric and historic states and empires.

Lectures and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program

ANTHROP 2SA3 - ENCOUNTERING THE SACRED

This course introduces ethnographic approaches to the study of Asian religions. Students will conduct their own ethnographic research on a local religious figure or community.
Three hours (lecture and discussion); one term
Cross-list(s): SCAR 2SA3
This course is administered by the Department of Religious Studies.

ANTHROP 2ST3 - SPECIAL TOPICS IN ANTHROPOLOGY - LEVEL II

Topic: TBA. The topic varies with each instructor and will focus on one of Anthropologys subdisciplines (e.g. one class may examine Sustainability, Environment, and Climate, and another focus on Futurity, Hope, and Time).
One term
Prerequisite: Registration in Level II or above in any program.
ANTHROP 2ST3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 2U03 - PLAGUES AND PEOPLE

- consideration of the role played by infectious disease in human evolution. The social and biological outcomes of major epidemics and pandemics, past and present, will be explored.

Lecture (two hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II or above in any program

ANTHROP 2WA3 - NEANDERTHALS TO PYRAMIDS: INTRODUCTION TO WORLD ARCHAEOLOGY

This course introduces students to major debates in World Archaeology, including the origins of: humanity, art, first peoples of the Americas, farming, social differentiation and state-level societies. Global case studies highlight the approaches archaeologists employ in their search for answers.
Lectures, tutorials (three hours); one term
Prerequisite(s): Registration in Level II or above in any program

ANTHROP 3AR3 - CULTURE AND RELIGION

This course introduces key theorists and theories, classic and current topics, and issues of methodology and writing in the study of religion and culture.
Two lectures, one tutorial; one term

Prerequisite(s): Registration in Level II or above in any program
Cross-list(s): SCAR 3AR3
This course is administered by the Department of Religious Studies

ANTHROP 3AS3 - ARCHAEOLOGY AND SOCIETY

- critical examination of the history of archaeology and the social and political implications of our understanding of the ancient human past.

Lectures and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology

ANTHROP 3BA3 - SPECIAL TOPICS IN BIOLOGICAL ANTHROPOLOGY

The topic varies with each instructor (e.g. one class may examine current issues on the study of the human skeleton for application in archaeology and forensic anthropology and other classes may focus on the anthropological perspective on nutrition at the population level.
Seminar (three hours); one term
Prerequisite(s): Registration in any program in Anthropology

ANTHROP 3BB3 - ANCIENT AGRICULTURE TO CRIMINAL INVESTIGATIONS: PALEOETHNOBOTANY IN PRACTICE

This course trains students in laboratory methods and interpretations of botanical evidence through hands-on practice. We explore the major classes of plant remains likely to be encountered in forensic cases and archaeological sites; identify botanical residues and organize the data to make interpretable results; and address major issues within the discipline including preservation, analytical methods, sampling, collection, and interpretation.
Three hours (lectures, discussion, and lab); one term
Prerequisite(s): ANTHROP 2PA3; and credit or registration in WHMIS 1A00. This requirement must be completed prior to the first lab.

ANTHROP 3BD3 - THE BLACK DEATH

This class studies the underlying causes and consequences of the Black Death and the second plague pandemic of 1346 -1722 across Europe and Western Asia. We consider the synergistic effects that ultimately led to the 30-70% mortality from a biological and cultural/social perspective with guest lectures from leading historians, climatologists, geneticists and rodent ecologists. What were the pandemic's origins, its root causes (biological and other) and the ultimate consequences on the socio-economic fabric of Europe? We consider the ongoing epidemics in Madagascar, South America and the American Southwest.
Lecture (two hours); tutorial (one hour); one term
Prerequisite(s): ANTHROP 2D03 or ANTHROP 2U03

ANTHROP 3CA3 - CERAMIC ANALYSIS

Examination of theories and methods used by archaeologists to analyze ceramics and understand past ceramic technologies. The class will include strong hands-on and original research components.
Three hours (lectures, labs, discussion); one term
Prerequisite(s): ANTHROP 2PA3 and credit or registration in WHMIS 1A00. This requirement must be completed prior to the first lab.
Not open to students with credit in ANTHROP 3EE3, if the topic was Ceramic Analysis.

ANTHROP 3CC6 - ARCHAEOLOGICAL FIELD SCHOOL

Field instruction in the techniques used in the excavation of an archaeological site. The course includes hands-on instruction in manual excavation methods, mapping, field recording and laboratory analysis.
Offered during the Spring/Summer term only; one term
Prerequisite(s): ANTHROP 2PA3 or an equivalent course in archaeological methods and credit or registration in WHMIS 1A00. This requirement must be completed prior to the first day of field school.
Not open to students with credit in an equivalent field school from another university.

ANTHROP 3CF3 - CLIMATE CHANGE, CHANGING FOODWAYS AND POLITICS

What is the relationship between climate change, changing foodways and politics. Why is it that agri-businesses are reporting record profits while most farms lose money? Students will consider how the combination of climate threats in global capitalism, crop failures, price spikes, displacement and migration, and how these catastrophes might be averted if agricultural innovation and changing foodways keep pace with climate change.
Seminar (three hours)
Prerequisite: ANTHROP 2F03 is recommended.

ANTHROP 3DD3 - ARCHAEOLOGY OF DEATH

The emergence and varied development of the human response to death in the ancient world, including the advent of burials, cemeteries, tombs, ritual treatments, and ongoing interactions with the dead. Focus is on the interpretation of mortuary evidence in relation to its physical, social, spiritual, and psychological dimensions.
Lectures and discussion (three hours); one term
Prerequisite(s): ANTHROP 2PA3

ANTHROP 3E03 - SPECIAL TOPICS IN ARCHAEOLOGY I

Topic: TBA
The topic varies with each instructor (e.g. one class may examine Ancient Mesoamerican Cities and another focus on The Archaeology of Hierarchy.)
Lectures and discussion (three hours); one term
Prerequisite(s): ANTHROP 2PA3

ANTHROP 3EE3 - SPECIAL TOPICS IN ARCHAEOLOGY II

Topic: TBA
The topic varies with each instructor (e.g. one class may examine Ancient Mesoamerican Cities and another may focus on The Archaeology of Hierarchy.)
Lectures and discussion (three hours); one term
Prerequisite(s): ANTHROP 2PA3

ANTHROP 3EM3 - JERICHO TO MYCENAE: EASTERN MEDITERRANEAN PREHISTORY IN CONTEXT

In this course we use Eastern Mediterranean prehistory as a venue to engage with major debates in archaeology. How does politics shape the past? What is 'behaviourally modernity'? How is power created? How can we reconstruct gender roles? How do new technologies impact societies? What makes things valuable?
Lectures and discussion (three hours)
Anti-requisite: ANTHROP 3E03 Fall 2022

ANTHROP 3ET3 - ETHICS OF HOPE AND DESPAIR

This course explores how ethical value is shaped and contested now in the face of disasters near and far. Grounded in ethnographic studies of specific ethical traditions (religious and secular), course topics may include the problem of suffering, the cultivation of virtue, and the looming climate apocalypse.
Seminar (three hours); one term
Prerequisite(s): Three units of Level I Anthropology or three units of Level I

SCAR or permission of the instructor.
Cross-list(s): SCAR 3ET3

ANTHROP 3F03 - ANTHROPOLOGY AND THE 'OTHER'

At the base of all our "conversations" for this course, who are the "Other"? Under what foundational history were/are the "Others" created and for what purposes? Who among these "Others" have speech while "others" have only noises? How intrinsic are the "Others" to the creation of the modern? How have the creation of the Others affected our emotion and our creativity, as well as undermined our imaginative horizons?
Lectures, discussion (three hours); one term
Prerequisite(s): Three units of Level II or above Anthropology or permission of the instructor. ANTHROP 2F03 is recommended.

ANTHROP 3FA3 - FORENSIC ANTHROPOLOGY

This course examines the detection, recovery, and analysis of human remains within a medico-legal context. Students will explore the role of the forensic anthropologist in the investigation of criminal cases, human rights cases, and mass disasters.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above in any program.

ANTHROP 3FF3 - KEY DEBATES IN ANDEAN ARCHAEOLOGY

This class explores debates in Andean research, from the development of religious ideologies to the origins of social hierarchy, through archaeological, ethnohistorical and ethnographic data.
Lectures and discussion (three hours); one term
Prerequisite(s): ANTHROP 2PA3
Antirequisite(s): Not open to students with credit in ANTHROP 3E03 - Special Topics in Archaeology I if the topic was Ñawpa Pacha: Key Debates in Andean Archaeology

ANTHROP 3GG3 - ANTHROPOLOGY OF CONTEMPORARY EUROPE

This course looks at the politics and cultures of contemporary Europe.
Lectures, films, discussion groups (three hours); one term.
Prerequisite(s): ANTHROP 1AA3 or 1AB3.
Antirequisite(s): ANTHRO 2CE3 Winter Term 2018

ANTHROP 3GH3 - INTERDISCIPLINARY GLOBAL HEALTH FIELD COURSE: MATERNAL AND INFANT HEALTH IN MOROCCO

An integrated linguistic, cultural, historical, and public health field school in Morocco, with a focus on maternal and infant health, womens rights, and family.
Spring; one term
Prerequisite(s): Permission of the instructor
Co-requisite(s): ARABIC 3GH3
Antirequisite(s): RELIGST 3GH3
Cross-list(s): SCAR 3GH3
Available as a study-abroad experience in the Spring only. This course is intended for students who are entering Level III or above in the following Fall/Winter Session. Students interested in this course must contact Dr. E. Amster by February 15 for application instructions. There is an additional cost associated with this course.
This course is administered by the Department of Religious Studies.

ANTHROP 3HD3 - CHILDREN'S HEALTH AND DEVELOPMENT

This course provides an overview of children's health and development from historical, contemporary, and cross-cultural perspectives. The course content will focus on children's growth and development, nutrition, and mental health in Canadian and international contexts, but students are encouraged to pursue their own research topic interests related to children's health and development.
Online; one term
Prerequisite(s): ANTHROP 1AA3 or ANTHROP 1AB3 or permission of the instructor.

ANTHROP 3HH3 - THINK GLOBALLY, ACT LOCALLY: GLOBALIZATION, SOCIAL JUSTICE AND HUMAN RIGHTS

This course examines competing theories, issues and debates relating to the promotion of social justice and human rights in a Globally interconnected world. Course concepts are animated through opportunities for experiential learning with local communities and networks.
Lectures (three hours); one term
Cross-list(s): GLOBALZN 3A03
This course is administered by the Institute on Globalization and the Human Condition.

ANTHROP 3IS3 - INDEPENDENT STUDY IN ANTHROPOLOGY

Independent study of a research problem through published materials and/or fieldwork. Please refer to Department Note 2 for details on how to obtain permission to enrol.
One term
Prerequisite(s): Registration in any program in Anthropology and permission of the instructor.
ANTHROP 3IS3 may be repeated, if on a different study, to a total of six units. See Department Note 2.

ANTHROP 3K03 - ARCHAEOLOGICAL INTERPRETATION

Techniques and methodologies in the investigation of archaeological material.
Three hours (lectures, labs and discussion); one term
Prerequisite(s): ANTHROP 2PA3 or permission of the instructor.

ANTHROP 3LA3 - LITHICS ANALYSIS

- global approach to the theories and methods used by the archaeologists to analyse stone tools and the major debates surrounding these data. The class has a strong hands on and original-research component.

Lecture and lab (three hours); one term
Prerequisite(s): ANTHROP 2PA3; and credit or registration in WHMIS 1A00. This requirement must be completed prior to the first lab.
Not open to students with credit in ANTHROP 3E03, if the topic was 'Lithics Analysis.'

ANTHROP 3LD3 - LEARNING FROM THE DEAD

This course examines the use of human remains in research, education, and cultural institutions (e.g., museums), as well as ethical considerations about their use. We will examine a wide range of topics, such as: cadavers in medical training, the dead on display, archaeological bodies (e.g., mummies), and the commercial trade of human remains.
Lectures (three hours); one term
Prerequisite(s): ANTHROP 1AA3 or ANTHROP 1AB3 or permission of the instructor.

ANTHROP 3LL3 - OF BEAUTY AND VIOLENCE

What is the place of beauty in human experience and how does it find articulation in words? Using an interdisciplinary approach, this course explores the unexpected expressions and uses of beauty in a variety of social and ethnographic contexts marked by violence.
Lecture (three hours); one term

ANTHROP 3MD3 - MATTERS OF LIFE AND DEATH

This course examines death and dying from a cross-cultural and social perspective. It asks how humans negotiate lifes finitude from a cross-cultural perspective, and how we respond via care, grief, and other responses.
Lectures and discussion (three hours)
Pre-requisite: Three units of any level Anthropology

ANTHROP 3P03 - DOING ETHNOGRAPHY: RESEARCH METHODS

This course introduces research methods utilized by sociocultural anthropologists and others in related disciplines, focusing throughout on the collection, interpretation, and presentation of ethnographic (and other) data.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in level II or above

ANTHROP 3PA3 - DISH WITH ONE SPOON HEALTH, DIET AND TRADITIONAL BOTANY

Working with traditional knowledge holders, this course will explore the relationship between ethnobotany and agricultural practice to Haudenosaunee cultural beliefs and concepts of health and wellness amongst Indigenous people living within Dish with One Spoon territory.
Lectures (2 hours), tutorial (one hour); one term
Prerequisite(s): Three units of Level I or II Indigenous Studies, Indigenous language course, or permission of the Department
Cross-lists(s): INDIGST 3P03
This course is administered by Department of Indigenous Studies

ANTHROP 3PD3 - ANTHROPOLOGICAL PERSPECTIVES AND DEBATES

This course explores themes of importance to the various sub-disciplines of Anthropology. The goal is to show how varying analytical perspectives on these broad themes produce divergent views of past and present human cultures. Students are strongly encouraged to complete this course, prior to completion of Level III.
Three hours (lectures, discussion); one term
Prerequisite(s): Three units any level Anthropology.
This course is required of all students registered in an Honours Program in Anthropology

ANTHROP 3PP3 - PALEOPATHOLOGY

The origins and evolution of human diseases and methods of identifying disease in ancient human remains.
Lectures, discussion and lab (three hours); one term
Prerequisite(s): ANTHROP 2FF3

ANTHROP 3SS3 - SACRED JOURNEYS

- study of the significance of travel in various religious traditions, focusing on shrines, pilgrimages, and the inter-relationships between secular and sacred travel.

Lectures and tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): SCAR 3EE3
This course is administered by the Department of Religious Studies.

ANTHROP 3ST3 - ANTHROPOLOGY OF POSTCOLONIAL SCIENCE AND TECHNOLOGY

This course introduces students to the interdisciplinary field of science and technology studies (STS) and postcolonial studies, with a geographic focus on Africa. We will engage scholarship and media produced by anthropologists, historians, artists, and postcolonial theorists to challenge narratives that construct the continent as a passive recipient of knowledge, projects, 'development', and technological innovations that originate in the global North. Each week, our focus will be on tracing the itineraries of a single technoscientific object, such as pharmaceuticals, water pumps, malaria bed nets, biometric technologies, mobile phones, motorbikes, soap, and no-flush toilets. We will attend to what kinds of relations, politics, emotions, and economies assemble around these objects, and explore science and place, technology and culture, traveling technologies, and the many diverse meanings, stories and politics that adhere to (post)colonial science and technology.
Lecture (three hours); one term
Prerequisite(s): Registration in level III or above in any program. ANTHROP 2F03 is recommended.

ANTHROP 3TR3 - TOURISM: SEX, SUN AND SIGHTSEEING

An exploration of the intersections between various forms of tourism (e.g. food tourism, sex tourism, heritage and archaeology tourism) with narratives of identity, inequality, colonialism, and globalization.
Lecture (three hours); one term
Prerequisite(s): Registration in Level II or above in any program.

ANTHROP 3W03 - SPECIAL TOPICS IN ANTHROPOLOGY

The topic varies with each instructor (e.g. one class may examine Current Issues in Medical Anthropology and other classes may focus on Readings in Myth or Contemporary Issues in Archaeology).
One term
Prerequisite(s): Registration in Level II or above in any program.
ANTHROP 3W03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 3X03 - ZOOARCHAEOLOGY

- practical introduction to the identification and analysis of animal bones from archaeological sites and their use in the interpretation of hunting and domestication, animal-based economies, and human-environment interactions.

Labs and discussion (three hours); one term
Prerequisite(s): ANTHROP 2PA3 and credit or registration in WHMIS 1A00. This requirement must be completed prior to the first lab.

ANTHROP 3Y03 - INDIGENOUS COMMUNITY HEALTH AND WELLBEING

- critical examination of the determinants of health in Indigenous communities, processes of community revitalization and recent government policy initiatives.

Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above in any program.
Cross-list(s): HLTHAGE 3YY3; INDIGST 3Y03

ANTHROP 4AH3 - ARCHAEOLOGY AND HERITAGE: ETHICS, POLITICS, AND PRACTICE

This course will examine the ways in which archaeology is political, and how its practice and practitioners are deeply entangled with Western values and epistemologies.
Three hours (seminar); one term
Prerequisite(s): Registration in Level III or above in any program or permission of the instructor.
Not open to students with credit in ANTHROP 4E03 if the topic was 'Archaeology and Heritage: Ethics, Politics, and Practice'.

ANTHROP 4B03 - CURRENT PROBLEMS IN SOCIOCULTURAL ANTHROPOLOGY I

Topic: TBA The topic varies with each instructor.
Three hours (seminar); one term
Prerequisite(s): Registration in any program in Anthropology or permission of the instructor
ANTHROP 4B03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4BB3 - CURRENT PROBLEMS IN SOCIOCULTURAL ANTHROPOLOGY II

As per ANTHROP 4B03.
Three hours (seminar); one term
Prerequisite(s): Registration in any program in Anthropology or permission of the instructor
ANTHROP 4BB3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4CC3 - ARCHAEOLOGY OF FOODWAYS

This course addresses the deep history of particular foodways and the diversity of foodways over time, as gleaned from archaeological residues and early historic documents.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2PA3, or permission of the instructor

ANTHROP 4CL3 - ARCHAEOLOGY OF CLIMATE CHANGE AND CULTURE

The effects of major global and regional climate change events on the histories of past cultures, emphasizing the integration of multi-disciplinary research and the nature and resolution of debates on the timing, duration, extent, and severity of climate events and their importance for understanding culture change.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2PA3 or ANTHROP 2C03

ANTHROP 4CP3 - CULTURAL POLITICS OF FOOD AND EATING

This course focuses on food and the complex field of networks, expectations, and choices that are contested, negotiated, and often unequal.
Seminar (three hours); one term
Prerequisite(s): Registration in Honours Anthropology or Level IV of any Honours program or permission of the instructor
Not open to students with credit in ANTHROP 4B03, if the topic was "Cultural Politics of Food and Eating."

ANTHROP 4DD3 - ANTHROPOLOGY OF ZOMBIES AND THE UNDEAD

This course explores ethnographic and popular culture narratives of zombies and the undead through the lens of nationalism, colonialism, race, gender and other phenomena.
Seminar (three hours); one term
Prerequisite(s): Registration in any Anthropology program or permission of the Instructor
Antirequisite(s): Students who have taken ANTHROP 4B03 or ANTHROP 4BB3 (Special Topic: Anthropology of Zombies and the Undead) cannot enroll in this class

ANTHROP 4DN3 - DIET AND NUTRITION IN BIOCULTURAL PERSPECTIVE

Study of diet and nutrition in past and contemporary populations using a biocultural approach. Focus on methods, interpretations of data and perspectives.
Lectures (three hours); one term
Prerequisite(s): ANTHROP 1AA3 or ANTHROP 1AB3
Antirequisite(s): ANTHROP 4J03, if the topic was 'Diet and Nutrition: Biocultural and Bioarchaeological Perspectives'.

ANTHROP 4E03 - ADVANCED TOPICS IN ARCHAEOLOGY I

Study at an advanced level of selected topics in the sub-discipline. Topics may change from year to year.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2PA3 or permission of the instructor

ANTHROP 4EE3 - ADVANCED TOPICS IN ARCHAEOLOGY II

As per ANTHROP 4E03; but on a different topic.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2PA3 or permission of the instructor

ANTHROP 4FF3 - DIGGING THE CITY: THE ARCHAEOLOGY OF URBANISM

What is a city? What assumptions do we bring to the study of ancient cities? And how have archaeologists traced urban histories and the topographies of city spaces? This seminar investigates the archaeology of early cities, focusing on ancient urban spaces and their relationship to our understanding of issues of the modern city.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2PA3, or with permission of the instructor

ANTHROP 4G03 - INDEPENDENT RESEARCH I

Independent study of a research problem through published materials and/or fieldwork. Study may include participation in faculty research, student-initiated practica or library research. Please refer to Department Note 2 for details on how to obtain permission to enrol.
One term
Prerequisite(s): Registration in any program in Anthropology and permission of the instructor
See Department Note 2.

ANTHROP 4GG3 - INDEPENDENT RESEARCH II

As per ANTHROP 4G03, but on a different topic.
One term
Prerequisite(s): Registration in any program in Anthropology and permission of the instructor
See Department Note 2.

ANTHROP 4HF3 - ARCHAEOLOGY OF HUNTER-FISHER-GATHERERS

Worldwide examples of the varied and changing technologies and organizational strategies ancient foraging cultures used to extract a living before the advent of farming, with a focus on patterns of environmental interaction, resource intensification, landscape modification, local and regional warfare.
Three hours (seminar); one term
Prerequisite(s): ANTHROP 2PA3 or permission of the instructor

ANTHROP 4J03 - ADVANCED TOPICS IN BIOLOGICAL ANTHROPOLOGY I

Topic: TBA
Study at an advanced level of selected topics within the subdiscipline. Topics may change from year to year.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2E03 or permission of the instructor
ANTHROP 4J03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4JJ3 - ADVANCED TOPICS IN BIOLOGICAL ANTHROPOLOGY II

Topic: TBA
Study at an advanced level of selected topics within the subdiscipline. Topics may change from year to year.
Three hours (seminar); one term
Prerequisite(s): ANTHROP 2E03 or permission of the instructor
ANTHROP 4JJ3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4KK3 - THE ARCHAEOLOGY OF NEANDERTHALS AND OTHER EARLY HUMANS

This seminar engages with the archaeology of our early ancestors, asking: what constitutes humanity, when did we become 'modern', and what became of the Neanderthals?
Three hour seminar; one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program or permission of the Instructor.

ANTHROP 4LL3 - CRITICAL GLOBAL HEALTH

Global health constitutes a diversity of actors, institutions, and projects that mobilize immense resources, interventions, and technologies to address complex health issues across the globe. This seminar exposes students to the theories, methodologies, and approaches adopted by anthropologists and others who critically examine how global health reconfigures local practices, politics, and concepts of care, health, and the body. Drawing on case studies from across the globe and using an interdisciplinary lens, the seminar analyzes initiatives, projects, and interventions carried out to improve health in the past and present. We will critically examine topics including: histories of global health, social, cultural, and political aspects of health, health governance, measuring and quantifying health, global health technologies, cultures and ethics of global health research, health and human rights, and global healths development paradigms. Students will come to appreciate the value of anthropologically informed perspectives and methods for understanding the social, cultural, economic, and political complexities of improving health.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV in any program or permission of the instructor
Antirequisite(s): Not open to students with credit in ANTHROP 4B03, if the topic was "Critical Global Health"

ANTHROP 4MM3 - BORDERS, MIGRATION, REFUGE

This course addresses historical and contemporary instances of displacement and forced migration. Although grounded in ethnographic studies, it takes an interdisciplinary approach to topics which may include border politics, humanitarianism, hospitality, and the figure of the refugee.
Seminar (three hours); one term
Prerequisite(s): Three units of level I Anthropology or permission of the instructor
Antirequisite: Not open to students with credit in ANTHROP 4B03 or 4BB3, if the topic was "Borders, Migration, Refuge"

ANTHROP 4NE3 - NARRATIVE, ETHNOGRAPHY, WRITING

Writing is at the heart of much of what anthropologists do. Writing up field notes and creating ethnographic narratives are tools of the trade, but so are testimonials, memoirs, poems, blogs, and novels. This course is a hands-on guide for generating and sharing practical strategies for writing in various ethnographic genres.
This course centers on ethnographic writing as ethics and a craft. It provides a step-to-step guide to producing descriptions of places, times, selves, and others.
Seminar (three hours); one term
Prerequisite: Three units any level Anthropology.

ANTHROP 4R03 - ADVANCED BIOARCHAEOLOGY AND SKELETAL BIOLOGY

The analysis of human skeletal samples, including such topics as paleopathology, paleodemography, paleonutrition and biological distance analyses.
Lectures and discussion (three hours); one term
Prerequisite(s): ANTHROP 2FF3 or permission of the instructor

ANTHROP 4S03 - THE ANTHROPOLOGY OF INFECTIOUS DISEASE

The critical examination of the role of infectious diseases in the course of human history and contemporary society. Self-directed learning format.
Seminar (three hours); one term
Prerequisite(s): ANTHROP 2E03 and registration in Level IV Honours Anthropology; or permission of the instructor

ANTHROP 4SG3 - THE SECRET OF THE GIFT

This course will challenge your understanding of the gift. Is there a pure gift? What is some of the violence underneath the gift development, philanthropy, and so on? How have capitalist economies accumulated a great deficit in their balancing of historical accounts, when there is an immense debt handing over the *world*, a violent history replicated but hidden in the cleanliness of the present?
Lectures and discussions (three hours); one term
Prerequisite(s): ANTHROP 2F03 or three units of Level III or above Anthropology or permission of the instructor
Antirequisite(s): ANTHROP 4B03, if taken during the Fall term in 2010

Arabic

ARABIC 2AA3 - INTRODUCTION TO MODERN STANDARD ARABIC

This course introduces students to the basics of the Arabic language. Students will learn the Arabic alphabet, pronunciation, verb forms, and basic grammar.

No prior knowledge of Arabic is necessary.
Lectures and discussion (four hours); one term
Cross-list(s): SCAR 2AA3
NOTE: this course is intended for students with no background in Arabic. Students with any background in Arabic must contact the instructor for an assessment/placement test to determine the appropriate level of Arabic: 2AA3, 2AR3, or 3AA3.

ARABIC 2AR3 - INTRODUCTION TO MODERN STANDARD ARABIC II

This course builds on the fundamentals covered in ARABIC 2AA3/SCAR 2AA3. The course expands students' vocabulary, reading fluency, composition skills, and knowledge of grammatical constructions.
Lectures and tutorials (four hours); one term
Cross-list(s): SCAR 2AR3
Prerequisite(s): One of ARABIC 2AA3, RELIGST 2AA3, SCAR 2AA3

ARABIC 3AA3 - INTERMEDIATE MODERN STANDARD ARABIC

An intermediate course enhancing skills in modern standard Arabic through reading materials with the goal of improving comprehension in both written and spoken contexts.
Four hours (lectures); one term
Prerequisite(s): One of ARABIC 2AR3, RELIGST 2AR3, or SCAR 2AR3; or permission of the instructor
Cross-list(s): SCAR 3AA3

ARABIC 3GH3 - SPOKEN MOROCCAN ARABIC

Intensive training in spoken Moroccan Arabic through Latin transliteration and communicative method; no previous Arabic necessary. Students will learn to ask questions and understand responses, express facts and opinions, and engage in basic conversations in Moroccan Arabic.
Spring; one term
Prerequisite(s): Permission of the instructor
Co-requisite(s): ANTHROP 3GH3, HISTORY 3GH3, RELIGST 3GH3
Available as a study abroad experience in the Spring only. This course is intended for students who are entering Level III or above in the following Fall/Winter Session. Students interested in this course must contact Dr. E. Amster by February 15 for application instructions. There is an additional cost associated with this course.

Art

Courses in Art are administered by the School of the Arts.
Togo Salmon Hall, Room 414, ext. 27671
http://sota.mcmaster.ca/

ART 1TI3 - MAKING ART AND UNDERSTANDING TECHNOLOGY & IMAGES

Creating art utilizing a range of media, including digital tools and creative research, students will gain an understanding of art, images and cultures of technology. No previous artistic experience is required.
Three hours; one term
Prerequisite(s): Registration in Level I or above of any program
Antirequisite(s): Enrolment in or completion of MMEDIA 2B06
Not open to students in any iArts program.

ART 1UI3 - MAKING ART AND UNDERSTANDING IMAGES

Utilizing sketchbooks, collage, colour exercises and creative research, students will gain widely applicable skills in manipulating and analyzing the communicative power of images. No previous artistic experience is required.
Three hours; one term
Prerequisite(s): Registration in Level I or above of any program
Not open to students in any iArts program.

ART 2AA3 - INTRODUCTION TO THE PRACTICE OF ART THERAPY

An introduction to the practice of art therapy, with an overview of its history, the diversity of its applications within psychodynamic, solution-focused, cognitive behavioural principles, embodiment theory, and its clinical implications including neuroscience, mindfulness, Post-traumatic Stress Disorder, and pain management.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2AA3 May be offered virtually or online
May be offered virtually or online.

ART 2ER3 - ENVIRONMENTALLY RESPONSIBLE ART

This course focuses on environmentally sustainable studio production with a comprehensive approach that promotes understanding of how materials are manufactured, why they are selected, how they are used and implications of disposal. A student-centered approach will determine media use and concepts.
Three hours; one term
Offered on a rotational basis
Prerequisite(s): Credit or registration in WHMIS 1A00 (successful completion of WHMIS is required prior to studio work) and registration in Level II or above of any program. Recommended for students pursuing a Minor in Sustainability.
Cross-list(s): IARTS 2ER3

ART 4AR3 - ADVANCED RESEARCH AND PRESENTATION STRATEGIES

This course refines and focuses research strategies relevant to the student's artistic direction. Problem-solving sessions focus on connecting exploration and presentation options to ideas. Attendance at Visiting Artist lectures is mandatory.
Three hours; one term
Prerequisite(s): ART 3D03; ART 3TS3 and ART 3GS3, or ART 3GS6 A/B; and registration in Level IV Honours Studio Art program.

Art History

Courses in Art History are administered by the School of the Arts.
Togo Salmon Hall, Room 414, ext. 27671
http://sota.humanities.mcmaster.ca/

ARTHIST 2B03 - GREEK ART

The architecture, sculpture and painting of the Greek and Hellenistic worlds.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): GKROMST 2B03
Antirequisite(s): CLASSICS 2B03
This course is administered by the Department of Greek and Roman Studies. Offered on rotation.

ARTHIST 2C03 - ROMAN ART

The architecture, sculpture and painting of the Roman world.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): GKROMST 2C03
Antirequisite(s): CLASSICS 2C03
This course is administered by the Department of Greek and Roman Studies.
Offered on rotation.

ARTHIST 2DF3 - FROM THE GUILLOTINE TO THE EIFFEL TOWER, FRANCE 1789-1889

This course examines art and the narrative of revolutionary politics in France from c.1789 to 1889. We will study the politics of visual artists and government representatives. During a period of history that is often celebrated for the rise of democracy, we will investigate those who were marginalized and excluded as a result of racial, gender, sexual and other identities.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HISTORY 2DF3
This course is administered by the Department of History.

ARTHIST 2FA3 - FILM ANALYSIS

An introduction to an interrelated set of approaches to film study, all of which are defined by their attention to the filmic text and which provide students with a grasp of the fundamentals of film analysis.
Two lectures, plus one weekly film screening; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): THTRFLM 2FA3, IARTS 2FA3
This course is administered by the Theatre & Film Studies program.

ARTHIST 2H03 - AESTHETICS

An introduction to some main theories of the nature of art, criticism and the place of art in life and society.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): CMST 2O03
Cross-list(s): PHILOS 2H03
This course is administered by the Department of Philosophy.
Offered in alternate years.

ARTHIST 2Y03 - PERFORMANCE, ART AND VISUAL CULTURE IN THE MIDDLE EAST

An introduction to aspects of the history of the arts and visual cultures in the Middle East, with special attention to religious and cultural diversities and with an emphasis on intercultural transmissions.
Three hours (lectures and tutorial); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): IARTS 2ME3
Offered on a rotational basis.

ARTHIST 2Z03 - PERFORMANCE, ART AND VISUAL CULTURE IN EAST AND SOUTH ASIA

An introduction to aspects of the history of the arts and performance in South and East Asia from antiquity to modern times, highlighting the impact of cultural exchange and diversity.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): IARTS 2AS3
Offered on a rotational basis.

ARTHIST 3BB3 - INDIGENOUS ART AND VISUAL CULTURE IN CANADA

- survey of visual art production by Indigenous Canadian communities since c. 1960 including: painting, sculpture, installation, film/video, performance and hip hop. The course focuses on Indigenous (First Nations, Métis and Inuit) artistic practices and examines how those are framed in the context of museums in the 21st century.

Three hour lecture; one term
Prerequisite(s): One of IARTS 1PA3, IARTS 1PB3, INDIGST 1A03, INDIGST 1AA3, INDIGST 1B03 and registration in Level II or above of any program; or registration in Level III or above of any Art History program or Honours Studio Art; or permission of the instructor.
Cross-list(s): IARTS 3IA3, INDIGST 3F03

ARTHIST 3DF3 - ART AND POLITICS IN SECOND EMPIRE FRANCE

This course examines the intersections of politics and visual culture in France 1852-1870 and critical issues related to photography, painting, sculpture, printmaking, architecture and the Universal Expositions of 1855 and 1867.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ARTHIST 3J03
Cross-list(s): HISTORY 3DF3
This course is administered by the Department of History.

ARTHIST 3FL3 - EARLY CINEMA HISTORY

An introduction to the history of narrative film from its beginnings to the Second World War. It focuses on narrative cinema's development from aesthetic, social, technological and economic perspectives while also touching on a selected number of issues in film theory.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2FL3, THTRFLM 2FF3
Cross-list(s): IARTS 3EC3, THTRFLM 3FF3

ARTHIST 3Q03 - COLOURS OF THE WORLD

The experience of colour is fundamental to living in our world. This course examines some aspects of the social, economic, political and cultural production and use of colours in different cultures.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program.
Cross-list(s): IARTS 3CW3
Offered on a rotational basis. Consult the Master Timetable for offerings.

ARTHIST 3QQ3 - GREEK SANCTUARIES

Ancient Greek sanctuaries and their social and political context. Topics will include architecture and art, as well as activities such as sacrifice, athletic games healing and oracular consultation.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): GKROMST 3Q03
Antirequisite(s): CLASSICS 3Q03
Alternates with ARTHIST 3SS3 (GKROMST 3S03).
This course is administered by the Department of Greek and Roman Studies.

ARTHIST 3SS3 - POMPEII, HERCULANEUM, AND OSTIA

The archaeology of three cities in Italy (Pompeii, Herculaneum, Ostia) will be examined, with a focus on urbanism, public space, and domestic architecture and decoration.
Three lectures; one term
Prerequisite(s): One of CLASSICS or GKROMST 1A03, 2BB3, 2CC3, 2LC3, 2LD3 or ARTHIST 2B03 or 2C03, and registration in Level II or above of any program
Cross-list(s): GKROMST 3S03
Antirequisite(s): CLASSICS 3S03
Alternates with ARTHIST 3QQ3 (GKROMST 3Q03).
This course is administered by the Department of Greek and Roman Studies.

ARTHIST 3XX3 - CINEMA HISTORY FROM WWII

An exploration of narrative film from 1941 to the present day, incorporating a study of a variety of narrative cinema styles. Theoretical issues will include questions of cinema's relationships to other art forms, narrative, genre and authorship.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CMST 3XX3
Cross-list(s): IARTS 3CH3, THTRFLM 3L03

ARTHIST 3Z03 - INTERCULTURAL ARTS ALONG THE SILK ROAD

An examination of how both textural and material resources reveal the pluralistic achievements in the arts by peoples of different cultures and worldviews along the Silk Road at different times, and at how the deeply embedded practices inform today's cultural production in Eurasia.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): IARTS 3SR3
Offered on a rotational basis. Consult the Master Timetable for offerings.

ARTHIST 4AP3 - CONTEMPORARY ART PRACTICES OF INTERVENTION, PERFORMANCE AND CONCEPTUAL ART

Students will explore and develop and understanding of how 20th century provocations of Dadaism, Fluxus, and Feminist art impact and resonate with contemporary art practices in the 21st century. The course will also examine how the canon of Euro-Western art erased and de-valued work by Indigenous, Black, and Artists of Colour. Departing from a chronological approach to studying art history, the course is structured around issues and/or concepts that dynamically intersect historical and contemporary practices. The course is designed as an interdisciplinary arts-based seminar course, involving readings, lectures, and class discussions, but also field trips, arts-based activities, and collaborative experiential learning.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any program.
Cross-list(s): IARTS 4AP3
Antirequisite(s): ART 4AP3

ARTHIST 4LP3 - THE CULTURAL HISTORY OF PARIS, 1789-1914

Topics to be examined include: developments in architecture and city planning; the conservation of historic buildings and monuments; cultural institutions such as museums and art exhibitions; and the impact of gender, race and economics on experiences and concepts of identity in France's capital.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of any Honours program in Art or Art History
Cross-list(s): HISTORY 4LP3
Departmental permission required. This course is administered by the Department of History and students should apply using seminar ballots that will be available from the History Department following Reading Week.

ARTHIST 4O06 A/B - THESIS

Supervised study of a problem in the history of art of special interest to the student.
Tutorials; two terms
Prerequisite(s): Registration in Level IV of any Honours program in Art History; and a grade of at least A- in a previous course in the chosen field; and permission of the School of the Arts

ARTHIST 4Z03 - GENDER AND THE TEXTILE ARTS

This seminar will critically examine issues related to changes in the art and technology of textile-making and ornamentation of various cultures at different time periods: visuality, materiality, function, power, wealth, usage, taste, distribution, and especially, gender.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or above in any program.
Cross-list(s): IARTS 4Z03
Offered on a rotational basis. Consult the Master Timetable for offerings.

Arts & Science

Courses in Arts & Science are administered by the Arts & Science Program.
L.R. Wilson Hall, Room 3038, ext. 24655, 23153
http://artsci.mcmaster.ca

Notes

1. Prerequisites: Except where otherwise noted, a prerequisite for all Level I, II, III and IV Arts & Science courses is registration in the Arts & Science Program.
2. Limited Enrolment: Enrolment in Level I of the Arts & Science Program is limited to approximately 70 students.

ARTSSCI 1A03 - PRACTICES OF KNOWLEDGE

An examination of significant themes in intellectual history through a reading of major works in philosophy and literature that shed light on the conceptual foundations of contemporary life.
Three hours; one term
Prerequisite(s): Registration in Level I of the Arts & Science Program

ARTSSCI 1AA3 - CONTEMPORARY INDIGENOUS STUDIES

This course will explore the relationship between Indigenous peoples and mainstream society in the 20th century with regard to governmental policy, land claims, economic development, and self-determination.
Three hours; one term
Prerequisite(s): Registration in Level I of the Arts & Science Program
Cross-list(s): INDIGST 1AA3
This course is administered by the Indigenous Studies Department.

ARTSSCI 1B03 - WRITING

This course aims to develop students' ability to use language in written communication, with a focus on academic writing in particular. Students will develop their writing skills through assignments and activities that ask them to produce, analyze and reflect on written work in a range of genres.

Three hours; one term
Prerequisite(s): Registration in Level I of the Arts & Science Program

ARTSSCI 1BB3 - ARGUMENTATION

This course provides students with some of the conceptual tools needed to recognize, understand, evaluate, formulate, and attack arguments. Students will have the opportunity to develop such skills in their oral and written work.
Three hours; one term
Prerequisite(s): Registration in Level I of the Arts & Science Program

ARTSSCI 1C06 A/B - GLOBAL CHALLENGES INQUIRY

This inquiry course, designed to develop skills basic to the systematic, evidence-based investigation of public issues, focuses on substantial global challenges and injustices, as well as on means of working toward positive social change.
Three hours; two terms
Prerequisite(s): Registration in Level I of the Arts & Science Program

ARTSSCI 1D06 A/B - CALCULUS

This course aims to provide a thorough understanding of the principles and major applications of differential and integral calculus of functions of one variable, as well as an introduction to multivariate calculus and differential equations.
Lectures (three hours), tutorial (one hour), lab (one hour); two terms
Prerequisite(s): Registration in Level I of the Arts & Science Program
Antirequisite(s): MATH 1A03,1AA3, 1LS3, MATH 1LT3, 1X03, 1XX3, 1ZA3, 1ZB3
ARTSSCI 1D06 A/B serves as a prerequisite for all courses for which MATH 1AA3 (or equivalent) is a prerequisite.

ARTSSCI 2A06 A/B - SOCIAL AND POLITICAL THOUGHT

Development of social and political thought, with an emphasis on the question of justice, community, and the concept of "the human," in the writings of a wide range of thinkers, from Plato, Locke, Wollstonecraft, and Marx to Butler, Foucault, Audra Simpson, and Cornel West.
Three hours; two terms
Prerequisite(s): Registration in Level II of the Arts & Science Program

ARTSSCI 2D06 A/B - PHYSICS

This course explores many of the great concepts of physics in a quantitative way. Beginning with Newtonian mechanics, it moves into Einstein's relativity, wave phenomena, atomic physics, quantum mechanics and cosmology. Selected laboratory projects will be carried out.
Lecture (three hours), tutorial (one hour); two terms
Prerequisite(s): Registration in Level II of the Arts & Science Program

ARTSSCI 2E03 - ECONOMICS: PRINCIPLES AND POLICY

An introduction to the core principles of economics with the objective of helping students to apply economic reasoning to issues that are central to modern societies, such as: the role of government in a market-oriented setting; equity and efficiency; growth and the environment; and fiscal and monetary stability.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II of the Arts & Science Program
Antirequisite(s): Not open to students who have completed both ECON 1B03 and ECON 1BB3.

ARTSSCI 2R03 - APPLIED STATISTICAL INFERENCE

Inferential statistics, with an emphasis on applications. Topics include data description, graphical methods, probability, confidence intervals, hypothesis testing, one-way ANOVA, analysis of categorical data, regression and correlation. Use of a statistics software package.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II of the Arts & Science Program
Antirequisite(s): STATS 2B03, STATS 2MB3

ARTSSCI 3B03 - TECHNOLOGY AND SOCIETY I

The Culture of Technology. Technological practices and approaches are studied as cultural activities in the contexts of beliefs, philosophies, values and social structures both past and present.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 3BB3 - TECHNOLOGY AND SOCIETY II

The course will explore the extent to which technology controls our lives - including at work, at home, and in politics - and how different groups in society are affected and how they can respond.
Three hours; one term.
Prerequisite(s): Registration in Level III or above of the Arts & Science Program
Antirequisite(s): WORKLABR 2K03

ARTSSCI 3C03 - CODING INQUIRY

This course focuses on computer programming as both a technical and a social practice. Students will have an opportunity to learn and apply basic coding skills; to consider the intersections between coding and user experience; and to explore ways in which software design might contribute to addressing (or exacerbating) social challenges.
Three hours; one term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program
Not open to students with credit in ARTSSCI 4ST3, if the topic was Where Game Design Meets Culture: A Critical Dive into Videogames

ARTSSCI 3CL3 - THEATRE, SELF, AND SOCIAL DEVELOPMENT

Theatre skills are life skills. Class exercises, creative work, and online discussions will allow students to explore the practice and ethics of Applied Drama and to learn how theatre can be used as a tool for social development and change.
Three hours; one term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program

ARTSSCI 3CU3 - ALUMNI EXPERIENCE INQUIRY

Using an inquiry methodology, and through interaction with graduates of the Arts & Science program, students will explore the practical applications of an interdisciplinary degree. The professional experiences of alumni will inform and supplement an exploration of complex and multifaceted issues related to the relationships between interdisciplinary education, work, and life.
Three hours; one term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program

ARTSSCI 3EH3 - EXPLORING HAMILTON INQUIRY

This course encourages students to ask questions and explore topics focused on the City of Hamilton, Ontario. Through the exploration of Hamilton from a number of disciplinary perspectives, including cultural, economic, and geological, students will have an opportunity to gain insight into the city that McMaster University calls home. This course will include excursions during class time and may require small fees for travel.
Three hours; one term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program.

ARTSSCI 3F03 - EXPERIENTIAL PROJECT IN TEACHING AND LEARNING

This course allows students to explore in depth an issue related to teaching and learning in higher education under the supervision of McMaster faculty and/or staff affiliated with the Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (MacPherson Institute). Students may propose research questions of their own or contribute to the development of existing initiatives within the MacPherson Institute. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
One term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program and permission of the Arts & Science Program.

ARTSSCI 3GJ3 - GLOBAL JUSTICE INQUIRY

Using an inquiry methodology, students will explore issues pertaining to global justice through an interdisciplinary lens.
Three hours; one term
Prerequisite(s): Registration in Level III or above

ARTSSCI 3RL3 - RELIGION AND LAW

The notion of law has deep roots in religious thought and writing. This course will survey the historical development of law in the western world in connection with various religious traditions, with a focus on Judaism and Christianity. It will also address some contemporary issues and tensions between religion and law in pluralistic, secular societies.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level III and above of the Arts & Science Program
Cross-list(s): SCAR 3RL3
This course is administered by the Department of Religious Studies.

ARTSSCI 3S03 - THE EAST ASIAN RELIGIOUS TRADITION

Readings of East Asian texts in translation will centre around themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.
Lecture (two hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level III and above of the Arts & Science Program
Cross-list(s): SCAR 3S03
Antirequisite(s): RELIGST 3S03
This course is administered by the Department of Religious Studies.

ARTSSCI 3TR3 - TREES AND THEIR HISTORIES

Inspired by the trees on McMaster's campus, this course examines trees and their significance in history and the present through multiple lenses including: biology; colonial and economic histories; visual, material, and performing arts practices; indigenous and environmental studies; poetry, prose, and psychology.
Three hours; one term
Prerequisite(s): Registration in Level II or above of the Arts & Science Program
Cross-list(s): HISTORY 3TR3
This course is administered by the Department of History.

ARTSSCI 3X03 - INDIVIDUAL STUDY

This course consists of study under the supervision of a McMaster faculty member. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
One term
Prerequisite(s): Registration in Level III and above of the Arts & Science Program and permission of the Arts & Science Program

ARTSSCI 4A06 A/B - INDIVIDUAL STUDY

This course consists of study under the supervision of a McMaster faculty member. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
Two terms
Prerequisite(s): Registration in Level IV of the Arts & Science Program and permission of the Arts & Science Program

ARTSSCI 4A09 A/B - INDIVIDUAL STUDY

The same as ARTSSCI 4A06 A/B S but based on more extensive study. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
Two terms
Prerequisite(s): Registration in Level IV of the Arts & Science Program and permission of the Arts & Science Program

ARTSSCI 4C06 A/B - THESIS

This course consists of original research under the supervision of a McMaster faculty member. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
Two terms
Prerequisite(s): Registration in Level IV of the Arts & Science Program and permission of the Arts & Science Program

ARTSSCI 4C09 A/B - THESIS

The same as ARTSSCI 4C06 A/B but based on more extensive research. Proposal form and deadlines are available on the Arts & Science Program website https://artsci.mcmaster.ca.
Two terms
Prerequisite(s): Registration in Level IV of the Arts & Science Program and permission of the Arts & Science Program

ARTSSCI 4CB3 - EDUCATION INQUIRY

Students will have the opportunity in this course to use an inquiry-based approach to focus on social, cultural, political, and economic issues that influence and are influenced by education.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4CD3 - RESEARCH AND CREATIVE WRITING

The course exposes students to creative writing that is grounded in research. It also invites students to explore ways in which research findings might be disseminated through creative expression.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program.

ARTSSCI 4CF3 - HOW SCIENCE SPEAKS TO POWER

- case study approach is used to examine how science is shaped by politics and how science advice is filtered by political processes. Possible case studies include Mad Cow disease, the ozone hole, and genetically modified foods.

Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program, an Honours Biology program, or the Honours Integrated Science, Biology Concentration program.

ARTSSCI 4CI3 - DIVERSITY AND HUMAN RIGHTS INQUIRY

This course explores issues of diversity and the role of human rights protection regimes in both Canadian and international contexts.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4CP3 - MEDIA INQUIRY

This course considers media texts and industries as social and political entities, taking up theoretical and analytical perspectives, political economy of the media, news media, and entertainment media and their cultural effects.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4CT3 - MEDICAL HUMANITIES INQUIRY

This course exposes students to the rapidly developing international field known as medical humanities. It explores the interconnections between health, medicine, the arts, and the humanities, with a particular focus on issues of medical ethics and narrative in medicine.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4DS3 - DIGITAL SOCIETY AND PUBLIC POLICY

This course explores the challenges to public policy posed by an increasingly digital society and its advances in areas such as artificial intelligence, quantum computing, blockchain, 3D printing, robotics, and the Internet of Things.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4EP3 - ENVIRONMENTAL POLICY INQUIRY

This course provides a critical analysis of the relationship between public policymaking and environmental issues. Students will engage in critical discussion of a range of literature that has direct bearing on explaining how environmental issues, scientific evidence, and the policy process converge. The course also includes a current policy case study designed to help students gain further insight into how course themes and concepts unfold in reality.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4GS3 - THEORIES FROM THE GLOBAL SOUTH

An examination of social and political theory from thinkers, activists, and/or movements from the Global South. The course focuses on the work of a single theorist or small selection of theorists determined by the instructor annually.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program
Not open to students with credit in ARTSSCI 4ST3, if the topic was Gandhi's Politics

ARTSSCI 4HS3 - HISTORY OF SCIENCE INQUIRY

An exploration of theoretical questions and case studies from the history and sociology of science. Students will undertake inquiry projects on selected topics and present their work to the class.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4LI3 - LITERATURE INQUIRY I

As the first of two offerings dedicated to the interactive process of literary study, the course encourages students to participate in fresh, open-minded, and careful reading of literary works in various forms, and to claim for themselves the relevance of literary engagement as a practice of knowledge. The course can be taken on its own or paired with ARTSSCI 4LT3.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4LT3 - LITERATURE INQUIRY II

As the second of two offerings dedicated to the interactive process of literary study, the course encourages students to participate in fresh, open-minded, and careful reading of literary works in various forms, and to claim for themselves the relevance of literary engagement as a practice of knowledge. The course can be taken on its own or paired with ARTSSCI 4LI3.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

ARTSSCI 4MB3 - BEAUTY AND TRUTH IN MATHEMATICS AND SCIENCES

This course explores the relationship between beauty and truth in mathematics and the sciences. Drawing on texts by philosophers and scientists from various eras and fields of expertise, it considers issues such as the nature of beauty and truth and the intellectual role of pleasure.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program
Not open to students with credit in ARTSSCI 4ST3, if the topic was Beauty and Truth in Mathematics and Sciences

ARTSSCI 4MN1 - LOCAL EXPLORATIONS

An experiential learning course, which offers students the opportunity to explore issues of local significance and global relevance. Students may pursue independent study options or, when available, participate in assorted modules.

Details are available on the Arts & Science Program website https://artsci.mcmaster.ca.
One term
Prerequisite(s): Registration in the Arts & Science Program and permission of the Arts & Science Program
This course is evaluated on a Pass/Fail basis. Some experiential learning opportunities may require a fee to cover costs of travel and other logistics. ARTSSCI 4MN1 may be repeated, if on a different topic.

ARTSSCI 4MN2 - MOVEMENT AND INTEGRATION

This course brings together Arts & Science students and international exchange students to assess the experience of movement away from familiar terrain and reflect critically on ways of integrating that experiential learning into their lives as an ongoing practice of reflective, intentional living.
One term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program or as an international exchange student; and permission of the Arts & Science Program.
This course is evaluated on a Pass/Fail basis. International exchange students may pair ARTSSCI 4MN2 with ARTSSCI 4MN1, by permission, to attain 3 total units.

ARTSSCI 4ST3 - SELECTED TOPICS IN INQUIRY

Topics will vary from year to year in accordance with student interests and faculty availability. Students should consult the Arts & Science Program for information on topics to be offered.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program
ARTSSCI 4ST3 may be repeated, if on a different topic.

ARTSSCI 4VC3 - VISUAL CULTURE INQUIRY

This course allows students to explore the ways in which images and other visual texts intersect with issues of social concern. Drawing from a range of disciplinary perspectives, it considers histories, theories, and practices of the visual, and provides students with an opportunity to conduct self-directed, creative inquiry into visual culture.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program

Astronomy

Courses in Astronomy are administered by the Department of Physics and Astronomy.
A.N. Bourns Science Building, Room 241, ext. 24559
http://www.physics.mcmaster.ca/

Department Notes

1. The Department reserves the right to withdraw a Level III or IV course which is not specifically required in a Physics program if the registration falls below ten.
2. Students in Level III or IV of Physics programs will find a number of relevant electives among the offerings of the Department of Biology, the Department of Engineering Physics and the School of Earth, Environment & Society.
3. Courses in Physics and Astronomy are not open to students registered in the Bachelor of Technology program.

Courses

If no prerequisite is listed, the course is open.

ASTRON 1F03 - INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS

Topics include orbital motion, electromagnetic radiation, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe.
Three hours (lectures, web module) one tutorial; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03
Antirequisite(s): PHYSICS 1F03

ASTRON 2A03 - PERSPECTIVES ON INDIGENOUS AND EUROCENTRIC ASTRONOMY

An introduction to the intersection between Indigenous and Eurocentric/Western astronomy, particularly as it relates to naked-eye observations of the night sky; using astronomy as a gateway to learn more about Indigenous culture, history, and the process of decolonization and reconciliation.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): INDIGST 2N03

ASTRON 2B03 - THE BIG QUESTIONS

Ultimate questions in modern science are surveyed with emphasis on physical sciences: origin of space-time, elements and structure in the cosmos (stars, planets, galaxies).
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

ASTRON 2E03 - PLANETARY ASTRONOMY

Physical and mathematical foundation of planetary astronomy. Historical development of ideas about the solar system. A modern view of the planets; the origin and evolution of the solar system and planets around other stars.
Three lectures; one term
Prerequisite(s): One of ARTSSCI 2D06 A/B, PHYSICS 1A03, 1C03, 1D03, 1V03; and one of ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B

ASTRON 3X03 - GALAXIES AND COSMOLOGY

Stellar populations, star formation and the interstellar medium in galaxies. The Milky Way Galaxy; normal and active galaxies and large scale structure in the universe; observational and theoretical cosmology.
Three lectures, occasional lab periods; one term
Prerequisite(s): Six units from Level II PHYSICS, PHYSICS 1E03, ENGPHYS 2A04, 2H04, 2P04, 2QM3
Alternates with ASTRON 3Y03.

ASTRON 3Y03 - STELLAR STRUCTURE

The physics of stellar interiors. The main sequence and the life cycle of a star. Stellar evolution, including white dwarfs, neutron stars, and black holes.
Three lectures; one term
Prerequisite(s): Six units from Level II PHYSICS, PHYSICS 1E03, ENGPHYS 2A04, 2H04, 2P04, 2QM3. DATASCI 2G03 (or PHYSICS 2G03) is strongly recommended.
Alternates with ASTRON 3X03.

ASTRON 4X03 - DATA ANALYSIS PROJECT COURSE

- project-based course covering the basics of modern scientific data acquisition, mining and analysis, including observational astronomy techniques. Students will complete a series of projects in data analysis

using experimental data covering topics such as the fundamentals of image reduction and analysis, time-series analysis, photometry and spectroscopy.

Lectures, laboratory/tutorial; one term

Prerequisite(s): One of COMPSCI 1MD3, DATASCI 2G03 (or PHYSICS 2G03, MATH 1MP3; and registration in Level III or above in any program offered by the Faculty of Science.

Antirequisite(s): DATASCI 4X03

May be offered in alternate years.

ASTRON 5X03 A/B S - GRADUATE TOPICS IN ASTROPHYSICS

This course allows an undergraduate student to take any two of the astrophysics graduate-level courses (1.5 units) offered by the Department of Physics and Astronomy excluding PHYSICS 760 and 761.

May be completed over one or two terms

Prerequisite(s): Credit or registration in ASTRON 3X03 and ASTRON 3Y03; and permission of the instructor

Undergraduate students will be required to meet all academic obligations of this graduate-level course offering.

ASTRON 5X03 may be repeated, if on different graduate level topics.

Automotive and Vehicle Tech

Courses in Automotive and Vehicle Technology are administered by the Bachelor of Technology Program.

Engineering Technology Building (ETB), Room 509, ext. 20195

http://mybtechdegree.ca

Note

For the Four-Year Program, registration is only permitted for courses of the same level in which the student is registered, unless otherwise specified.

AUTOTECH 2AC3 - ADVANCED CAD

Parametric solid modeling for parts with complex geometry. Wireframe and complex surfaces. Multi-component assemblies with kinematic constraints. Fitting and kinematic animations for assemblies. Simulation analysis on solid models.

One lab (four hours); second term

Prerequisite(s): AUTOTECH 2AE3, 2CD3, and registration in level II or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 2AE3 - DESIGN OF MACHINE ELEMENTS

Stress and strain; load analysis; failure prediction; impact; fatigue; lubrication and sliding bearings; rolling bearings; shafts and associated parts; gears; fasteners; disassemble and reassemble vehicle systems.

Three lectures, one lab (three hours); first term

Prerequisite(s): ENGTECH 1ME3, 1PH3, and registration in level II or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 2CD3 - COMPUTER AIDED DESIGN

Two-dimensional drafting: drawing environment and commands, drafting settings, drawing editing, plotting output, dimensioning, orthographic projections and views, sectional and auxiliary views. Three-dimensional solid modeling: parts, assemblies, 2D drawings generation.

One lecture, one lab (two hours); first term

Prerequisite(s): Registration in level II or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 2MT3 - STRUCTURE AND PROPERTIES OF MATERIALS

Physical and mechanical properties of materials via tensile, impact and hardness tests and microscopic examination. Modification of properties using heat treatment and plastic deformation. Application and selection of metals and alloys, ceramics, polymers and composites to the automotive industry, including corrosion prevention. Mechanics of materials such as stress transformations, principal stresses and deflection.

Three lectures, one lab (three hours); first term

Prerequisite(s): ENGTECH 1CH3, 1ME3, 1PH3, and registration in level II or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 2TS3 - THERMODYNAMICS AND HEAT TRANSFER

Thermodynamic principles; heat engines; gas turbine cycles; air conditioning; conductive, convective and radiative heat transfer, heat transfer coefficients, heat exchangers, vehicle thermal management components and systems.

Three lectures, one lab (three hours); second term

Prerequisite(s): AUTOTECH 2AE3; ENGTECH 1CH3, 1MT3, 1PH3, and registration in level II or above of the Automotive andVehicle Engineering Technology Co-op program.

AUTOTECH 3AE3 - AUTOMOTIVE SYSTEMS AND INTEGRATIONS

Spark ignition engines; diesel engines, ignition systems, emission control devices, computers and on-board diagnostics; clutches; manual and automatic transmissions and transaxles; driveline; steering systems; suspension systems; brakes; tires and wheels; case studies.

Three lectures, one lab (two hours); first term

Prerequisite(s): AUTOTECH 2AE3, and registration in level III or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 3AV3 - ELECTRIC AND HYBRID VEHICLES

Alternate vehicular power systems: electric hybrid and fuel cell technology; electric propulsion systems and electric storage systems; current and future vehicular powertrain design and control principles for electric vehicles, for series, parallel and complex hybrid vehicles, for fuel cell vehicles; regenerative braking

Three lectures, one lab (three hours every other week); first term

Prerequisite(s): AUTOTECH 3AE3, 3CT3, and registration in level III of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 3CT3 - CONTROL THEORY

Analysis and design of closed loop control systems course to include: control system characteristics and performance, stability analysis, system types and performance improvement, digital control systems, compensation, filtering and motion control system analysis and tuning.

Three lectures, one lab (three hours every other week); first term

Prerequisite(s): ENGTECH 1EL3, 2MT3, and registration in level III or above of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 3MP3 - MANUFACTURING PROCESSES AND SYSTEMS

Metal-casting processes and equipment; forming and shaping processes and equipment for metals, ceramics and plastics; material-removal processes and machines; joining processes and equipment; surface technology; engineering metrology and instrumentation.

Three lectures, one lab (two hours); first term

Prerequisite(s): AUTOTECH 2AC3, 2AE3, 2CD3, 2MT3, 3AE3 and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 3MV3 - MECHATRONICS

Sensors and actuators: analysis, selection and implementation. Programmable logic controllers. Ladder logic and sequential programming. Micro-controller analysis, implementation, and programming. Communication interfaces. Case studies of mechatronic systems, simulation, and testing.
Three lectures, one lab (three hours); first term
Prerequisite(s): AUTOTECH 3CT3, ENGTECH 1CP3, 1PR3, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 3TS3 - FLUID MECHANICS

Fluid statics; forces on submerged and floating bodies; kinematics of flow and Bernoulli's equations; dimensional analysis and similarity; flow in closed conduits. Automotive turbomachines, fluid flow around bodies, lift and drag minimization by proper vehicle design.
Three lectures, one lab (two hours every other week); first term
Prerequisite(s): AUTOTECH 2AE3, 2TS3, and registration in level III or above of the Automotive and Vehicle Engineering Technology Co-op program.
Antirequisite(s): ENGTECH 4TF3

AUTOTECH 3VD3 - MECHANICAL VIBRATIONS

Single degree of freedom systems; free vibration; harmonically excited vibration; vibration under general forcing conditions; two degree of freedom systems; multi-degree of freedom systems; natural frequencies and mode shapes; vibration control; vehicle oscillations.
Three lectures, one lab (two hours every other week); first term
Prerequisite(s): AUTOTECH 3AE3, 3CT3, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4AE3 - INTERNAL COMBUSTION ENGINES

Internal combustion engine operating characteristics; engine cycles; air and fuel induction; fluid motion within combustion chamber; heat transfer in engines; friction and lubrication.
Three lectures, one lab (two hours every other week); second term
Prerequisite(s): AUTOTECH 2TS3, 3AE3 and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4AT3 - CONCEPTUAL DESIGN OF ELECTRIC AND HYBRID VEHICLES

Problem based learning course in which groups of students research, discuss, and implement conceptual design aspects of electric or hybrid electric vehicles for modern transportation approaches. The engineering and business aspects of vehicle design are analyzed from the vehicle technical specifications phase to various levels of automation.
Three lectures; first term
Prerequisite(s): AUTOTECH 3AE3, 3AV3, 4EC3, ENGTECH 4EE0, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4BE3 - BATTERY ENERGY STORAGE SYSTEMS

Comprehensive exploration of batteries and their critical role in applications with focus on electric vehicles. Analysis of intricacies of model battery characteristics and in-depth understanding of cell characterization and battery pack modeling. The essential aspect of Battery Management Systems with insights into their design and operation is also covered.
Three lectures (3 hours per week); 1 lab (3 hours every other week)
Prerequisite(s): AUTOTECH 2TS3, 3CT3 and Level III in the Automotive and Vehicle Engineering Technology Co-op program

AUTOTECH 4CI3 - ROBOTICS AND COMPUTER INTEGRATED MANUFACTURING

Manufacturing planning; flexible manufacturing systems; CIM and quality; emerging CIM technologies; vision systems; robotics; workspace analysis; homogeneous transformation; angle and axis of rotation; Euler angles; manipulator kinematics; trajectories planning; displacement and velocity analyses; Jacobian matrix; redundant sensing of manipulators; manipulator statics; singularities; robot programming.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): AUTOTECH 2AC3, 3AE3, ENGTECH 1CP3, ENGTECH 4EE0, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program
Antirequisite(s): MANTECH 4RM3

AUTOTECH 4DV3 - VEHICLE DYNAMICS

Acceleration performance; braking performance; aerodynamics and rolling resistance; ride; tires; steady-state cornering; suspensions; steering systems; rollover.
Three lectures, one lab (two hours every other week); first term
Prerequisite(s): AUTOTECH 3VD3, 4MS3; ENGTECH 4EE0, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4EC3 - ELECTRICAL AND ELECTRONICS CONTROL SYSTEMS

Intelligent vehicles; vehicle controllers, protocols buses and applications areas such as chassis, steering, braking, traction and stability control etc; and safety critical systems.
Three lectures, one lab (three hours); second term
Prerequisite(s): AUTOTECH 3CT3, 3MV3, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4MS3 - KINEMATIC AND DYNAMIC MODELLING AND SIMULATION

Kinematic and dynamics of rigid bodies; multi-body dynamic modelling and simulation of automotive dynamics; multi-body systems simulation software; modelling of the full vehicle; complex multi-body dynamic models.
Three lectures, one lab (three hours); second term
Prerequisite(s): AUTOTECH 3VD3, ENGTECH 3FE3 and one of ENGTECH 2MS3 or 3MN3, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.

AUTOTECH 4TR1 - CAPSTONE DESIGN I

This course requires students to research, design, develop, and implement an independent project and Capstone Design II. The project plan and a model developed will be documented as a technical report and presented in a seminar.
One tutorial, one lab (two hours); second term
Prerequisite(s): AUTOTECH 2AC3, 3AV3, 3MV3, 3VD3, GENTECH 3MT3, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.
Cannot be taken concurrently with any co-op work term course.

AUTOTECH 4TR3 - CAPSTONE DESIGN II

This course is a continuation of AUTOTECH 4TR1 and it requires the students to conduct further research, modify/refine project design, develop and implement the independent project proposal submitted as a part of the Capstone Design I course load. The project will be documented as a technical report and presented in a seminar.
One tutorial, one lab (three hours); first term
Prerequisite(s): AUTOTECH 3MP3, 4EC3, 4MS3, 4TR1, ENGTECH 4EE0, and registration in level IV of the Automotive and Vehicle Engineering Technology Co-op program.
Cannot be taken concurrently with any co-op work term course.

Biochemistry

Courses in Biochemistry are administered by the Department of Biochemistry and Biomedical Sciences.
Health Sciences Centre, Room 4H30, ext. 22059
https://biochem.healthsci.mcmaster.ca/
Courses
If no prerequisite is listed, the course is open.

BIOCHEM 1MM3 - FROM MOLECULES TO MEDICINE: UNLOCKING BIOCHEMICAL SECRETS IN HEALTH

In this course students will embark on a journey through the molecular mysteries that shape human health and provide a window into the world of biomedical science. The course will explore how tiny molecules and cells hold the keys to understanding and treating diseases. Content will be focused in three main areas: microbiology, metabolism, and cancer. Topics include antibiotics, vaccines, and stem cells. Students will become familiar with biomedical research and how scientific discoveries are transforming medicine.
Two lectures, one term
Prerequisite(s): Grade 12U Biology recommended but not required.

BIOCHEM 2B03 - NUCLEIC ACID STRUCTURE AND FUNCTION

Fundamental concepts and experimental methods in studying both DNA and RNA. Nature of genetic information and its storage. Molecular basis of replication, transcription and translation. Students will be required to participate in a seminar outside of regular class hours.
Three lectures; one term
Prerequisite(s): Credit or registration in one of CHEMBIO 2OA3, 2OG3, CHEM 2OA3, 2OG3, and credit or registration in one of CHEMBIO 2OB3, 2OD3, CHEM 2OB3, 2OD3, and registration in an Honours Biochemistry, Honours Chemical Biology, Honours Molecular Biology and Genetics, or Honours Neuroscience program; or registration in Honours Arts & Science and Biochemistry or Honours Medical and Biological Physics
Antirequisite(s): BIOCHEM 3G03

BIOCHEM 2BB3 - PROTEIN STRUCTURE AND ENZYME FUNCTION

Fundamental concepts and experimental methods in studying structures of proteins, including membrane proteins. Nature of enzyme catalysis. Introduction to enzyme kinetics and mechanism. Three lectures; one term
Prerequisite(s): Credit or registration in one of CHEMBIO 2OA3, 2OG3, CHEM 2OA3, 2OG3, and credit or registration in one of CHEMBIO 2OB3, 2OD3, CHEM 2OB3, 2D03, and registration in an Honours Biochemistry, Honours Chemical Biology, Honours Molecular Biology and Genetics or Honours Neuroscience program; or registration in Honours Arts & Science and Biochemistry or Honours Medical and Biological Physics
Antirequisite(s): BIOCHEM 3G03

BIOCHEM 2EE3 - METABOLISM AND PHYSIOLOGICAL CHEMISTRY

- brief introduction to proteins, enzymes and gene expression followed by a more detailed treatment of energy and intermediary metabolism with emphasis on physiological chemistry.

On-line, web modules; one term
Prerequisite(s): One of CHEMBIO 2OA3, 2OG3, CHEM 2BA3, 2E03, 2OA3, 2OC3, 2OG3, HTHSCI 2D06 A/B, 2E03; or credit or registration in BIOPHYS 2S03 and registration in Honours Medical and Biological Physics (B.Sc.)
Antirequisite(s): BIOCHEM 3D03, LIFESCI 2EE3
Not open to students registered in an Honours Biochemistry or Honours Chemical Biology (B.Sc.) program.

BIOCHEM 2L06 A/B - INQUIRY IN BIOCHEMICAL TECHNIQUES

An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops, with a focus on how to search the primary literature, prepare and deliver written and oral presentations.
Two lectures, one lab or workshop (three hours); two terms
Prerequisite(s): Credit or registration in BIOCHEM 2B03, 2BB3, BIOSAFE 1BS0(or HTHSCI 1BS0) and registration in Honours Biochemistry or Honours Medical and Biological Physics (B.Sc.) or Honours Arts & Science and Biochemistry.
BIOSAFE 1BS0 (or HTHSCI 1BS0) must be completed prior to the first lab.

BIOCHEM 3A03 - BIOCHEMICAL RESEARCH PRACTICE

- one-term research project undertaken in a biochemistry laboratory during the fall, winter, spring or summer term which requires the submission of a formal report. Students are responsible to arrange a suitable project, location and agreement of the supervisor. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Prerequisite(s): BIOCHEM 2L06 A/B; and registration in an Honours Biochemistry program; and permission of the Department
Antirequisite(s): BIOCHEM 3LA3, 3R06 A/B
May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.
Not open to students with credit or registration in ISCI 2A18 A/B.

BIOCHEM 3AB3 - ANTIBIOTICS ARE THE CORNERSTONE OF MEDICINE

This course explores the history of antibiotic discovery and the influence of these drugs on modern medicine. We will explore the array of antibiotic classes that are currently employed in the clinic; the methods through which our current antibiotics were discovered; next-generation methods to identify novel antibiotics; and mechanisms to overcome the economic disincentives that limit antibiotic discovery and development by for-profit entities.
Two lectures (one hour), one tutorial (one hour); one term
Prerequisite: One of CHEM 2OA3, 2OC3, 2OG3, CHEMBIO 2OA3, 2OG3; and one of BIOCHEM 2BB3, 2EE3, BIOCHEM 3G03, HTHSCI 2E03

BIOCHEM 3BP3 - PRACTICAL BIOINFORMATICS IN THE GENOMICS ERA

Introduction to bioinformatics theory, tools, and practice with an emphasis upon high-throughput DNA sequencing technologies. Areas of emphasis

include gene sequence analysis, functional prediction, genome assembly and annotation, gene expression analysis, gene regulation analysis, genome databases, and microbial genomics. Includes introduction to the command line, software development, and cloud computing.
Two lectures, one tutorial; one term
Prerequisite(s): One of BIOCHEM 2B03, 3G03, BIOLOGY 2C03, MOLBIOL 2C03

BIOCHEM 3CB3 - EMERGING DISCOVERY IN CELL BIOLOGY

Students will critically evaluate and present primary manuscripts in basic cellular biology and cellular biochemistry on theme areas related to the endoplasmic reticulum and ER stress, intracellular protein trafficking, and cytoskeleton actin and tubulin.
Three hours (lectures); one term
Prerequisite: BIOCHEM 2B03 and 2BB3; or BIOCHEM 2EE3 and 3G03
Antirequisite(s): BIOCHEM 3EE3

BIOCHEM 3D03 - METABOLISM AND REGULATION

Principles of bioenergetics. Major pathways for carbohydrates and lipids in energy production. Photosynthesis. Nitrogen metabolism. Biosynthesis of small biomolecules. Integration and regulation of metabolic activities.
Three lectures; one term
Prerequisite(s): BIOCHEM 2BB3; or BIOCHEM 3G03 and registration in Honours Chemical Biology (B.Sc.) or Honours Medical and Biological Physics (B.Sc.)
Antirequisite(s): BIOCHEM 2EE3

BIOCHEM 3G03 - PROTEINS AND NUCLEIC ACIDS

Chemical and conformational properties of proteins and relationships to their function including regulation of enzyme activity. Chemical and physical structure of DNA and RNA relevant to biological function.
Three lectures; one term
Prerequisite(s): One of BIOPHYS 2A03, CHEM 2BA3, 2OA3, 2OC3, 2E03, 2OG3, CHEMBIO 2OA3, 2OG3, HTHSCI 2D06 A/B, 2E03, LIFESCI 2BP3 or registration in Honours Medical and Biological Physics (B.Sc.) or Honours Chemical Biology (B.Sc) or Honours Biology and Pharmacology Co-op (B.H.Sc.); or credit or registration in CHEM 2OA3 and registration in Biomedical Discovery and Commercialization (B.H.Sc.). Completion of at least Grade 12 Biology is strongly recommended.
Antirequisite(s): BIOCHEM 2B03, 2BB3
Not open to students registered in an Honours Biochemistry program

BIOCHEM 3GN3 - BIOCHEMICAL AND MOLECULAR FOUNDATIONS OF GENETICS

This course is designed to provide students with a comprehensive understanding of the biochemical and molecular mechanisms underlying genetic flow of information, gene structure, functionality, and inheritance mechanisms. Students will also be introduced to applied genomics and explore its practical applications in studying biological and biomedical phenomenon from metabolism, to development, and cancer.
Lectures (two hours), Tutorial (one hour); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03; or ISCI 1A24 A/B; and registration in an Honours Biochemistry program.

BIOCHEM 3H03 - CLINICAL BIOCHEMISTRY

An outline of clinical chemistry; its relation to disease and relevance to health care.
Three lectures; one term
Prerequisite(s): Credit or registration in one of BIOCHEM 2EE3, 3D03, HTHSCI 2D06 A/B or 2E03

BIOCHEM 3LA3 - ADVANCED BIOCHEMISTRY TECHNIQUES

Laboratory course focusing on module-based advanced biochemistry techniques such as protein purification and analysis using Fast Protein Liquid Chromatography (FPLC) and Immunodetection techniques, CRISPR-Cas9, quantitative PCR, cell culture techniques, etc.
One lecture (two hours), one lab (three hours); one term
Prerequisite(s): Registration in Level III Honours Biochemistry - Biomedical Research Specialization; or registration in a Level III Honours Biochemistry program and permission of the department
Antirequisite(s): BIOCHEM 3A03, 3R06

BIOCHEM 3LT3 - FUNDAMENTAL AND APPLIED BIOCHEMICAL TECHNIQUES

Laboratory course that will introduce fundamental and applied biochemical techniques. Lab sessions will explore molecular biology and protein methods with an emphasis on advanced techniques such as qPCR and cell-culture.
One lecture (two hours), one lab (three hours); one term
Prerequisite(s): Registration in Level III Honours Biochemistry or registration in a Chemical Engineering and Bioengineering program, or permission of the Department
Antirequisite(s): BIOCHEM 2L06 A/B, 3LA3
Note: This course is restricted to Level III Honours Biochemistry (B.H.Sc.) transfer and Chemical Engineering and Bioengineering students

BIOCHEM 3MI3 - MICROBIAL INTERACTIONS

This course examines how interactions with bacteria influence all cellular life on earth. Topics include conflict and collaboration between bacteria, host-pathogen and host-symbiont interactions, and biological innovations arising from battles between bacteria and bacteriophages.
Two lectures, one tutorial; one term
Prerequisite(s): BIOCHEM 2B03 and one of BIOCHEM 2BB3, BIOLOGY 2B03, 2C03, 2EE3; or BIOCHEM 3G03

BIOCHEM 3R03 - CLINICAL RESEARCH PROJECT

- one-term research project undertaken under the supervision of a Faculty of Health Sciences research supervisor during the fall, winter or summer term which requires the submission of a formal report. Project may involve clinical research, systematic reviews, and meta-analyses. Students are responsible to arrange a suitable project, location and agreement of the supervisor. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Prerequisite(s): BIOCHEM 2L06 A/B or credit or registration in BIOCHEM 3LT3; and permission of the Department.
May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.

BIOCHEM 3R06 A/B S - RESEARCH PROJECT

- project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. Assessment is based on laboratory work, and a final report. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Prerequisite(s): Registration in an Honours Biochemistry or Biomedical Discovery and Commercialization program. Permission of the Department is required.

Antirequisite(s): BIOCHEM 3A03, 3LA3, 3P03, ISCI 2A18 A/B, 3A12 A/B
Consent of the Department is required. May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.

BIOCHEM 3Z03 - STRUCTURAL DETERMINATION AND ANALYSIS OF MACROMOLECULES

Introduction to methods used in the determination of protein and macromolecular structures, which include x-ray crystallography, electron microscopy and small-angle x-ray scattering. Interpretation of protein structure data with practical emphasis on solving structures by x-ray crystallography.
Three hours; one term
Prerequisite(s): One of BIOCHEM 2BB3 or BIOCHEM 3G03 and registration in Level III or above of any Honours program

BIOCHEM 4C03 - INQUIRY IN BIOCHEMISTRY

Broader aspects of biochemistry such as those relating to food, drugs, health and environment discussed in small groups. Group and individual projects, seminars and lectures as appropriate to the subject matter.
Three hours; one term
Prerequisite(s): Registration in Level IV or above of an Honours Biochemistry program
Antirequisite(s): BIOCHEM 4B06 A/B, 4F09 A/B, 4P03, 4R12 A/B, 4T15 A/B, 4Z03, ISCI 4A12 A/B

BIOCHEM 4E03 - GENE REGULATION IN STEM CELLS AND DEVELOPMENT

This course will explore elements of the biochemistry and molecular controls of human cells using both cancer and human stem cells to illustrate key differences in human medicine and biology from other systems. Given the human-focused lens, course content will also include social, ethical, and commercial aspects as it relates to human health using stem cells for regenerative medicine and cancer therapy in patients. Three hours; one term
Prerequisite(s): BIOCHEM 2B03; or one of MOLBIOL 3B03, 3M03; or HTHSCI 2D06 A/B or HTHSCI 2E03

BIOCHEM 4F09 A/B - SENIOR THESIS

- thesis based on a major research project supervised by a member of the Department of Biochemistry and Biomedical Sciences. The results will also be presented to the Department in a seminar. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Occasional tutorial (one hour); two terms
Prerequisite(s): BIOCHEM 2L06 A/B and registration in Level IV or above of an Honours Biochemistry program
Permission of the Department is required.
Antirequisite(s): BIOCHEM 4C03
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course. May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.

BIOCHEM 4H03 - BIOTECHNOLOGY AND DRUG DISCOVERY

Selected topics on genomics, proteomics and bioinformatics illustrating the modern application of molecular biology and biochemistry to pharmaceutical and other research.
One session (three hours); one term
Prerequisite(s): Credit or registration in BIOCHEM 3D03; or BIOCHEM 3G03 and registration in a Chemical Engineering program; or BIOCHEM 2EE3 and BIOCHEM 3G03
Antirequisite(s): BIOMEDDC 3B06 A/B

BIOCHEM 4J03 - IMMUNOLOGICAL PRINCIPLES IN PRACTICE

This advanced course applies problem-based learning to immunological problems. Topics concern development of immunoassays, resistance to infection and immunity in health and disease.
Three hours, one term.
Prerequisite(s): HTHSCI 3I03 or BIOTECH 3IV3; or permission of the instructor
Antirequisite(s): MOLBIOL 4J03
Cross-list(s): HTHSCI 4J03
This course is administered by the Honours Health Sciences Program.

BIOCHEM 4M03 - CELLULAR AND INTEGRATED METABOLISM

Study of nutritional biochemistry and the regulation of metabolism; the role of specific nutrients in functional processes of the body in health and disease.
Three lectures; one term
Prerequisite(s): BIOCHEM 3D03; or BIOCHEM 2EE3 and 3G03; or HTHSCI 2D06 A/B or 2E03

BIOCHEM 4N03 - MOLECULAR MEMBRANE BIOLOGY

Properties and structures of membranes, molecular components of biological membranes and their interactions, strategies for signal transduction cascades, hormones, receptors.
Three lectures; one term
Prerequisite(s): Credit or registration in BIOCHEM 3D03; or BIOCHEM 2EE3 and BIOCHEM 3G03; or one of HTHSCI 2D06 A/B, HTHSCI 2E03

BIOCHEM 4Q03 - BIOCHEMICAL PHARMACOLOGY

Introduction to the basic concepts of pharmacology. Mechanisms of action of antibacterial, antiviral, antifungal and anticancer drugs, toxins and how cellular resistance to such agents develop. Applications of drug-resistant mutants for genetic, biochemical pharmacological and cell biological studies.
Three lectures; one term
Prerequisite(s): BIOCHEM 2BB3; or BIOCHEM 2EE3 and credit or registration in BIOCHEM 3G03; or credit or registration in BIOCHEM 3G03 and BIOMEDDC 3B06; or HTHSCI 2D06 A/B or HTHSCI 2E03

BIOCHEM 4S03 - INTRODUCTION TO MOLECULAR BIOPHYSICS

- presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. In particular, the following topics are discussed: physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.

Three lectures; one term
Prerequisite(s): One of BIOPHYS 2A03, CHEMBIO 2P03, ENGPHYS 2NE3, ISCI 2A18 A/B, MATLS 2B03, PHYSICS 2H04; PHYSICS 3K03; or registration in Level III or above of an Honours program in the Department of Physics and Astronomy or in the Honours Mathematics and Physics program. BIOPHYS 3S03 is recommended.
Cross-list(s): BIOPHYS 4S03
This course is administered by the Department of Physics and Astronomy.

BIOCHEM 4T15 A/B - SENIOR THESIS

- thesis based on a major research project supervised by a member of the Department of Biochemistry and Biomedical Sciences. The results will also be presented to the Department in a seminar. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Occasional tutorial (one hour); two terms
Prerequisite(s): BIOCHEM 2L06 A/B and registration in Level IV or above of an Honours Biochemistry program.
Permission of the Department is required.
Antirequisite(s): BIOCHEM 4C03
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course. May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.

BIOCHEM 4Z03 - SENIOR PROJECT

- project supervised by a member of the Department of Biochemistry and Biomedical Sciences. Areas of study can include pedagogical research, literature reviews and data analysis as well as traditional lab-based projects. Assessment is based on lab/research performance and a final report. Refer to https://biochem.healthsci.mcmaster.ca/education/undergraduate/forms-and-procedures/ for information about applying for a position.

Prerequisite(s): BIOCHEM 2L06 A/B and registration in Level IV or above of an Honours Biochemistry program.
Permission of the Department is required.
Antirequisite(s): BIOCHEM 4C03
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course. May not be taken concurrently with any research project, thesis, or experiential education course under the supervision of the same supervisor.

Biology

Courses in Biology are administered by the Department of Biology.
Life Sciences Building, Room 218, ext. 23557
http://www.biology.mcmaster.ca

Notes

1. Students are strongly encouraged to take BIOLOGY 1A03 and BIOLOGY 1M03 in different terms.
2. Some Biology courses are available for students enrolled in Level II or above of a non-Biology program. Space for such students is limited and places are assigned on a first come basis.

Courses

If no prerequisite is listed, the course is open.

BIOLOGY 1A01 - CELLULAR AND MOLECULAR BIOLOGY - LABORATORY SKILL DEVELOPMENT

Laboratory applications of structure, molecular composition and function in sub-cellular and cellular systems.
One wet lab (three hours, alternating weeks), one dry lab (one hour, alternating weeks); one term
Prerequisite(s): Credit or registration in BIOLOGY 1A02
Co-requisite(s): WHMIS 1A00, and BIOSAFE 1BS0 (or HTHSCI 1BS0) if not already completed. Both requirements must be completed prior to the first lab.
Antirequisite(s): BIOLOGY 1A03; Not open to students with credit or registration in HTHSCI 1I06 A/B or ISCI 1A24 A/B.
During Spring Term offerings, both wet and dry laboratories occur weekly and may occur in a compressed fashion.

BIOLOGY 1A02 - FOUNDATIONS AND APPLICATIONS OF CELLULAR AND MOLECULAR BIOLOGY

Structure, molecular composition and function in sub-cellular and cellular systems.
Three hours (virtual lectures, web modules); one term
CROSS-LIST(S): BIOLOGY 1A03
PREREQUISITE(S): One of Grade 12 Biology U, BIOLOGY 1P03 or registration in an Engineering program
ANTIREQUISITE(S): BIOLOGY 1A03; Not open to students with credit or registration in HTHSCI 1I06 A/B or ISCI 1A24 A/B.

BIOLOGY 1A03 - CELLULAR AND MOLECULAR BIOLOGY

Structure, molecular composition and function in sub-cellular and cellular systems.
Three hours (lectures, web modules), one wet lab (three hours, alternating weeks), one dry lab (one hour, alternating weeks); one term
Prerequisite(s): One of Grade 12 Biology U, BIOLOGY 1P03 or registration in an Engineering program
Co-requisite(s): WHMIS 1A00, and BIOSAFE 1BS0 (or HTHSCI 1BS0) if not already completed. Both requirements must be completed prior to the first lab.
Not open to students with credit or registration in BIOCHEM 1MM3, HTHSCI 1I06 A/B or ISCI 1A24 A/B. Students are strongly encouraged to take BIOLOGY 1A03 and BIOLOGY 1M03 in different terms.
During Spring Term offerings, both laboratories occur weekly.

BIOLOGY 1AF0 - LABORATORY SKILLS DEVELOPMENT

Laboratory work. Students must enroll in this course when completing BIOLOGY 1A01 outside of the Fall, Winter, Spring or Summer terms.
Prerequisite(s): BIOLOGY 1A02; and permission of the Course Administrator, Life Sciences Building, Room 118.
Students MUST register in BIOLOGY 1A01 in the same or subsequent session as BIOLOGY 1AF0.

BIOLOGY 1M03 - BIODIVERSITY, EVOLUTION AND HUMANITY

Fundamental evolutionary and ecological concepts with particular reference to the diversity of life.
Three lectures, two hour seminar/lab every other week; one term
Prerequisite(s): Grade 12 Biology U or BIOLOGY 1P03
Not open to students with credit or registration in ISCI 1A24 A/B.
Students are strongly encouraged to take BIOLOGY 1A03 and 1M03 in the different terms.
During Spring Term offerings, both laboratories occur weekly.

BIOLOGY 1P03 - INTRODUCTORY BIOLOGY

Introduction to basic biological principles for students without Grade 12 Biology U.
Three lectures; one term
Not open to students with credit in Grade 12 Biology U.

BIOLOGY 2A03 - INTEGRATIVE PHYSIOLOGY OF ANIMALS

Fundamental principles of animal physiology, including: cellular energetics, diffusion, osmosis, membrane transport, excitability and contractility, gas exchange, fluid dynamics, electrolyte balance.
Three lectures, one lab (three hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02); and one of

PHYSICS 1A03 (or 1B03) or 1C03 or credit or registration in ARTSSCI 2D06 A/B; or ISCI 1A24 A/B
Antirequisite(s): MEDPHYS 4XX3
Not open to students with credit or registration in BIOLOGY 3P03, 3U03, 3UU3 or to students registered in the Bachelor of Science in Nursing (B.Sc.N.), Bachelor of Health Sciences (Honours) (B.H.Sc.), Bachelor of Health Sciences (Honours) - Biomedical Sciences Specialization (B.H.Sc.), or Bachelor of Health Sciences (Honours) - Child Health Specialization (B.H.Sc.), or with credit or registration in HTHSCI 2F03 or 2FF3.

BIOLOGY 2B03 - CELL BIOLOGY

Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.
Lectures (one hour), web modules (three hours), tutorial, seminars; one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), CHEM 1A03, 1AA3; or ISCI 1A24 A/B; or BIOLOGY 1A03 and registration in Chemical Engineering and Biosciences, or Honours Medical and Biological Physics (B.Sc.)
Antirequisite(s): HTHSCI 2K03
Not open to students with credit or registration in ISCI 2A18 A/B.

BIOLOGY 2C03 - GENETICS

Structure, function and transmission of genes; chromosomal basis of inheritance; mono- and dihybrid crosses; sequential steps in gene function; linkage maps; sex chromosome inheritance.
Lectures (three hours), tutorial (two hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03; or ISCI 1A24 A/B; and registration in an Honours program in the Faculty of Science, the Faculty of Health Sciences, or the Arts & Science Program
Antirequisite(s): MOLBIOL 2C03
Not open to students registered in Honours Molecular Biology and Genetics.

BIOLOGY 2D03 - PLANT BIODIVERSITY AND BIOTECHNOLOGY

Key concepts in plant biology and biodiversity will be explored, including the origin of plants, plant structure and development, plant genomes, plant responses to the environment and other organisms, agriculture and plant biotechnology.
Three lectures, one lab (three hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03; or ISCI 1A24 A/B. If not already completed, BIOSAFE 1BS0 (or HTHSCI 1BS0) must be done prior to the first lab.

BIOLOGY 2EE3 - INTRODUCTION TO MICROBIOLOGY AND BIOTECHNOLOGY

Microbial structure, genetics, metabolism, and evolution. Overview of agricultural, medical, environmental, and industrial microbiology. Covers key concepts, fundamental principles, and common research tools in microbiology.
Three lectures, one lab (three hours); one term
Prerequisite(s): ISCI 1A24 A/B; or BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03, CHEM 1A03, 1AA3; or registration in Level III Chemical Engineering and Bioengineering. If not already completed, BIOSAFE 1BS0 (or HTHSCI 1BS0) must be done prior to the first lab. Not open to students with credit or registration in HTHSCI 2MB3.

BIOLOGY 2F03 - FUNDAMENTAL AND APPLIED ECOLOGY

An introduction to fundamental ecological principles and their application to current environmental problems at the level of organisms, populations and ecosystems.
Lectures (three hours), one optional tutorial, one lab (three hours); one term
Prerequisite(s): BIOLOGY 1M03 or ISCI 1A24 A/B
Not open to students with credit or registration in ISCI 2A18 A/B.

BIOLOGY 2L03 - THE SCIENTIFIC METHOD IN BIOLOGY

An active learning approach to experiencing how research is conceived, executed, interpreted and communicated in Biology. Principles and case studies in lectures are matched with hands-on application in the lab.
Two lectures, one lab (three hours); one term
Prerequisite(s): Registration in Level II and above of any Honours Biology or Honours Molecular Biology and Genetics program or permission of the Instructor. If not already completed, BIOSAFE 1BS0 (or HTHSCI 1BS0) must be done prior to the first lab.

BIOLOGY 3AA3 - FUNDAMENTAL CONCEPTS OF PHARMACOLOGY

Drug interactions with living organisms; absorption and elimination of drugs, variations in drug action, drug toxicity, receptor structure and function, and signal transduction pathways.
Three lectures, one tutorial (three hours); one term
Prerequisite(s): BIOLOGY 2A03; and one of BIOCHEM 2BB3, 2EE3, ISCI 2A18 A/B, or registration in BIOCHEM 3G03. BIOLOGY 3P03 is strongly recommended.
Not open to students with credit in BIOCHEM 4Q03 or registration in Honours Biology and Pharmacology.

BIOLOGY 3B03 - PLANT PHYSIOLOGY

Principles of physiology and plant cell metabolism. Topics include: photosynthesis, photorespiration, mineral nutrition, water relations and transpiration.
Two lectures, one lab (three hours); one term
Prerequisite(s): BIOLOGY 2B03 or ISCI 2A18 A/B; and BIOLOGY 2D03 or registration in a Biophysics program

BIOLOGY 3DD3 - COMMUNITIES AND ECOSYSTEMS

Communities and ecosystems: mechanism and principles governing their form and function in origin, development, and maintenance of terrestrial and aquatic communities and ecosystems and their interactions with anthropogenic change, with elements of macroecology, biogeography, landscape, and global ecology.
Three lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 2F03 or ISCI 2A18 A/B. BIOLOGY 2D03 is recommended.

BIOLOGY 3EI3 - ECOLOGICAL INDICATORS

Students learn how to assess the health of Great Lakes ecosystems, including wetlands, woodlots, and streams using established ecological indicators.
One lecture (two hours), one lab (three hours); one term
Prerequisite(s): BIOLOGY 2F03 or ISCI 2A18 A/B

BIOLOGY 3EP3 A/B S - APPLIED BIOLOGY PLACEMENT

This placement course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement.
Normally students will complete 60 hours of placement work through the duration of the experience; may be completed over one or two terms
Prerequisite(s): Credit or registration in SCIENCE 2C00; and registration in

Level III or above of a program in the Faculty of Science; and permission of the academic supervisor and the course coordinator (or designate)
Antirequisite(s): EARTHSC 3IN3, 4IN3, GEOG 3MI3, 3MV3 A/B, LIFESCI 3EP3 A/B S, 4EP6, SCIENCE 3EP3 A/B S, SCIENCE 3EX6 A/B S
Students are responsible to arrange a suitable placement and supervision, and are required to submit an application to the Department of Biology two months prior to registration. More information can be found at https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html. The application form is available at https://biology.mcmaster.ca/undergraduate/undergrad-forms-docs.html.

BIOLOGY 3ET3 - ECOTOXICOLOGY

This course covers the environmental pathways of exposures of terrestrial and aquatic organisms to modern and legacy contaminants, and the adverse effects that these contaminants have on diverse species including humans.
Lectures (two hours), one tutorial (two hours); one term
Prerequisite(s): CHEM 1A03, 1AA3 and registration in Level III or above.
Completion of BIOLOGY 2A03, 2B03, 2F03 and one of CHEMBIO 2OA3, 2OC3 (or 2OG3), CHEM 2E03, 2OA3 (or 2OG3), ENVIRSC 3O03 are recommended.

BIOLOGY 3FF3 - EVOLUTION

Successful participants synthesize and apply the main theoretical concepts and evaluate and analyse the major empirical observations related to evolution upon completing this course.
Three lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 2C03 or MOLBIOL 2C03

BIOLOGY 3HD3 - HUMAN DISASTERS

This course will examine a range of human and biologically based disasters, such as antibiotic resistance, DDT, the Great Sparrow Massacre, the Kansas Dustbowl and Agent Orange, by contextualising the circumstances and examining the science involved.
Lectures (three hours); one term
Prerequisite(s): Registration in Level III or above of any program

BIOLOGY 3IR3 A/B S - INDEPENDENT RESEARCH PROJECT

Students will conduct an independent research study in a faculty member's laboratory. For further information, please refer to https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html and search for BIOLOGY 3IR3 in Level III outlines.
Students are responsible to arrange a suitable placement and supervision, and are required to submit a form to the Department of Biology in Life Sciences Building, Room 118 thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). The application form is available at https://biology.mcmaster.ca/undergraduate/experiential-opportunities/applied-research-work-integrated-learning-and-co-op/

- - 10 hours per week (scheduling arranged by supervisor); one or two term(s)

Prerequisite(s): Registration in Level III or above of any Honours Biology program. BIOLOGY 2L03 is recommended preparation.
Permission of the Department is required. Students are expected to have a GPA of at least 8.0.
Antirequisite(s): MOLBIOL 3I03 A/B S
Not open to students with credit or registration in any department- or program-based independent study or research seminar course within the University.

BIOLOGY 3JJ3 - FIELD METHODS IN ECOLOGY

An introduction to techniques in ecology, including restoration, population, community, functional, and behavioural ecology, based on field labs. Lectures provide background and data analysis.
Two lectures, one lab (four hours); one term
Prerequisite(s): BIOLOGY 2F03 or ISCI 2A18 A/B

BIOLOGY 3P03 - CELL PHYSIOLOGY

Analysis of cell function with an emphasis on electrical properties, ion transport proteins, signalling via second messengers, and mechanisms of cell homeostasis.
Two lectures, one tutorial; one term
Prerequisite(s): One of BIOLOGY 2A03, PNB 2XB3, or BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and registration in Level III or above of Honours Kinesiology, or HTHSCI 2F03, 2FF3 and registration in Honours Biology and Pharmacology Co-op program; and credit or registration in one of BIOCHEM 2BB3, 3G03, BIOLOGY 2B03, or registration in Honours Neuroscience; or ISCI 2A18 A/B

BIOLOGY 3PG3 - POPULATION GENETICS

Conceptual foundations of evolutionary theory and principles of population genetics.
Three lectures; or two lectures, dry lab; one term
Prerequisite(s): BIOLOGY 3FF3 and registration in Level III or above of any Honours program

BIOLOGY 3R03 - FIELD BIOLOGY I

Academic component associated with field work chosen from an assortment of modules. Content and schedules vary annually. Module must differ from any completed for credit in BIOLOGY 4J03. For further information, please refer to https://biology.mcmaster.ca/undergraduate/experiential-opportunities/field-courses/.
Prerequisite(s): Permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites.
Co-requisite(s): Credit or registration in BIOLOGY 3RF0

BIOLOGY 3RF0 - FIELD WORK I

Field work, corresponding with BIOLOGY 3R03, chosen from an assortment of modules. Content and schedules vary annually. Module must differ from any completed for credit in BIOLOGY 4J03. Students enrolling in this course must pay the incidental fees, as prescribed by the Department. Further information may be found at https://biology.mcmaster.ca/undergraduate/experiential-opportunities/field-courses/.
Prerequisite(s): Permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites.
Students must register in BIOLOGY 3R03 in the same or subsequent session as BIOLOGY 3RF0.

BIOLOGY 3S03 - AN INTRODUCTION TO BIOINFORMATICS

This course introduces the techniques and methods of basic computer analysis of sequence data, including alignment, databases, and phylogenetic reconstruction.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level III or above of any program. BIOLOGY 2C03 (or equivalent) is strongly recommended.
Not open to students with credit or registration in HTHSCI 3CB3.

BIOLOGY 3SA3 - APPLIED STATISTICS FOR BIOLOGY

Theory and practice for statistical analysis in Biology. Using R, students will explore and analyse large data sets.
Three hours (lectures, web modules), one tutorial (one hour); one term
Prerequisite(s): One of ISCI 2A18 A/B, PNB 3XE3, STATS 2B03, 2MB3
Antirequisite(s): STATS 4P03
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

BIOLOGY 3SS3 - POPULATION ECOLOGY

Population structure and dynamics. Natural selection and regulation of organisms by environmental and biological factors. An evolutionary view of predation, competition, life history schedules.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): BIOLOGY 2F03 (or ISCI 2A18 A/B)

BIOLOGY 3U03 - ANIMAL PHYSIOLOGY - HOMEOSTASIS

Respiration, circulation, acid-base balance and renal function.
Two lectures, one lab/tutorial (three hours); one term
Prerequisite(s): BIOLOGY 2A03 and registration in Level III or above of any Honours program; or BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and registration in Level III or above of Honours Kinesiology; or HTHSCI 2F03, 2FF3 and registration in Honours Biology and Pharmacology Co-op program. BIOCHEM 2EE3 and 3G03 are recommended.
Not open to students registered in the B.Sc.N., Bachelor of Health Sciences (Honours) (B.H.Sc.), Bachelor of Health Sciences (Honours) - Biomedical Sciences Specialization (B.H.Sc.), Bachelor of Health Sciences (Honours) - Child Health Specialization (B.H.Sc.), or Bachelor of Health Sciences (Honours) - Global Health Specialization (B.H.Sc.).

BIOLOGY 3UU3 - ANIMAL PHYSIOLOGY - REGULATORY SYSTEMS

Regulation associated with major features and functions of organisms (e.g. feeding, reproduction, thermoregulation, growth, stress, sleep, aging). Emphasis on endocrinology, evolution, vertebrates and ecology. Material will include selected readings.
Three lectures; or two lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 2A03; or both BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and registration in Level III or above of Honours Kinesiology. BIOLOGY 2B03 (or ISCI 2A18 A/B) and BIOLOGY 2C03 or MOLBIOL 2C03 are recommended.
Not open to students registered in B.Sc.N., Honours Health Sciences Program - (B.H.Sc.(Hons)), Bachelor of Health Sciences (Honours) - Biomedical Sciences Specialization (B.H.Sc.), Honours Health Sciences - Child Health Specialization - B.H.Sc. (Hons), or Bachelor of Health Sciences (Honours) - Global Health Specialization (B.H.Sc.), or with credit or registration in HTHSCI 2F03 or 2FF3.

BIOLOGY 3XL3 - COMPARATIVE VERTEBRATE ANATOMY & PHYSIOLOGY

Major organ systems (cardiovascular, respiratory, renal, skeletal, muscle, gastrointestinal) form and function compared across taxa (within vertebrates) and environments (heat, cold, salt, and oxygen stress).
Two lectures, one lab (three hours); one term
Prerequisite(s): BIOLOGY 2A03 and registration in Level III or above of any Honours program; or both BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and registration in Level III or above of Honours Kinesiology. BIOCHEM 2EE3 and 3G03 are recommended.
Offered in alternate years.
Priority will be given to students enrolled in the Honours Biology - Physiology Research Specialization program.

BIOLOGY 3ZZ3 - TOPICS IN PHYSIOLOGY

An advanced seminar focusing on current topics in physiology.
One seminar (two hours), one tutorial (two hours); one term
Prerequisite(s): BIOLOGY 2A03; and either registration in the Honours Biology - Physiology Research Specialization program or credit in one of BIOLOGY 3MM3, 3P03, 3U03, 3UU3, 3XL3

BIOLOGY 4A03 - ADVANCED TOPICS IN ECOLOGY

Examination of current topics in ecology including ecosystem and landscape ecology, evolutionary ecology and behavioural ecology.
Two lectures, one tutorial (three hours); one term
Prerequisite(s): One of BIOLOGY 3DD3, 3FF3, 3SS3; and registration in Level III or above of any Honours program

BIOLOGY 4AA3 - CONSERVATION BIOLOGY

Examination of how biological principles, mainly from population biology and genetics can be applied to conserving diversity in the natural world.
Two lectures, one tutorial, one lab (three hours); one term
Prerequisite(s): BIOLOGY 2C03 or MOLBIOL 2C03; and one of BIOLOGY 3DD3, 3FF3 or 3SS3; and registration in Level III or above of any Honours program

BIOLOGY 4AE3 - THE ECOLOGY AND EVOLUTION OF ORGANISMS

The evolution of organismal form and function from a perspective of the ecological niche. Convergent and coevolutionary aspects as shaped by environmental and biological factors.
Three lectures; one term
Prerequisite(s): BIOLOGY 2F03 (or ISCI 2A18 A/B) and registration in Level III or above of an Honours Biology program

BIOLOGY 4C12 A/B S - SENIOR THESIS

- thesis based upon a research project in an area of biology. Arrangements to take BIOLOGY 4C12 A/B S, including agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html and click on Level IV outlines. The application form is available at https://biology.mcmaster.ca/undergraduate/undergrad-forms-docs.html.

Occasional lecture/tutorial; two terms
Prerequisite(s): Registration in Level IV of any Honours Biology program and permission of the Course Administrator, Life Sciences Building, Room 118. Students are expected to have a GPA of at least 8.5.
Antirequisite(s): BIOLOGY 4F06 A/B S
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course.

BIOLOGY 4F06 A/B S - SENIOR PROJECT

Students undertake an experimental or library project in a specialized area of biology under the direction of a member of the Biology department. Arrangements to take BIOLOGY 4F06 A/B S, including the agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at https://biology.mcmaster.

ca/undergraduate/undergrad-course-outlines.html and click on Level IV outlines. The application form is available at https://biology.mcmaster.ca/undergraduate/undergrad-forms-docs.html.
Occasional lecture/tutorial; two terms
Prerequisite(s): Registration in Level IV of any Honours Biology program and permission of the Course Administrator, Life Sciences Building, Room 118. Students are expected to have a GPA of at least 7.5.
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course.

BIOLOGY 4IR3 - ADVANCED INDEPENDENT RESEARCH PROJECT

An independent research project, involving bench or field work or literature review, in an area of biology, to be supervised by an approved faculty member. Arrangements to take this course, including agreement of the supervisor, should be made according to Departmental Guidelines at least one month prior to beginning of the course. For information on Departmental Guidelines, please refer to the Biology web site at https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html and click on Level IV outlines. The application form is available at https://biology.mcmaster.ca/undergraduate/undergrad-forms-docs.html.
Occasional lecture/tutorial; one term
Prerequisite(s): Registration in Level IV of any Honours Biology program and permission of the Course Administrator
Antirequisite(s): BIOLOGY 4C12 A/B S, 4F06, LIFESCI 4A03, MOLBIOL 4G12 A/B S
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course.

BIOLOGY 4J03 - FIELD BIOLOGY II

- second academic component associated with field work chosen from an assortment of modules. Content and schedules vary annually. Module must differ from any completed for credit in BIOLOGY 3R03. For further information, please refer to https://biology.mcmaster.ca/undergraduate/experiential-opportunities/field-courses/.

Prerequisite(s): BIOLOGY 3R03, 3RF0; and permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites.
Co-requisite(s): Credit or registration in BIOLOGY 4JF0

BIOLOGY 4JF0 - FIELD WORK II

Field work, corresponding with BIOLOGY 4J03, chosen from an assortment of modules. Content and schedules vary annually. Module must differ from any completed for credit in BIOLOGY 3R03. Students enrolling in this course must pay the incidental fees, as prescribed by the Department. Further information may be found at https://biology.mcmaster.ca/undergraduate/experiential-opportunities/field-courses/.
Prerequisite(s): BIOLOGY 3R03, 3RF0; and permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites.
Students MUST register in BIOLOGY 4J03 in the same or subsequent session as BIOLOGY 4JF0.

BIOLOGY 4MH3 - MICROBIOME-HOST INTERACTIONS

Students will delve into the rapidly growing body of literature on microbiomes the community of bacteria, archaea, fungi, and viruses, that associate with diverse plant and animal host species. One lecture (one hour), one tutorial (two hours); one term
Prerequisite(s): One of BIOLOGY 3SS3 or BIOLOGY 3DD3; and one of BIOLOGY 3FF3 or BIOLOGY 3PG3

BIOLOGY 4PP3 - ENVIRONMENTAL MICROBIOLOGY AND BIOTECHNOLOGY

Study of interaction of microorganisms with their environment with emphasis on topics of ecological significance including plant-microbe interactions, nutrient cycling and waste treatment.
One lecture (two hours), one tutorial (two hours); one term
Prerequisite(s): BIOLOGY 2EE3; and registration in Level III or above of any Honours program

BIOLOGY 4T03 - MOLECULAR AND CELLULAR NEUROSCIENCE

Selected topics in neurobiology at the molecular and cellular level including growth factors and neuronal development, ion channels, neurotransmitter functions, learning and memory, and neurological disorders.
Two lectures, one tutorial (three hours); one term
Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B), BIOLOGY 3P03 and registration in Level III or above of an Honours Biology program, Honours Neuroscience, or Honours Psychology, Neuroscience & Behaviour. MOLBIOL 3B03 and BIOCHEM 2B03, 2BB3 or 3G03 are recommended.
Priority will be given to students enrolled in the Honours Biology - Physiology Research Specialization program.

BIOLOGY 4X03 - ENVIRONMENTAL PHYSIOLOGY

The influence of environmental factors on the physiology of animals and the adaptation of animals to diverse environments in the context of biodiversity.
Three lectures; or two lectures, one tutorial; one term
Prerequisite(s): One of BIOLOGY 3MM3, 3P03, 3U03, 3UU3, 3XL3; and registration in Level III or above of any Honours program
Priority will be given to students enrolled in the Honours Biology - Physiology Research Specialization program.

Biomedical Discovery & Commercialization

Courses in Biomedical Discovery and Commercialization are administered by the Department of Biochemistry and Biomedical Sciences.
Health Sciences Centre, Room 4H30, ext. 27335, bdcprogram@mcmaster.ca
https://bdcprogram.healthsci.mcmaster.ca/

BIOMEDDC 2C03 - EXPLORING CAREERS IN BIOMEDICAL SCIENCES

An inquiry-based course that will explore careers related to biochemistry and biomedical sciences, coupled with an exploration of the science behind each career. The course will include examination of the primary literature as it relates to each topic, culminating in a final presentation.
One three-hour seminar
Prerequisite(s): Registration in Level II or above of any program in the Faculty of Health Sciences, Faculty of Science, or Arts & Science

BIOMEDDC 3A03 - IDEAS TO INNOVATION IN BIOMEDICAL SCIENCES

This course will introduce students to critical thinking essential to discovery research through examples of fundamental and applied research occurring in the laboratories of thought leaders at McMaster and their efforts to translate this knowledge to stakeholders across the spectrum of knowledge users. Communication of fundamental research is emphasized.

One three-hour lecture; one term
Prerequisite(s): Registration in Level III of the Biomedical Discovery and Commercialization program

BIOMEDDC 3B06 A/B - DRUG DISCOVERY AND DEVELOPMENT

This two-term course will provide an overview of paradigms and processes in modern drug discovery and development. Selected content will include discovery and preclinical research as well as clinical development, market analysis and intellectual property. Learners will benefit from a mix of lecture-based and student-focused activities.
One three-hour lecture; two terms
Prerequisite(s): Registration in Level III of the Biomedical Discovery and Commercialization program.
Antirequisite(s): BIOCHEM 4H03

BIOMEDDC 3C06 - RESEARCH SKILLS LABORATORY AND INQUIRY

- laboratory-based inquiry course where students will learn and apply current techniques used in drug discovery. Instruction to achieve an understanding of key laboratory skills in drug discovery will prepare students for participation in a team-based drug discovery project.

One lecture (two hours), two labs (three hours); one term
Prerequisite(s): Credit or registration in BIOCHEM 3G03 or BIOCHEM 2B03, 2BB3, and registration in level III of the Biomedical Discovery and Commercialization program.

BIOMEDDC 3WR3 - BIOCHEMISTRY AND BIOMEDICAL SCIENTIFIC WRITING: RIGHT YOUR WRITE

This course will give students a foundational understanding of scientific writing for the biomedical sciences, and learn to apply these in structured written formats. Fundamental principles of effective scientific writing, analysis of published articles and an overview of how to effectively convey a scientific story will be taught and practiced. Throughout the course, students will be given practical examples of science writing and will be given writing exercises with opportunities for frequent feedback and review to improve their written communications. A workshop on advanced figure design is also provided.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any Biochemistry program or the Biomedical Discovery and Commercialization program or by permission of the BDC Program
Antirequisite(s): BIOMEDDC 2W03

BIOMEDDC 4A15 A/B - SENIOR RESEARCH THESIS

An intensive two-term research project carried out under the supervision of a member or associate member of the Department of Biochemistry and Biomedical Sciences. The results will be presented to the department in a seminar or poster session as part of a senior thesis symposium.
Monthly tutorial (one hour); two terms
Prerequisite(s): Registration in Level IV of the Biomedical Discovery and Commercialization program
Antirequisite(s): HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, 4A15 A/B S, 4C06 A/B S, 4C09 A/B S, 4C12 A/B S, 4C15 A/B S, 4D09 A/B S, 4D12 A/B S, 4G09 A/B S, 4G12 A/B S, 4G15 A/B S, 4R09 A/B, 4R12 A/B S, 4D06 A/B S, 4G06 A/B S
Not open to students enrolled in the BHSc (Honours) Program. May not be taken concurrently with BIOCHEM 3R06 A/B.

BIOMEDDC 4B03 - ROAD TO BIOMEDICAL COMMERCIALIZATION

This course will be a practical and hands-on foray into the world of commercialization of biomedical research. Students will conduct an in-depth examination of biomedical research with the goal of establishing a favoured avenue for commercialization. To this end, students will work in small groups on both individual and group assignments. The effort will be self-directed and under the mentorship of a content expert. Students will also benefit from lectures and guidance from commercialization experts in the McMaster Industry Liaison Office (MILO).
Seminar and discussions (three hours); one term
Prerequisite(s): Registration in Level IV of the Biomedical Discovery and Commercialization program

Biophysics

Courses in Biophysics are administered by the Department of Physics and Astronomy.
A.N. Bourns Science Building, Room 241, ext. 24559
http://www.physics.mcmaster.ca/

Department Notes

1. The Department reserves the right to withdraw a Level III or IV course which is not specifically required in a Physics program if the registration falls below ten.
2. Students in Level III or IV of Physics programs will find a number of relevant electives among the offerings of the Department of Biology, the Department of Engineering Physics and the School of Earth, Environment & Society.
3. Courses in Physics and Astronomy are not open to students registered in the Bachelor of Technology program.

Courses

BIOPHYS 2A03 - BIOPHYSICS OF THE CELL AND LIVING ORGANISMS

Some of the most exciting breakthroughs in science are made at the interface between disciplines. The course will discuss the way that biophysics techniques are used to study the structure, dynamics and function of molecules in living cells and organisms. Topics may include: solubility of macromolecules, ligand-receptor binding, protein folding, filament assembly, Brownian motion and diffusion, bioelectromagnetism, membrane-permeability, electrophoresis. Experimental methods discussed may include: fluorescence, optical tweezers, atomic force microscopy.
Three hours (lectures); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1D03, 1V03; and one of MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B
Cross-list(s): LIFESCI 2BP3
Not open to students enrolled in any Physics program or with credit or registration in ISCI 2A18 A/B.

BIOPHYS 2S03 - EXPLORATIONS IN MEDICAL AND BIOLOGICAL PHYSICS

An inquiry-based presentation of selected current topics in medical and biological physics including central concepts imaging and vision, cellular propulsion and of organic chemistry. As part of this course students will work in small groups and carry out several short projects involving a critical assessment of scientific literature, experimental research and programming.
One lecture or tutorial (one hour), one workshop (two hours); one term
Prerequisite(s): One of ISCI 1A24 A/B, BIOPHYS 2A03, LIFESCI 2BP3, MEDPHYS 1A03 (or BIOPHYS 1S03), PHYSICS 1AA3, 1CC3, 1E03 or registration in Honours Medical and Biological Physics

BIOPHYS 3D03 - ORIGIN OF LIFE

- multidisciplinary survey course on the search for life on other planets and the origin of life. The course starts with the latest discoveries of habitable exoplanets, pre-biotic chemistry on the early Earth and habitable exoplanets, and the search for life in the solar system (Mars, icy Moons, Titan, etc.), then addresses the origin of genetic information and metabolism, the RNA world, and the origin of protocells.

Three lectures, one tutorial or occasional lab; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Science
Antirequisite(s): ORIGINS 3D03, PHYSICS 3L03

BIOPHYS 3G03 - MODELLING LIFE

Introduction to simulating computational models in the life sciences, including examples from molecular and cell biology, ecology and evolution. Designing models to link to experimental questions and to test scientific hypotheses.
Three hours (lectures); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1D03, 1V03; and one of MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B
Cross-list(s): LIFESCI 3BP3

BIOPHYS 3S03 - 'SQUISHY PHYSICS': PHYSICS OF SOFT MATTER

Soft materials include polymers, liquid crystals, surfactants and colloids. The course will cover structure, dynamics, phase transitions and self-assembly, and discuss applications and links to the life sciences.
Three lectures; one term
Prerequisite(s): One of CHEM 2P03, CHEMBIO 2P03, ENGPHYS 2NE3, ISCI 2A18 A/B, MATLS 2B03, PHYSICS 2H04, 3K03; or registration in Level III or above of any Honours program offered by the Department of Physics and Astronomy; or registration in Level III or above of the Honours Mathematics and Physics program

BIOPHYS 4S03 - INTRODUCTION TO MOLECULAR BIOPHYSICS

- presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. In particular, the following topics are discussed: physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature. The course includes a small programming component.

Three lectures; one term
Prerequisite(s): One of BIOPHYS 2A03, CHEM 2P03, CHEMBIO 2P03, ENGPHYS 2NE3, ISCI 2A18 A/B, LIFESCI 2BP3, MATLS 2B03, PHYSICS 2H04, 3K03; or registration in Level III or above of an Honours program in the Department of Physics and Astronomy or in the Honours Mathematics and Physics (B.Sc.) program. BIOPHYS 3S03 is recommended.
Cross-list(s): BIOCHEM 4S03

Biosafety

BIOSAFE courses are administered by the Faculty of Science.

BIOSAFE 1BS0 - BIOSAFETY TRAINING

Formerly HTHSCI 1BS0
BSL 1 biosafety training for the handling of non-pathogenic bacteria, cell lines, blood and body fluids or mammalian tissues based on federal laboratory biosafety guidelines.

This course is evaluated on a Complete/Fail basis.
Web module
BSL 1 must be completed prior to the start of the first lab for all courses for which it is required. Students who fail the quiz will be required to repeat it and will not be permitted in any course where BIOSAFE 1BS0 is a requirement until the quiz has been successfully completed.

Biotechnology

Courses in Biotechnology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca
Note
For the Four-Year Program, registration is only permitted for courses of the same level in which the student is registered, unless otherwise specified.

BIOTECH 2B03 - BIOTECHNOLOGY CONCEPTS

Basic elements of biotechnology. Proteins, enzymes, nucleic acids, DNA manipulation, cloning and recombinant technology, with applications in genetics, medicine and industry.
Three lectures, one lab (three hours); second term
Prerequisite(s): BIOTECH 2CB3, 2M03, and registration in level II or above of the Biotechnology Co-op program
Antirequisite(s): BIOTECH 2BE3

BIOTECH 2BC3 - BIOCHEMISTRY

Biochemistry and biotechnology; amino acids, nucleotides, nucleic acids, proteins, peptides, enzymes, carbohydrates, lipids, membranes and their functions, metabolism, gene expression and DNA.
Three lectures; one lab (three hours every other week); second term
Prerequisite(s): BIOTECH 2OC3, and registration in level II or above of the Biotechnology Co-op program

BIOTECH 2CB3 - CELL BIOLOGY

An introduction to basic living cell structure, functions, genetics and the fundamentals of metabolism.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): ENGTECH 1BI3, 1CH3, and registration in level II or above of the Biotechnology Co-op program

BIOTECH 2EC3 - CHEMICAL ENGINEERING CONCEPTS

Material balances: single and multi-unit systems with possible reactions. Energy balance: energy conservation including enthalpy calculations, steam tables, specific heats, phase changes, and reactions. Survey of momentum, heat and mass transfer; basics of chemical process design.
Three lectures, one lab (two and one half hours every other week); first term
Prerequisite(s): ENGTECH 1CH3, 1MT3, and registration in level II or above of the Biotechnology Co-op program.
Antirequisite(s): BIOTECH 3EC3

BIOTECH 2GT3 - GENETICS

This course covers the fundamentals of genetic studies including genes and genetic code, DNA, RNA and protein synthesis, cellular reproduction and human genetics.
Three lectures; second term
Prerequisite(s): ENGTECH 1BI3 and registration in level II or above of the Biotechnology Co-op program.

BIOTECH 2M03 - MOLECULAR BIOLOGY

Principles of molecular biology that form the basis nucleic acid and protein based methodologies. DNA replication, repair and recombination; bacterial and eukaryotic transcription and RNA processing; translation; and regulation of gene expression.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 1BI3, 1CH3, and registration in level II or above of the Biotechnology Co-op program.

BIOTECH 2MB3 - MICROBIOLOGY

An introduction to microbiological analysis with emphasis on use of microscopic techniques, staining, cultivation and control of microbial growth, enumeration, identification, potable water analysis, with environmental and industrial applications.
Three lectures, one lab (three hours); second term
Prerequisite(s): BIOTECH 2CB3, 2M03, and registration in level II or above of the Biotechnology Co-op program

BIOTECH 2OC3 - ORGANIC CHEMISTRY

This course covers a working knowledge of the major classes of organic compounds, including their physical and chemical properties. The laboratory introduces the techniques of organic synthesis and identification.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 1CH3, and registration in level II or above of the Biotechnology Co-op program

BIOTECH 3B03 - INDUSTRIAL BIOTECHNOLOGY

- continuation of Biotechnology I including a more in depth application of the recombinant technology and gene expression systems. Applications include microbial, plant, and animal biotechnology, bioremediation, cloning and stem cell technology.

Three lectures, one lab (three hours); first term
Prerequisite(s): BIOTECH 2B03, 2GT3, 2MB3, and registration in level III or above of the Biotechnology Co-op program.

BIOTECH 3BC3 - BIOPROCESS CONTROL AND DYNAMICS

Basic control theory and interfacing concepts, design of simple digital controllers, as applied to biological systems with emphasis on biosensors, bioreactors, neural physiology, and homoeostasis.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): ENGTECH 1EL3, 2MA3, BIOTECH 2B03, 2EC3, and registration in level III or above of the Biotechnology Co-op program

BIOTECH 3BP3 - BIOREACTOR PROCESSES AND DESIGN

Overview of fermentation technology and bioprocessing, kinetics and thermodynamics of microbial processes. Mass transfer in immobilized systems. Analysis of batch and continuous processes, bioreactor design and analysis, operation and control, instrumentation, oxygen transfer, and scale up.
Four lectures, one lab (three hours); first term
Prerequisite(s): BIOTECH 2EC3, 3BC3, 3B03, and registration in level IV of the Biotechnology Co-op program

BIOTECH 3CM3 - COMPUTATIONAL MODELING OF BIOLOGICAL SYSTEMS

This course covers fundamental concepts of computational modeling and applying it to biological systems. Lab component will include programming language to explore/study biological systems.
Two lectures, one lab (two hours); first term
Prerequisite(s): ENGTECH 1PP3, ENGTECH 2MA3, and registration in level IV of Biotechnology Co-op program

BIOTECH 3FM3 - FOOD MICROBIOLOGY

An introduction to the microbiology of raw materials used in the manufacturing of food products. The course will review microbial growth and examine the types of microorganisms found in foods, the fermentation process in foods and food borne illness.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): BIOTECH 2CB3, 2MB3, and registration in level IV of the Biotechnology Co-op program

BIOTECH 3IV3 - IMMUNOLOGY AND VIROLOGY

Structure and function of antibodies, antibody diversity and interactions, immune system and immunity, immunological responses to disease, antibodies production and applications, structure of viruses, methods to study viruses, virus transcriptions and interactions.
Three lectures, one lab (three hours); first term
Prerequisite(s): BIOTECH 2MB3 and registration in level III or above of the Biotechnology Co-op program

BIOTECH 3PM3 - PHARMACOLOGY

The first part of this course deals with general principles of pharmacokinetics and pharmacodynamics. Implications of the choice of route of administration and dosing will be studied. The second component of the course is systems pharmacology whereby the major drugs affecting different systems of the human body will be explored.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): ENGTECH 1CH3, BIOTECH 2BC3, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4BI3 - BIOINFORMATICS

The course will familiarize students with the tools and principles of bioinformatics. A toolbox will be used to study access to genomic and proteomic data and data formats and analysis techniques.
Three lectures, one lab (three hours); first term
Prerequisite(s): BIOTECH 3CM3 or MANTECH 4AI3 or SFWRTECH 4AI3 or ENGTECH 4AI3 or 4DA3, and BIOTECH 4GP3, ENGTECH 1CP3 or 1PP3, 3ES3, 4EE0, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4BL3 - BIOMATERIALS AND BIOCOMPATIBILITY

Natural and synthetic biopolymers, and other materials for industrial and biomedical engineering applications: biocompatibility; tissue response to implants; inflammation; bioplastics, composites and applications.
Three lectures; second term
Prerequisite(s): BIOTECH 2BC3, 3B03, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4BM3 - BIOPHARMACEUTICALS

An introduction to biopharmaceutical drug development and manufacture. Emphasis will include basic genetic engineering principles used in the development and large-scale manufacture of biopharmaceutical products.
Three lectures, one lab (three hours); second term
Prerequisite(s): BIOTECH 3B03, 3PM3, and registration in level IV of the Biotechnology Co-op program.

BIOTECH 4BS3 - BIOTECHNOLOGY REGULATIONS

This course will familiarize students with current methods of laboratory safety and good lab and manufacturing practices in biotechnology; bioethics issues, benefits and risks of biotechnology applications; provincial, federal and international guidelines/regulations.
Three lectures; first term
Prerequisite(s): BIOTECH 3PM3, ENGTECH 4EE0, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4GP3 - GENOMICS AND PROTEOMICS

This course examines genomics, functional genomics and proteomics. Topics covered are the organization of model system genomes, gene expression profiling at the mRNA and protein levels, microarrays, analyses of interactions, genomic and proteomic databases.
Three lectures, one lab (three hours); second term
Prerequisite(s): BIOTECH 2M03, 3B03, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4TB3 - ADVANCED BIOTECHNOLOGY

This advanced course examines select topics of interest that reflect current methods utilized to produce new products and processes in the field of biotechnology. The course invites subject experts from various sectors of the biotech industry as guest lecturers.
Three lectures; first term
Prerequisite(s): BIOTECH 3B03, 4GP3, ENGTECH 4EE0, and registration in level IV of the Biotechnology Co-op program

BIOTECH 4TR1 - CAPSTONE PROJECT I

This course requires students to research, design, develop, and implement an independent project. The project plan and a model developed will be documented as a technical report and presented in a seminar.
One tutorial, one lab (two hours); second term
Prerequisite(s): BIOTECH 3BP3, 3FM3, 3PM3, GENTECH 3MT3, and registration in level IV of the Biotechnology Co-op program
Cannot be taken concurrently with any co-op work term course.

BIOTECH 4TR3 - CAPSTONE PROJECT II

This course is a continuation of BIOTECH 4TR1 and it requires the students to conduct further research, modify/refine the project design, develop, and implement the independent project proposal submitted as a part of the Capstone Project I. The project will be documented as a technical report and presented in a seminar.
One tutorial, one lab (three hours); first term
Prerequisite(s): BIOTECH 4BL3, 4BM3, 4GP3, 4TR1, ENGTECH 4EE0, and registration in level IV of the Biotechnology Co-op program
Cannot be taken concurrently with any co-op work term course.

Cayuga

Courses in Cayuga are administered by the Indigenous Studies Department.
LR Wilson Hall, Room 1811, ext. 27426
https://indigenous.mcmaster.ca
Courses
If no prerequisite is listed, the course is open.

CAYUGA 1Z03 - INTRODUCTION TO CAYUGA LANGUAGE AND CULTURE

This course will study the Cayuga language, in its spoken and written forms, in the context of Iroquoian cultural traditions, values, beliefs and customs.

CAYUGA 2Z03 - INTERMEDIATE CAYUGA

This course expands on the vocabulary and the oral skills for the Cayuga language. In addition, the course reviews the written component of the language.
Prerequisite(s): CAYUGA 1Z03

Chemical Biology

Courses in Chemical Biology are administered by the Department of Chemistry and Chemical Biology.
A.N. Bourns Science Building, Room 156, ext. 23490
https://www.chemistry.mcmaster.ca
Department Notes
1. CHEM 1AA3 is a prerequisite for CHEM 2E03 and CHEM 2E03 is a prerequisite for BIOCHEM 2EE3.
2. Students seeking permission and/or a seat authorization for a Chemistry or Chemical Biology course must submit an application for academic permission to the Department of Chemistry and Chemical Biology (chemadv@mcmaster.ca) well in advance of the start of the term.

Courses

CHEMBIO 2A03 - INTRODUCTION TO BIO-ANALYTICAL CHEMISTRY

An introductory course covering basic principles of quantitative analysis of biological samples based on classical volumetric techniques and modern instrumental methods including spectroscopy and chromatography.
Three lectures, one lab; one term
Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3 or ISCI 1A24 A/B; and registration in an Honours Chemical Biology, Honours Biochemistry, Honours Biology, Chemical Engineering, Honours Life Sciences or Honours Molecular Biology and Genetics program
Antirequisite(s): CHEM 2A03, 2AA3, CHEMBIO 2AA3

CHEMBIO 2L03 - PHARMACEUTICAL CHEMISTRY LABORATORY I: BIOMOLECULAR INTERACTIONS

Students will be introduced to the standard tools and techniques employed in Chemical Biology research.
Two lectures, one lab (four hours); one term
Prerequisite(s): Registration in Honours Chemical Biology; and CHEM 2OA3 or 2OG3 or CHEMBIO 2OG3; and CHEM 2A03 or CHEMBIO 2A03

CHEMBIO 2OD3 - ORGANIC CHEMISTRY II

Fundamental reactions used to construct organic molecules, nucleophilic substitutions at carbonyl centres, biomolecules, and applications of spectroscopic techniques in organic chemistry. Emphasis on reaction mechanisms.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 2OG3 or CHEMBIO 2OG3; and registration in Honours Chemical Biology (B.Sc.)
Antirequisite(s): CHEM 2OB3, 2OD3, CHEMBIO 2OB3

CHEMBIO 2OG3 - ORGANIC CHEMISTRY I

Examines how structure affects properties and chemistry of organic molecules important for life, health, and advanced technologies. Includes fundamentals of reactions of functional groups, organic reaction mechanisms and spectroscopic techniques for structure determination.
Three lectures, one lab (four hours), one tutorial; one term
Prerequisite(s): CHEM 1AA3 or ISCI 1A24 A/B; and registration in Honours Chemical Biology (B.Sc.)
Antirequisite(s): CHEM 2OA3, 2OC3, 2OG3, CHEMBIO 2OA3

CHEMBIO 2P03 - PHYSICAL CHEMISTRY TOOLS FOR CHEMICAL BIOLOGY

Chemical thermodynamics and kinetics and their application to biological, chemical and environmental systems.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3; and one of MATH 1A03, 1LS3, 1M03, 1MM3, 1X03, 1ZA3; or ISCI 1A24 A/B
Antirequisite(s): EARTHSC 2L03, ENVIRSC 2L03, PHYSICS 2H04
Cross-list(s): CHEM 2P03
Not open to students with credit or registration in ISCI 2A18 A/B.

CHEMBIO 2Q03 - INQUIRY FOR CHEMICAL BIOLOGY

An introduction to current Chemical Biology research, combined with developing skills in scientific writing and oral presentation, searching and analyzing the scientific literature and databases, scientific software, and other transferrable skills.
Three lectures; one term
Prerequisite(s): Registration in Honours Chemical Biology (B.Sc.)
Antirequisite(s): CHEM 2Q03

CHEMBIO 3AA3 - ANALYTICAL TOOLS FOR CHEMICAL BIOLOGY

Modern instrumental bioanalytical techniques will be examined, including atomic and molecular spectroscopy, mass spectrometry and chromatography with emphasis on analytical design, data interpretation, and applications to biomedical, environmental, and food safety areas.
Three lectures; one term
Prerequisite(s): One of CHEM 2A03, 2AA3, CHEMBIO 2A03, 2AA3
Antirequisite(s): CHEM 3AA3

CHEMBIO 3BM3 - IMPLANTED BIOMATERIALS

An introduction to the chemistry of implantable biomaterials (metals, ceramics, plastics, elastomers) and the methods used to characterize their physical properties. The wound healing response following insult by an implanted foreign body will be examined, in order to understand the need to control synthetic biomedical interfaces. The regulatory approval process will also be discussed.
Three lectures; one term
Prerequisite(s): CHEM 1AA3 (or ISCI 1A24 A/B); and BIOLOGY 2B03 (or ISCI 2A18 A/B) or registration in an Honours Chemical Biology program; and one of CHEM 2E03, 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3; or permission of the instructor
Cross-list(s): LIFESCI 3BM3
May be offered in alternate years.

CHEMBIO 3EP3 A/B S - ADVANCED CHEMICAL BIOLOGY PLACEMENT

This placement course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement.
Students are responsible to arrange a suitable placement, obtain appropriate permission from both a placement and academic supervisor, and are required to submit an application to the Department of Chemistry and Chemical Biology thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.
May be completed over one or two terms
Prerequisite(s): Registration in Level III or above of an Honours Chemical Biology program; and permission of the academic supervisor and the course coordinator (or designate)
Not to be taken concurrently with a Co-op work term.

CHEMBIO 3L03 - CHEMICAL BIOLOGY LABORATORY II

- research project will be formulated and addressed using the tools of Chemical Biology.

One lecture, one lab (five hours); one term
Prerequisite(s): Credit or registration inBIOSAFE 1BS0; and CHEMBIO 2L03
If not already completed, BIOSAFE 1BS0 must be completed prior to the first lab.

CHEMBIO 3OA3 - ORGANIC MECHANISTIC TOOLS FOR CHEMICAL BIOLOGY

Chemistry and biology of primary metabolism. Synthesis, biosynthesis and degradation of carbohydrates, nucleotides, and proteins are compared and contrasted by studying reaction mechanisms and catalysis.
Three lectures, one lab; one term
Prerequisite(s): One of CHEM 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3

CHEMBIO 3OB3 - STRUCTURAL ELUCIDATION OF NATURAL PRODUCTS AND SMALL MOLECULES

Applications of spectroscopy detailing the use of NMR, MS, IR, and UV in determining structures of small molecules and biomolecules with a particular focus on natural products.
Three lectures; one term
Prerequisite(s): One of CHEM 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3
May be offered in alternate years.

CHEMBIO 3P03 - BIOMOLECULAR INTERACTIONS AND KINETICS

Principles of macromolecule-macromolecule and small molecule-macromolecule interactions, including ligands and drugs. Techniques for characterizing and quantifying biomolecular interactions in vitro and in vivo. Emerging technologies such as biological therapeutics as applied to pharmaco-dynamics and -kinetics.
Three lectures; one term
Prerequisite(s): One of CHEM 2P03, CHEMBIO 2P03 or ISCI 2A18 A/B

CHEMBIO 3RP3 - RESEARCH PRACTICUM IN CHEMICAL BIOLOGY

- one term research project undertaken in a chemical biology laboratory during the fall, winter or summer term which requires the submission

of a formal report. May be taken in preparation for a Level IV thesis or project.

Students are responsible to arrange a suitable research experience, obtain appropriate permission from both a placement and academic supervisor, and are required to submit an application to Department of Chemistry and Chemical Biology thirty days prior to the date classes begin in each Term (see the Sessional Dates in the Undergraduate Calendar). More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.

Prerequisite(s): Registration in Level III or above of an Honours Chemical Biology program; and permission of the academic supervisor and the course coordinator (or designate)

Not to be taken concurrently with a Co-op work term.

The course may be repeated once, in a subsequent term, if the topic and project are different.

CHEMBIO 4A03 - BIO-ANALYTICAL CHEMISTRY AND ASSAY DEVELOPMENT

Advanced separation and detection principles for high-throughput bio-assays for drug targets, as well as recent global analytical strategies for genomic, proteomic and metabolomic analyses.

Three lectures; one term

Prerequisite(s): CHEM 3AA3 or CHEMBIO 3AA3

May be offered in alternate years.

CHEMBIO 4G12 A/B - SENIOR THESIS IN CHEMICAL BIOLOGY

- thesis-based on a major research project supervised by a member or associate member of the Department of Chemistry and Chemical Biology, or a member of the Chemical Biology Graduate Program. Supervisors from other departments may be approved on an individual basis by the course coordinator. More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html. Students are responsible for securing a suitable project supervisor, and are required to submit an application by thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar).

Prerequisite(s): Registration in Level IV of Honours Chemical Biology (B.Sc.) and permission of the Department. Students are expected to have a Grade Point Average of at least 9.5.

Antirequisite(s): CHEMBIO 4G03, CHEMBIO 4GG9, CHEMBIO 4RP6 A/B S

Not open to students with credit or registration in ISCI 4A12 A/B.

CHEMBIO 4IB3 - BIO-INORGANIC CHEMISTRY

Inorganic elements and their behaviour in biological systems. Topics for study include metalloenzymes, bio-redox agents, transport proteins, biomimetic inorganic complexes, metallodrugs, and radiopharmaceuticals.

Three lectures; one term

Prerequisite(s): CHEM 3II3

Cross-list(s): CHEM 4IB3

May be offered in alternate years.

CHEMBIO 4OA3 - NATURAL PRODUCTS

- description of basic building blocks and reaction mechanisms involved in the biosynthesis of naturally occurring compounds.

Three lectures; one term

Prerequisite(s): CHEM 3OA3 or CHEMBIO 3OA3

Cross-list(s): CHEM 4OA3

CHEMBIO 4OB3 - MEDICINAL CHEMISTRY: DRUG DESIGN AND DEVELOPMENT

Topics will include lead compound discovery strategies; high-throughput screening and 'in silico' screening; exploration of structure-activity relationships; drug targets and molecular mechanisms of drug action; strategies for drug optimization.

Three lectures; one term

Prerequisite(s): CHEM 3OA3 or CHEMBIO 3OA3

May be offered in alternate years.

CHEMBIO 4Q03 - PEER TUTORING IN CHEMICAL BIOLOGY

This course provides students with practical experience in teaching in Chemical Biology. Peer tutors support and guide students in CHEMBIO 2Q03. They evaluate, and provide effective feedback on, in-progress work, presentations, and written reports. Peer tutors practice effective presentation and scientific writing skills and receive feedback on their progress.

Applications are available in April in the preceding academic year on the Department of Chemistry and Chemical Biology website. Applications are due by May 31. Successful applicants will be notified by email.

One lecture (three hours), tutorial (one hour); one term

Prerequisite(s): CHEMBIO 2Q03 and permission of the instructor

Antirequisite(s): CHEM 4Q03

CHEMBIO 4RP6 A/B S - RESEARCH PROJECT IN CHEMICAL BIOLOGY

- project supervised by a member or associate member of the Department of Chemistry and Chemical Biology, or a member of the Chemical Biology Graduate Program. Supervisors from other departments may be approved on an individual basis by the course coordinator. More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html. Students are responsible for securing a suitable project supervisor, and are required to submit an application thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar).

Prerequisite(s): Registration in Level IV Honours Chemical Biology (B.Sc.) and permission of the Department. Students are expected to have a Grade Point Average of at least 5.0.

Antirequisite(s): CHEMBIO 4G03, CHEMBIO 4GG9 A/B, CHEMBIO 4G12 A/B

Not open to students with credit or registration in ISCI 4A12 A/B.

Chemical Engineering

Courses in Chemical Engineering are administered by the Department of Chemical Engineering.

John Hodgins Engineering Building, Room 374, ext. 24957

http://chemeng.mcmaster.ca

Department Note

All Chemical Engineering courses are open to students registered in a Chemical Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments and other faculties.

CHEMENG 2D04 - CHEMICAL ENGINEERING PRINCIPLES I

Introduction to Chemical Engineering as a profession. Introduction to engineering calculations, including unit conversions and process variable representation and analysis. Material balances on steady-state and un-steady state processes, including those with chemical reactions and recycle streams. The behaviour of gases and liquids, including mixtures, along with their properties and physical equilibria.

Four lectures, one tutorial (two hours); first term
Prerequisite(s): Registration in Level II or above of any Chemical Engineering program or permission from the Department

CHEMENG 2DW1 - PROBLEM SOLVING STRATEGIES

Developing problem solving awareness, planning strategies, creativity, analysis methods, interpersonal skills, and networks in the context of a themed team project.

- hour lecture per week, first term

Prerequisite(s): Registration in Level II or above of any Chemical Engineering program or permission from the Department.

CHEMENG 2E04 - NUMERICAL METHODS AND COMPUTING FOR CHEMICAL ENGINEERS

Application of finite and discretized models for various chemical processing applications at steady and unsteady states. Techniques for numerical solution of linear and nonlinear model equations. Techniques for numerical differentiation and integration of equations and data sets. Introduction to data-driven model fitting and analysis.
Three lectures; one tutorial (two hours); first term
Prerequisite(s): MATH 1ZA3, 1ZB3, 1ZC3, registration in level II or above in a Chemical Engineering program or level III or above in a Materials Engineering program, or permission from the department
Antirequisite(s): CHEMENG 3E04, ENGPHYS 2CE4, ENGPHYS 3NM4, CIVENG 2E03, COMPENG 3SK3, MECHENG 3F04, COMPSCI 4X03, MECHTRON 3X03, SFWRENG 4X03

CHEMENG 2F04 - CHEMICAL ENGINEERING PRINCIPLES II

Combined mass and energy balances in the steady and unsteady state. The second law of thermodynamics, physical/chemical equilibria and sustainability.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): Registration or credit in CHEMENG 2D04 or permission from the Department

CHEMENG 2O04 - FLUID MECHANICS

Properties of fluids; Instruments for measuring and controlling fluid flow; Macroscopic balances for mass, momentum, and energy; Basic principles and design procedures for turbomachinery; Introduction to software tools for fluid flow design and analysis; Application of Navier-Stokes equations for unidirectional flow systems; Boundary layer theory applied to internal and external flows.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): Registration in a Chemical Engineering, Materials Engineering, or Engineering Physics program, or permission of the Department

CHEMENG 3A04 - HEAT TRANSFER

Steady and unsteady conduction and convection, condensation and boiling. Understanding fundamentals behind heat exchangers, and finned arrangements. Heat Exchanger Network designs for integrated plants.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): CHEMENG 2F04, 2O04, or registration in Level III or above in a Materials Engineering program, and permission of the Department
Antirequisite(s): CHEMENG 3TP6, MATLS 3TP4, MATLS 3LP3, MECHENG 3R03

CHEMENG 3BK3 - BIO-REACTION ENGINEERING

Kinetics of cellular processes, microbial processes and enzyme reactions including those of immobilized cells and enzymes. Cell culturing. Bioreactor design. Bioprocess development including downstream processing.
Three lectures; first term
Prerequisite(s): Registration in Level IV or above of any Chemical Engineering program or the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program; or permission of the Department

CHEMENG 3BM3 - BIOSEPARATIONS ENGINEERING

Introduction to bioseparations engineering, cell disintegration, precipitation based separation processes, extraction, adsorption, chromatography, centrifugal separations, filtration, membrane based separation processes, electrophoresis.
Three lectures; second term
Prerequisite(s): Registration in Level IV or above of any Chemical Engineering Program, or Integrated Biomedical Engineering & Health Sciences (IBEHS) Program; or permission of the Department

CHEMENG 3D04 - CHEMICAL ENGINEERING THERMODYNAMICS

Thermodynamic properties of non-ideal fluids and multicomponent systems. Fundamental relationships between thermodynamic properties. Criteria for thermodynamic equilibrium with applications in phase and chemical reaction equilibria.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): CHEMENG 2F04 and 2E04 (or 3E04), or permission of the Department
Antirequisite(s): CHEMENG 3D03

CHEMENG 3G04 - CHEMICAL PROCESS DESIGN AND SIMULATION

Chemical process simulations including models for heat exchangers, separators, reactors, heat integration, pressure handling, energy conversion, and other unit operations. Using process design and simulations to solve problems related to chemical processing, energy and sustainability.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): CHEMENG 2E04 (or 3E04), CHEMENG 2F04, CHEMENG 3A04 and CHEMENG 3M04 (or CHEMENG 3TP6), CHEMENG 3D04 (or 3D03), or permission from the Department

CHEMENG 3K04 - INTRODUCTION TO REACTOR DESIGN

Writing and solving mass, mole and energy balances for multiple reactions in various process operations such as batch, CSTR, and plug flow reactors, considering a variety of configurations, including a machine learning perspectives.
Three lectures; one tutorial (two hours); second term
Prerequisite(s): MATH 2Z03 and 2ZZ3, registration or credit in CHEMENG 2F04, 2E04 (or 3E04) and 3D04 (or 3D03); or permission of the Department

CHEMENG 3L03 - INTERMEDIATE LABORATORY SKILLS

Experiments and projects in heat transfer, thermodynamics, mass transfer and fluid mechanics with appropriate data analysis and report writing.
Two lectures, one lab (three hours); second term
Prerequisite(s): CHEMENG 2O04, CHEMENG 3D04 (or 3D03), CHEMENG 3A04 (or CHEMENG 3TP6); or permission of the department

CHEMENG 3M04 - MASS TRANSFER AND STAGEWISE OPERATIONS

Steady-state and unsteady-state diffusion, mass transfer coefficients, multi-component diffusion, stage-wise operations, differential contacting and

absorption, and distillation.
Three lectures, two tutorials; first term
Prerequisite(s): CHEMENG 2F04 and 2O04 and permission of the department
Antirequisite(s): CHEMENG 3TP6, MATLS 3TP4, MATLS 3LP3

CHEMENG 3P04 - PROCESS CONTROL

Transient behaviour of chemical processes. Theory and practice of automatic control. Introduction to computer process control.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): MATH 2Z03 and MATH 2ZZ3, credit or registration in CHEMENG 2E04 (or 3E04), CHEMENG 2O04, CHEMENG 3A04 (or CHEMENG 3TP6), CHEMENG 3K04; or permission of the Department
Antirequisite(s): IBEHS 4A03

CHEMENG 3Q03 - INTRODUCTION TO POLYMER SCIENCE

An overview of important synthetic and natural polymers and key concepts in polymer science, with an emphasis on polymer structure-property-application relationships. Principles of polymer synthesis and characterization are related to applied polymer design challenges.
Three lectures; second term
Prerequisite(s): Registration in level II or above of any engineering programs

CHEMENG 3TP6 - TRANSPORT PHENOMENA

This course will cover the principal physics of both heat and mass transfer including the principles of conservation of energy, a detailed study for how molecules move and mathematically modelling these scenarios. This course will cover the similarities between the two phenomena and how they can be applied to real world chemical engineering examples.
Four lectures; two tutorials (two hours each); first term
Prerequisite(s): CHEMENG 2F04, and CHEMENG 2O04; or Permission of the Department
Antirequisite(s): CHEMENG 3M04, CHEMENG 3A04, MATLS 3TP4, MATLS 3LP3

CHEMENG 3U04 - UNIT OPERATIONS

Unit Operations in Chemical Engineering, Operational characteristics of physical and chemical sensors, statistics of sampling and analysis, measurement error and data acquisition theory. Measurement of pressure, temperature, flow, strain and voltage. Using Excel for data analysis. PFD, P&ID review and production.
Three Lectures; One tutorial (two hours); first term
Prerequisite(s): Registration in Level III or above of any chemical engineering, and registration or credit in CHEMENG 3TP6; or permission of the Department
Antirequisite(s): CHEMENG 2I03, CHEMENG 3I03

CHEMENG 4A03 - ENERGY SYSTEMS ENGINEERING

Assessments of current energy systems covering resources extraction, conversion, and delivery evaluated based on political, social, economic, and environmental criteria. Emphasis placed on power generation technologies including coal, natural gas, nuclear, solar, and wind. Develop an understanding of how our future sustainable energy system will look and why this transition is challenging, particularly for the power grid.
Two lectures; one tutorial (two hours); first term
Prerequisite(s): Registration in final level of any engineering programs; or permission of the department

CHEMENG 4B03 - POLYMER REACTION ENGINEERING

Kinetics of polymerization: step-growth, chain-growth (free radical, anionic, anionic coordination, cationic, Ziegler-Natta polymerization), and Co-polymerization. Polymerization processes: solution/bulk, suspension, emulsion, gas-phase, slurry, and reactive processing. Case studies: polymerization reaction and polymer design in research and industrial applications.
Three lectures; first term
Prerequisite(s): CHEMENG 3K04, or permission of the Department

CHEMENG 4E03 - MODERN METHODS FOR PROCESS CONTROL

Modern process control strategies including model predictive control (MPC), requiring computer programming and making effective use of process models and empirical data. Formulation and analysis of discrete-time dynamic processes. Design, implementation, and analysis of digital feedback control systems. Strategies for implementing numerical methods efficiently and effectively. Coursework will include coding in MATLAB and reasoning with linear algebra.
Three lectures; first term
Prerequisite(s): CHEMENG 3P04 or permission of the department

CHEMENG 4EC3 - ELECTROCHEMISTRY AND ELECTROCHEMICAL ENGINEERING

Fundamental concepts of electrochemistry, electrochemical engineering, and electrochemical technologies, with a particular focus on sustainable energy conversion and storage applications. The course will cover current and emerging areas of application for electrochemical technologies, electrochemical reaction kinetics, reactor design, thermodynamics, and mass transport.
Three lectures; second term
Prerequisite(s): Registration in level 4 or above of any chemical or materials engineering program, or permission from the Department

CHEMENG 4G03 - OPTIMIZATION IN CHEMICAL ENGINEERING

Formulation of optimization programs for important engineering problems focusing on equipment design, economics, controls, operations, and scheduling. Solution methods and analysis of linear, nonlinear, and mixed-integer programs. Introduction to mathematical concepts of convexity and optimality conditions. Introduction to meta-heuristic optimization methods.
Two lectures, one tutorial (two hours); second term
Prerequisite(s): CHEMENG 2E04 (or 3E04), or permission of the Department

CHEMENG 4H03 - BIG DATA METHODS AND MODELING IN CHEMICAL AND MATERIALS ENGINEERING

Review of multivariate statistics. Acquiring, interpreting and processing large data sets. Introduction to dimensional reduction techniques such as principal component analysis (PCA) and projection of latent structures (PLS). Introduction to Artificial Neural Networks. Survey of methods for clustering, classification, and regression. Chemical and materials engineering applications. Coursework will include computer programming and reasoning with linear algebra.
Three lectures; one term
Prerequisite(s): One of COMMERCE 2QA3, STATS 3Y03, MATLS 3J03, IBEHS 3S03 or HTHSCI 2A03 or permission of the Department

CHEMENG 4K03 - REACTOR DESIGN FOR HETEROGENEOUS SYSTEMS: PRINCIPLES AND MACHINE LEARNING PERSPECTIVE

Handling reactor non-idealities such as presence of catalysts and non-ideal flow patterns. Analysis and design of reactors using a combination of first principles and machine learning methods. Three lectures; first term
Prerequisite(s): CHEMENG 3K04 or permission of the department

CHEMENG 4L03 - ADVANCED LABORATORY SKILLS

Experiments and projects in transport phenomena, reaction kinetics, reactor design and process control with appropriate data analysis and report writing. One lab (three hours), two lectures; first term
Prerequisite(s): CHEMENG 3L02, CHEMENG 3A04 and CHEMENG 3M04 (or CHEMENG 3TP6), and registration in Level IV or above of any Chemical Engineering program

CHEMENG 4M03 - INDUSTRIAL SEPARATION PROCESSES

Overview of industrial separation methods with focus on applications in the water and energy industries. Topics to be covered may include liquid-liquid extraction, adsorption, ion-exchange, sedimentation, filtration, and membrane technologies (ultrafiltration, reverse osmosis), with a particular emphasis on the fundamental phenomena and design principles for each topic.
Two lectures, one tutorial (two hours); first term
Prerequisite(s): CHEMENG 2O04, CHEMENG 3M04 (or CHEMENG 3TP6) or permission of the Department

CHEMENG 4N04 - ENGINEERING ECONOMICS AND PROBLEM SOLVING

Economic decision making with capital and operating cost estimation, taxation, depreciation, profitability, payback, net present value, interest rates and sensitivity analysis. Applications to design and operation of engineering systems, emphasizing safety, equipment performance, uncertainty, flexibility and troubleshooting. Students will work individually and in groups on problem-based projects.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): CHEMENG 2O04, CHEMENG 3K04, CHEMENG 3M04 (or CHEMENG 3TP6), CHEMENG 3P04, CHEMENG 3G04 and registration in the final level of any Chemical Engineering program, or permission of the Department
Antirequisite(s): ENGINEER 2B03, ENGINEER 3PX3

CHEMENG 4T03 - APPLICATIONS OF CHEMICAL ENGINEERING IN MEDICINE

Applications of chemical engineering principles to biological systems and medical problems including examples from engineered biomaterials, biomaterial-induced host body response, tissue engineering, 3D bioprinting, controlled drug delivery, and microfluidic systems.
Three lectures; second term
Prerequisite(s): CHEM 2E03 or 2OA3; registration in Level III or above in any engineering program; and permission of the Department
Cross-listed: IBEHS 4Y03

CHEMENG 4TA3 A/B - RESEARCH AND PRACTICE IN ENGINEERING EDUCATION

This course focuses on mastery of core technical engineering skills with applications through student mentorship and teaching practicum, with demonstration of deeper understanding through lecture design and presentation, assessment design, and course material development, and delivery. It also offers theoretical foundations, methods, and topics related to engineering education research.
Two lectures (first term); One Lecture and one practicum placement (second term)
Prerequisite(s): Registration in level III or above of an Engineering program, and permission of the instructor

CHEMENG 4W06 A/B - CHEMICAL PLANT DESIGN AND CAPSTONE PROJECT

Projects, often in cooperation with industry, usually involving steady-state design and computer simulation of an existing or new process. Plant equipment may be tested to develop simulation models. Sustainability analysis applied as an integral part of plant design. Cannot be taken concurrently with any co-op work term course.
Three lectures; both terms
Prerequisite(s): Registration in the final level of any Chemical Engineering program, registration or credit in CHEMENG 4N04, or permission of the department

CHEMENG 4X03 - POLYMER PROCESSING

Advancing the principles of laminar fluid mechanics by application to the field of polymer processing, stressing the development of models that describe flow in parallel and series. Focus is given to extrusion and injection molding. Examines the unique rheological properties of polymers and shows their impact on flow processes.
Three lectures; second term
Prerequisite(s): One of CHEMENG 3A04 (or CHEMENG 3TP6), MATLS 3E04 or MECHENG 3R03; CHEMENG 2O04 or MECHENG 3O04; or permission of the Department

CHEMENG 4Y04 A/B - SENIOR INDEPENDENT PROJECT

- research and design project with students working independently under the direction of a Faculty member.

Two labs (three hours); both terms. The hours assigned can be freely scheduled to suit those involved in a particular project and may include computation classes, laboratory work, discussions, or individual study.
Prerequisite(s): Registration in the final level of any Chemical Engineering program and a GPA of at least 9.5, and permission of the Department
Antirequisite(s): IBEHS 3I06 A/B S

CHEMENG 4Z03 - INTERFACIAL ENGINEERING

The physics and chemistry at the 'nano' scale including interactions forces, colloids, surface active systems, wetting, adhesion, and flocculation.
Three lectures; second term
Prerequisite(s): Registration in final level of any Engineering program or permission of the Department

Chemistry

Courses in Chemistry are administered by the Department of Chemistry and Chemical Biology.
A.N. Bourns Science Building, Room 156, ext. 23490
http://www.chemistry.mcmaster.ca/

Department Notes

1. CHEM 1AA3 is a prerequisite for CHEM 2E03 and CHEM 2E03 is a prerequisite for BIOCHEM 2EE3.
2. Students seeking permission and/or a seat authorization for a Chemistry or Chemical Biology course must submit an application for academic permission to the Department of Chemistry and Chemical Biology (email:

chemadv@mcmaster.ca) well in advance of the start of the term.

Courses

If no prerequisite is listed, the course is open.

CHEM 1A03 - INTRODUCTORY CHEMISTRY I

- discussion of chemical fundamentals, including bonding, structure, reactivity, and energetics of phase transitions, with emphasis on applications to health, energy, and the environment. Laboratories highlight experimental techniques.

Three hours (lectures, web modules), one lab (two and one half hours) every other week; one term

Prerequisite(s): Grade 12 Chemistry U and either registration in a Level I program in the Faculty of Science or Engineering I, Arts & Science I, Health Sciences I, any program above Level I; or a grade of at least 80% in Grade 12 Chemistry U; or CHEM 1R03

Co-requisite(s): WHMIS 1A00 if not already completed, must be completed prior to the first lab.

Antirequisite(s): CHEM 1E03

Not open to students with credit or registration in ISCI 1A24 A/B.

CHEM 1AA3 - INTRODUCTORY CHEMISTRY II

- discussion of organic chemistry, chemical kinetics and acid-base equilibrium, with emphasis on relevant experimental techniques and solving real problems ranging from drug discovery to environmental chemistry.

Three lectures, one lab (two and one half hours) every other week; one term

Prerequisite(s): CHEM 1A03 or CHEM 1E03

Not open to students with credit or registration in ISCI 1A24 A/B.

CHEM 1E03 - GENERAL CHEMISTRY FOR ENGINEERING I

An introduction to chemical principles for Engineering students, including reactivity, bonding, structure, energetics and electrochemistry.

Three lectures, one lab (two and one half hours) every other week; one term

Prerequisite(s): Registration in a program in Engineering

Antirequisite(s): CHEM 1A03

Not open to students with credit or registration in ISCI 1A24 A/B.

CHEM 1R03 - GENERAL CHEMISTRY

- general introduction to chemistry, suitable for students without Grade 12 Chemistry U.

Three lectures, one tutorial; one term

Prerequisite(s): Grade 11 Chemistry SCH3U

Not open to students with a grade of 80% or higher in Grade 12 Chemistry SCH4U.

Not open to students with credit or registration in CHEM 1A03.

CHEM 2A03 - QUANTITATIVE CHEMICAL ANALYSIS

The art and science of performing quantitative analysis on samples based on classical volumetric techniques and modern instrumental methods including electrochemistry, optical spectroscopy, and chromatography.

Three lectures, one lab (three hours); one term

Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3; or ISCI 1A24 A/B

Antirequisite(s): CHEM 2AA3, CHEMBIO 2A03, 2AA3

CHEM 2BC3 - MAKING CHEMISTRY MORE SUSTAINABLE

The 12 principles of Green Chemistry provide strategies for chemists and those who use chemicals to reduce their impact on the planet. Students will develop approaches to scientific problems that take sustainability into account at the conception of all new chemical syntheses and processes - "benign by design".

Three lectures; one term

Prerequisite(s): CHEM 1A03 (or 1E03) and CHEM 1AA3; or ISCI 1A24 A/B

Antirequisite(s): CHEM 2SC3

The lectures of this course are combined with CHEM 2SC3.

CHEM 2E03 - INTRODUCTORY ORGANIC CHEMISTRY

An introduction to organic chemistry with an emphasis on structure and bonding, conformations and stereochemistry, and reaction processes around alkyl halide, alkene, and carbonyl centers. Special topics may include spectroscopy, polymers, and/or biomolecules.

Three lectures, one tutorial; one term

Prerequisite(s): CHEM 1A03 (or 1E03) and CHEM 1AA3; or ISCI 1A24 A/B

Not open to students with credit or registration in CHEM 2OA3, 2OC3, 2OG3 or CHEMBIO 2OA3, 2OG3.

CHEM 2E03 is not a prerequisite for further courses in Organic Chemistry.

This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

CHEM 2II3 - INTRODUCTORY INORGANIC CHEMISTRY: STRUCTURE AND BONDING

The basic theories and models of bonding and structure that explain the combination of elements across the periodic table with primary emphasis on the main-group elements.

Three lectures, one tutorial; one term

Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3; or ISCI 1A24 A/B

CHEM 2LB3 - TOOLS FOR CHEMICAL DISCOVERY

Advanced techniques for synthesis and characterization of organic and inorganic molecules and materials, and the use of modern instrumentation in chemistry.

One lecture, two labs; one term

Prerequisite(s): Registration in an Honours Chemistry or Honours Sustainable Chemistry program

CHEM 2OA3 - ORGANIC CHEMISTRY I

An introduction to organic chemistry with emphasis on the reactions of functional groups and an introduction to spectroscopic techniques for structure determination.

Three lectures, one lab (three hours) every other week, one tutorial (one hour) every week; one term

Prerequisite(s): ISCI 1A24 A/B or CHEM 1AA3

Antirequisite(s): CHEM 2OC3, 2OG3, CHEMBIO 2OA3, 2OG3

Students with a grade of less than C- in ISCI 1A24 A/B or CHEM 1AA3 are strongly encouraged to consider CHEM 2E03 before attempting CHEM 2OA3, or as an alternative to CHEM 2OA3. Registration priority will be given to students for whom this course is a program requirement.

Not open to students registered in Honours Chemical Biology or to students with credit or registration in CHEM 2OC3, 2OG3, CHEMBIO 2OA3, 2OG3.

CHEM 2OB3 - ORGANIC CHEMISTRY II

Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbohydrates, applications of spectroscopic techniques in organic chemistry.

Three lectures, one lab (three hours) every other week; one tutorial (one hour) every week; one term

Prerequisite(s): One of CHEM 2OA3, 2OC3, CHEM 2OG3, CHEMBIO 2OA3, CHEMBIO 2OG3

Registration priority will be given to students for whom this course is a program requirement.

Antirequisite(s): CHEM 2OD3, CHEMBIO 2OB3, CHEMBIO 2OD3
Not open to students registered in Honours Chemical Biology.

CHEM 2OD3 - SYNTHESIS AND FUNCTION OF ORGANIC MOLECULES

Fundamental reactions used to construct organic molecules, nucleophilic substitutions at carbonyl centres, biomolecules, and applications of spectroscopic techniques in organic chemistry. Emphasis on reaction mechanisms.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 2OG3
Antirequisite(s): CHEM 2OB3, CHEMBIO 2OB3, CHEMBIO 2OD3

CHEM 2OG3 - STRUCTURE AND REACTIVITY OF ORGANIC MOLECULES

Examines how structure affects properties and chemistry of organic molecules important for life, health, and advanced technologies. Includes fundamentals of reactions of functional groups, organic reaction mechanisms and spectroscopic techniques for structure determination.
Three lectures, one lab (four hours), one tutorial; one term
Prerequisite(s): ISCI 1A24 A/B; or CHEM 1A03 (or 1E03) and 1AA3; and registration in an Honours program; or CHEM 1A03 (or 1E03) and 1AA3 with a grade of at least C-; or CHEM 1A03 (or 1E03), 1AA3 and permission of the Department (See *Department Note 2* above.)
Antirequisite(s): CHEM 2OA3, 2OC3, CHEMBIO 2OA3, 2OG3

CHEM 2P03 - APPLICATIONS OF PHYSICAL CHEMISTRY

Chemical thermodynamics and kinetics and their application to biological, chemical and environmental systems.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3; and one of ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1M03, 1MM3, 1X03, 1ZA3; or ISCI 1A24 A/B
Antirequisite(s): EARTHSC 2L03, ENVIRSC 2L03, PHYSICS 2H04
Cross-list(s): CHEMBIO 2P03
Not open to students with credit or registration in ISCI 2A18 A/B.

CHEM 2Q03 - INQUIRY FOR CHEMISTRY

An introduction to current Chemistry research, combined with developing skills in scientific writing and oral presentation, searching and analyzing the scientific literature and databases, scientific software, and other transferrable skills.
Three lectures; one term
Prerequisite(s): Registration in Honours Chemistry (B.Sc.) or Honours Sustainable Chemistry (B.A.Sc.) or Honours Integrated Science (B.Sc.) (Chemistry Concentration)
Antirequisite(s): CHEMBIO 2Q03

CHEM 2SC3 - SUSTAINABLE CHEMISTRY - GREEN CHEMISTRY

An introduction to the 12 principles of Green Chemistry, which provide guidelines for ways to 'reduce the harm' that chemical processes do to the planet. Students will develop a novel way to approach scientific problems by taking into account sustainability at the conception of all new chemical syntheses and processes - 'benign by design'.
Three lectures; one term
Prerequisite(s): CHEM 1A03 (or 1E03) and CHEM 1AA3; or ISCI 1A24 A/B; and registration in an Honours Chemistry or Honours Chemical Biology program or Honours Sustainable Chemistry
Antirequisite(s): CHEM 2BC3
The lectures of this course are combined with CHEM 2BC3.

CHEM 3AA3 - INSTRUMENTAL ANALYSIS

Modern instrumental analytical techniques will be examined, including atomic and molecular spectroscopy, mass spectrometry and chromatography with emphasis on analytical design and data interpretation.
Three lectures; one term
Prerequisite(s): One of CHEM 2A03, 2AA3, CHEMBIO 2A03, 2AA3
Antirequisite(s): CHEMBIO 3AA3

CHEM 3EP3 A/B S - ADVANCED CHEMISTRY PLACEMENT

This placement course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement.
Students are responsible to arrange a suitable placement, obtain appropriate permission from both a placement and academic supervisor, and are required to submit an application to the Department of Chemistry and Chemical Biology thirty days prior to the date classes begin in each Term (see the Sessional Dates section of the Undergraduate Calendar). More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.
May be completed over one or two terms
Prerequisite(s): Registration in level III or above of an Honours Chemistry or an Honours Sustainable Chemistry program; and permission of the academic supervisor and the course coordinator (or designate)
Not to be taken concurrently with a Co-op work term.

CHEM 3EQ3 - EXPERIENTIAL SUSTAINABLE CHEMISTRY

- project exploring applications of Sustainable Chemistry. Students will develop a testable hypothesis and perform some laboratory work to test it. The student will complete an academic component in the form of a report. Students are required to submit an application to the Department of Chemistry and Chemical Biology thirty days prior to the date classes begin in each Term (see the Sessional Dates section of the Undergraduate Calendar). More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.

One lecture, one lab; one term
Prerequisite(s): Registration in an Honours Sustainable Chemistry program; and permission of the course coordinator (or designate)

CHEM 3I03 - INDUSTRIAL CHEMISTRY

- systematic study of modern processes in the chemical industry, as well as their environmental impact and the role of emerging green chemistry technologies.

Three lectures; one term
Prerequisite(s): One of CHEM 2E03, 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3; or registration in Level III or IV of a Chemical Engineering program

CHEM 3II3 - INTRODUCTION TO TRANSITION METAL CHEMISTRY

An introduction to transition metal chemistry, with focus on the relationships between structure, bonding, orbitals, properties, spectroscopy and applications.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 1AA3 or ISCI 1A24 A/B

CHEM 3LA3 - STRATEGIES FOR CHEMICAL DISCOVERY

An advanced laboratory course emphasizing the principles of chemical research, including synthesis, analysis, characterization, and application of organic, inorganic, and organometallic compounds. Exposes students to an array of advanced characterization techniques used in the modern chemical research laboratory.
One lecture, two labs; one term
Prerequisite(s): CHEM 2LB3

CHEM 3OA3 - ORGANIC SYNTHESIS

- survey of contemporary organic synthesis, including functional group manipulations, use of protecting groups, and strategic carbon-carbon bond forming reactions. Applications involving multistep syntheses of complex organic molecules will be presented.

Three lectures; one term
Prerequisite(s): One of CHEM 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3
May be offered in alternate years.

CHEM 3PA3 - QUANTUM MECHANICS AND SPECTROSCOPY

An introduction to quantum chemistry and its applications in spectroscopy and structure and unusual phenomena at the nanoscale.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 2PC3 or 3PC3; or CHEM 1AA3 and one of MATH 1AA3, 1LT3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B and MATH 1B03 OR 1ZC3; and PHYSICS 1AA3, 1CC3, or ARTSSCI 2D06 A/B; or ISCI 1A24 A/B and MATH 1B03 or 1ZC3

CHEM 3PC3 - MATHEMATICAL TOOLS FOR CHEMICAL PROBLEMS

An introduction to vector calculus, differential equations and linear algebra - including solving linear equations, eigenvalues and eigenvectors - motivated by problems of chemical equilibrium and kinetics.
Three lectures, one tutorial; one term
Prerequisite(s): One of CHEM 2P03, CHEMBIO 2P03, EARTHSC 2L03, ENGINEER 2H03, ENVIRSC 2L03, ISCI 2A18 A/B, MATLS 2B03, PHYSICS 2H04; and one of ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1X03, 1ZA3, ISCI 1A24 A/B; or permission of the Instructor
Antirequisite(s): CHEM 2PC3

CHEM 3RC3 - RADIOISOTOPES IN MEDICINE

- systematic study of the use of radioactive isotopes and radiotracers in the physical and life sciences, including: radioisotope production; elucidating biochemical pathways using radiotracers; diagnostic radiopharmaceuticals in cancer and mental health care; and therapeutic radioisotopes and radiopharmaceuticals.

Three lectures
Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3; or ISCI 1A24 A/B
Cross-list(s): LIFESCI 3RC3

CHEM 3RP3 - RESEARCH PRACTICUM IN CHEMISTRY

- one term research project undertaken in a chemistry laboratory during the fall, winter or summer term which requires the submission of a formal report. May be taken in preparation for a Level IV thesis.

Students are responsible to arrange a suitable research experience, obtain appropriate permission from both a placement and academic supervisor, and are required to submit an application to Department of Chemistry and Chemical Biology thirty days prior to the date classes begin in each Term (see the Sessional Dates in the Undergraduate Calendar). More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.
Prerequisite(s): Registration in level III or above of an Honours Chemistry or an Honours Sustainable Chemistry program; and permission of the academic supervisor and the course coordinator (or designate)
Not to be taken concurrently with a Co-op work term. The course may be repeated once, in a subsequent term, if the topic and project are different.

CHEM 3SC3 - SUSTAINABLE CHEMISTRY: NATURAL RESOURCES AND ENERGY

Sustainable Use of Natural Resources and Energy. Using examples and case studies, this course will apply the principles of green chemistry and sustainability to the life cycles of resources such as hydrogen, water and endangered elements.
Three lectures; one term
Prerequisite(s): CHEM 2SC3 or CHEM 2BC3

CHEM 4AA3 - RECENT ADVANCES IN ANALYTICAL CHEMISTRY

Recent advances in analytical chemistry will include an introduction to chemometrics and multivariate analysis, as well as new developments in separation science and mass spectrometry.
Three lectures; one term
Prerequisite(s): CHEM 3AA3 or CHEMBIO 3AA3
May be offered in alternate years.

CHEM 4D03 - ORGANIC STRUCTURE AND SYNTHESIS

This course will focus on strategic carbon-carbon and carbon-heteroatom bond forming reactions and their applications to both retrosynthetic analysis and total synthesis of complex organic molecules. Applications of green-chemical principles, catalysis and organocatalysis will be emphasized in their historical context.
Three lectures; one term
Prerequisite(s): CHEM 3OA3 or CHEMBIO 3OA3
May be offered in alternate years.

CHEM 4G12 A/B - SENIOR THESIS

- thesis based on a research project under the direction of a member or associate member of the Department of Chemistry and Chemical Biology, or a member of the Chemical Biology Graduate Program. Supervisors from other departments may be approved on an individual basis by the course coordinator. More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.

Students are responsible for securing a suitable project supervisor, and are required to submit an application thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar).
Two terms
Prerequisite(s): Registration in Level IV of any Honours Chemistry (B.Sc.) or Honours Sustainable Chemistry (B.A.Sc.) program and a GPA of at least 6.0; or permission of the Department
Antirequisite(s): CHEM 4G09 A/B, CHEM 4RP6 A/B S
Not open to students with credit or registration in ISCI 4A12 A/B.

CHEM 4IA3 - PHYSICAL AND SPECTROSCOPIC METHODS FOR INORGANIC STRUCTURE DETERMINATION

Structural and spectroscopic methods such as multi-nuclear NMR, EPR, Msbauer and vibrational spectroscopies are covered. Inquiry directed problems

and topics illustrate applications in contemporary inorganic chemistry.
Three lectures, one tutorial; one term
Prerequisite(s): CHEM 2II3, 3II3
May be offered in alternate years.

CHEM 4IB3 - BIO-INORGANIC CHEMISTRY

Inorganic elements and their behaviour in biological systems. Topics for study include metalloenzymes, bio-redox agents, transport proteins, biomimetic inorganic complexes, metallodrugs, and radiopharmaceuticals.
Three lectures; one term
Prerequisite(s): CHEM 3II3
Cross-list(s): CHEMBIO 4IB3
May be offered in alternate years.

CHEM 4IC3 - SOLID STATE INORGANIC MATERIALS: STRUCTURES, PROPERTIES, CHARACTERIZATION AND APPLICATIONS

Structure-property relationships that form the basis for the technological applications of non molecular inorganic solids, including oxides, metals and intermetallic compounds.
Three lectures; one term
Prerequisite(s): CHEM 2II3, 3II3
May be offered in alternate years.

CHEM 4II3 - TRANSITION METAL ORGANOMETALLIC CHEMISTRY AND CATALYSIS

Organometallic complexes and their reactivity, with a view towards catalyst design. An inquiry project is included.
Three lectures; one term
Prerequisite(s): CHEM 2II3, 3II3
May be offered in alternate years.

CHEM 4OA3 - NATURAL PRODUCTS

- description of basic building blocks and reaction mechanisms involved in the biosynthesis of naturally occurring compounds.

Three lectures; one term
Prerequisite(s): CHEM 3OA3 or CHEMBIO 3OA3
Cross-list(s): CHEMBIO 4OA3

CHEM 4OP3 - POLYMERS AND ORGANIC MATERIALS

Fundamentals of polymer structure, and the structure-property relationships that enable polymer applications in a wide array of products. Both traditional and modern polymerization methods are covered, with an emphasis on methods enabling the formation of advanced polymer architectures.
Three lectures; one term
Prerequisite(s): One of CHEM 2OB3, 2OD3, CHEMBIO 2OB3, 2OD3
Antirequisite: CHEM 4OB3
May be offered in alternate years.

CHEM 4PB3 - COMPUTATIONAL MODELS FOR ELECTRONIC STRUCTURE AND CHEMICAL BONDING

Modern computational methods for studying atoms, molecules, and materials.
Three lectures; one term
Prerequisite(s): CHEM 3PA3 or PHYSICS 3MM3

CHEM 4Q03 - PEER TUTORING IN CHEMISTRY

This course provides students with practical experience in teaching in Chemistry. Peer tutors support and guide students in CHEM 2Q03. They evaluate, and provide effective feedback on, in-progress work, presentations, and written reports. Peer tutors practice effective presentation and scientific writing skills and receive feedback on their progress.
Applications are available in April in the preceding academic year on the Department of Chemistry and Chemical Biology website. Applications are due by May 31. Successful applicants will be notified by email.
One lecture (three hours), tutorial (one hour); one term
Prerequisite(s): CHEM 2Q03 and permission of the instructor
Antirequisite(s): CHEMBIO 4Q03

CHEM 4RP6 A/B S - RESEARCH PROJECT IN CHEMISTRY

- project supervised by a member or associate member of the Department of Chemistry and Chemical Biology or a member of the Chemical Biology Graduate Program. Supervisors from other departments may be approved on an individual basis by the course coordinator. More information and the application form can be found at https://chemistry.mcmaster.ca/undergraduate/forms-documents.html.

Students are responsible for securing a suitable project supervisor, and are required to submit an application thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar).
Prerequisite(s): Registration in Level IV Honours Chemistry (B.Sc.) or Honours Sustainable Chemistry (B.A.Sc.) and permission of the Department. Students are expected to have a Grade Point Average of at least 5.0.
Antirequisite(s): CHEM 4G09 A/B, CHEM 4G12 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

CHEM 4SC3 - SUSTAINABLE CHEMISTRY - ANALYSIS AND REGULATION

This course develops the skills necessary to use numerical metrics for 'green' and 'sustainable' chemistry in an industrial or academic setting, including those used by regulators. Topics will include life cycle analysis, risk assessment, and impacts on the environment including bioaccumulation of small molecules and polymers, and remediation.
Three lectures; one term
Prerequisite(s): CHEM 2SC3 or CHEM 2BC3

CHEM 4W03 - NATURAL AND SYNTHETIC MATERIALS

The microscopic origins of the macroscopic properties of materials including soft polymer and biological systems.
Three lectures; one term
Prerequisite(s): CHEM 2PB3, CHEMBIO 2P03 or CHEM 2P03
Antirequisite(s): CHEM 3PB3
May be offered in alternate years.

Chinese

Chinese 1Z06 is administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/
Course
If no prerequisite is listed, the course is open.

CHINESE 1Z06 A/B - MANDARIN CHINESE FOR BEGINNERS

An intensive beginner's course in modern standard (Mandarin) Chinese designed for students with no prior knowledge of the language. The focus is on

developing proficiency in the skills of listening, speaking, reading and writing. In addition to general knowledge about China and Chinese culture, students will be exposed to some basic Chinese script.
Three hours; two terms
Not open to native speakers of Chinese or to students with credit in Grade 12 U or M equivalent.

Civic Vitality & Democratic Engagement

CIVDEM 3CS3 - CAMPAIGN SCHOOL

This course offers an in-course and experiential learning experience in campaign and election management using a municipal, provincial or federal election as a case study.

- hours

Prerequisite(s): POLSCI 3EL3 or registration in Level III Political Science (or higher) or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list(s): POLSCI 3CS3
This course is administered by Political Science.

CIVDEM 3EL3 - ELECTION LAW AND POLICY

This course examines the politics, policy, and legal foundations of electoral systems in Canada and on a comparative basis.
Prerequisite(s): POLSCI 1AA3 and registration in Level III or above
Cross-list(s): POLSCI 3EL3
This course is administered by Political Science.

CIVDEM 3Z03 - CANADIAN PUBLIC SECTOR MANAGEMENT

This course introduces students to the structures and processes of management in the Canadian public sector. The purpose is to highlight the role played by institutions, processes, and personnel in governing Canada. The course provides an exposure to the organizational and operational arrangements and practices in the public service, and examines the governing framework of the country.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above.
Cross-list(s): POLSCI 3Z03
This course is administered by Political Science.

CIVDEM 4EC6 A/B - PARTNERED LEARNING IN ELECTIONS AND DEMOCRACY

This interdisciplinary course examines ways to strengthen electoral integrity, foster inclusive civic participation, and build democratic resiliency - whether in the local community, nationally, or in places around the world. Students gain research skills and foundational knowledge on specific topics pursuant to weekly course schedule, and work in teams on a partner-informed research project.
Prerequisite(s): Registration in Level IV Political Science or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list(s): POLSCI 4EC6 A/B, POLSCI 4ED6 A/B
This course is administered by Political Science

CIVDEM 4ED6 A/B - PARTNERED LEARNING IN ELECTIONS AND DEMOCRACY

This interdisciplinary course examines ways to strengthen electoral integrity, foster inclusive civic participation, and build democratic resiliency - whether in the local community, nationally, or in places around the world. Students gain research skills and foundational knowledge on specific topics pursuant to weekly course schedule, and work in teams on a partner-informed research project.
Prerequisite(s): Registration in Level IV Political Science or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Antirequisite(s): POLSCI 4EC6 A/B; CIVDEM 4EC6 A/B
Cross-list(s): POLSCI 4ED6 A/B - Partnered Learning in Elections and Democracy
This course is administered by Political Science.

CIVDEM 4EM3 - ELECTIONS MANAGEMENT

This course covers the general building blocks of election administration from voter registration to recounts. Students will learn how election administration bodies manage different aspects of the election process; recognize the key debates and tensions in election policy; and identify their impacts on election administration.

- hours (seminar)

Prerequisite(s): Registration in Level IV Political Science or IBH or Commerce or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list(s): COMMERCE 4EM3, POLSCI 4EM3
This course is administered by Political Science.

Civil Eng Infrastructure Tech

Courses in Civil Engineering Infrastructure Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca

CIVTECH 3GE3 - GEOTECHNICAL MATERIALS AND ANALYSIS

Composition of soils, soil identification and classification; compaction; seepage theory; effective stress concept; stresses and displacements using elastic solutions; consolidation theory and settlement.
Two lectures, one lab; one term
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 3GT3 - GEOTECHNICAL DESIGN

Shear strength characteristics and failure criteria for soils; direct shear, triaxial, plane strain and field tests; earth pressure theory; bearing capacity theory; slope stability and embankment analysis; borehole testing and interpretation.
Two lectures, one lab; one term
Prerequisite(s): CIVTECH 3GE3, ENGTECH 3ML3, ENGTECH 3ET0 and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 3PM3 - HIGHWAY DESIGN, CONSTRUCTION, AND MAINTENANCE

Geometric design. Horizontal and vertical alignment, and intersections. Aggregates and soils, asphalt and Portland cement concrete; design of bituminous mixtures; pavement rehabilitation; distress mechanisms; construction techniques; preventative measures.
Three lectures; one term
Prerequisite(s): CIVTECH 3GE3, ENGTECH 3ML3, and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 3SA3 - STRUCTURAL ANALYSIS

Structural analysis and modelling of linear elastic truss, beam and frame structures; analysis of determinate and indeterminate structures; matrix stiffness method of analysis.
Three lectures; one term
Prerequisite(s): ENGTECH 3ML3 and registration in the Civil Engineering Infrastructure Technology Co-op program
CIVTECH 4RC3 may be taken concurrently with this course.

CIVTECH 3TP3 - TRANSPORTATION PLANNING AND MODELLING

Fundamental theories and applications of transportation planning and modelling; short and long range transportation planning; traffic impacts of land development; trip generation and gravity models; software applications.
Two lectures, one lab; one term
Prerequisite(s): ENGTECH 3ST3 and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4BC3 - BUILDING SCIENCE

Topics include building science theory, heat, air and moisture transfer, building envelope, roofing and green roofs, sustainability considerations, assessment, durability, performance, LEED design, codes and regulations.
Three lectures; one term
Prerequisite(s): ENGTECH 3SP3, ENGTECH 4TF3, and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4BD3 - BRIDGE DESIGN, MAINTENANCE AND REPAIR

Bridge elements, structural forms, design loads and required concrete and steel properties. Causes and mechanisms of damage in bridges and of methods of damage detection and assessment. Effective repair materials and techniques and maintenance strategies.
Three lectures; one term
Prerequisite(s): CIVTECH 4RC3 or 4SD3; and registration in the Civil Engineering Infrastructure Technology Co-op program
CIVTECH 4RC3 or 4SD3 may be taken concurrently with this course.

CIVTECH 4LU3 - ADVANCED LAND USE PLANNING

Formerly CIVTECH 3LU3.
Management of land use; land development and redevelopment processes; infrastructure requirements; land redevelopment; principles and practices of land use planning, legislation and regulations; public consultation; GIS applications.
Three lectures; one term
Prerequisite(s): GENTECH 4SE3 and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4MH3 - HYDRAULIC ENGINEERING

Fluid mechanics applications in civil engineering. Topics include; flow in open channels, hydraulic jump, weirs and spillways, forces on immersed bodies, pumps in series/parallel and fluid measurements.
Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, one of CIVTECH 3FM3, ENGTECH 4TF3, and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4RC3 - REINFORCED CONCRETE AND MASONRY DESIGN

Formerly CIVTECH 3RC3
Design by limit states methods to ensure adequate capacities for bending moment, shear and diagonal tension, axial force; and design to satisfy serviceability requirements.
Three lectures; one term
Prerequisite(s): CIVTECH 3SA3, and registration in the Civil Engineering Infrastructure Technology Co-op program
CIVTECH 3SA3 may be taken concurrently with this course.

CIVTECH 4SD3 - STRUCTURAL STEEL DESIGN

Limit states design methods to ensure capacities for bending moment, shear and diagonal tension, axial force; serviceability requirements; failure analysis for common structural materials.
Three lectures; one term
Prerequisite(s): CIVTECH 3SA3 and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4UM3 - ASSET MANAGEMENT

Formerly CIVTECH 3UM3
Introduction to utilities products and networks. Planning and management tools for infrastructure, including inventory management, needs assessment, demand management and investment decisions.
Three lectures; one term
Prerequisite(s): GENTECH 3EE3 and registration in the Civil Engineering Infrastructure Technology Co-op program

CIVTECH 4WT3 - MUNICIPAL AND ENVIRONMENTAL ENGINEERING

Formerly CIVTECH 3WT3
Design, maintenance and rehabilitation of municipal water systems. This includes drinking water distribution systems, sewage and rainwater collection, management and pumping. Land development and population forecasting as it relates to water and wastewater demand.
Three lectures; one term
Prerequisite(s): ENGTECH 4TF3 and registration in the Civil Engineering Infrastructure Technology Co-op program

Civil Engineering

Courses in Civil Engineering are administered by the Department of Civil Engineering.
John Hodgins Engineering Building, Room 301, ext. 24287 or 24315
http://www.eng.mcmaster.ca/civil

Department Note

- All Civil Engineering courses are open to students registered in a civil engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other engineering departments and other faculties.

CIVENG 2A03 - SURVEYING AND MEASUREMENT FOR TRANSPORTATION AND CONSTRUCTION

Introduction to measurement and computational techniques of surveying, the theory of measurement and errors, adjustment of observations; laboratory measurement and instrumentation with a focus on geometric profiles for road networks and construction; formal Civil Engineering drawings, interpretation, and communication of information.

Two lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): Registration in Level II or above of a Civil Engineering program

CIVENG 2B04 - PRINCIPLES OF ENVIRONMENTAL ENGINEERING

Sustainability, ecosystems and climate change; mass balance; reaction kinetics; reactor theory; water quality; water and wastewater treatment; solid waste management; air pollution control.
Three lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): Registration in Level II Engineering or permission of the Department

CIVENG 2C04 - STRUCTURAL MECHANICS

Review of stress/strain state and strain-displacement relations; plastic deformations and residual stresses due to axial loading and bending; torsion of noncircular and thin-walled sections; unsymmetric bending and eccentric axial loading, shear stresses and unsymmetric loading of thin-walled members; transformation of stress and strain; stress/strain invariants; yield and fracture criteria energy methods; stability of columns.
Three lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): Credit or registration in CIVENG 2P04
Antirequisite(s): MECHENG 3A03

CIVENG 2E03 - COMPUTER APPLICATIONS IN CIVIL ENGINEERING

Numerical techniques including error analysis, root finding, linear algebraic equations, curve fitting, integration and differentiation, ordinary differential equations; sensitivity analysis; use of several software packages for numerical analysis; civil engineering applications.
Two lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): Credit or registration in CIVENG 2P04
Antirequisite(s): ENGPHYS 2CE4, CHEMENG 2E04, MECHENG 3F04, COMPENG 3SK3, ENGPHYS 3NM4, MECHTRON 3X03, SFWRENG 4X03

CIVENG 2J03 - ENGINEERING GEOLOGY

Fundamentals of engineering geology; earth structure and rock types; geological structures; earth surface processes; engineering properties and behaviour of soils and rocks; fundamentals of groundwater conditions, flow, and monitoring; geological material used in construction; subsurface exploration and site investigation.
Two lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): Registration in Level II or above Engineering or permission of the Department
Antirequisite(s): CIVENG 2J04

CIVENG 2O04 - FLUID MECHANICS

Fluid properties; hydrostatics; continuity, momentum and energy equations; potential flow; laminar and turbulent flow; flow in closed conduits, transients, open channel flow; hydraulic cross-sections.
Three lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): CIVENG 2P04, MATH 2Z03; credit or registration in MATH 2ZZ3
Antirequisite(s): MECHENG 3O04

CIVENG 2P04 - STATICS AND MECHANICS OF MATERIALS

Principles of statics as applied to rigid bodies. Internal forces, shear and bending moment diagrams, Stress and strain, elastic behaviour of simple members under axial force, torsion, bending and traverse shear. Principal stresses.
Three lectures, one tutorial (two hours); first term
Prerequisite(s):PHYSICS 1D03 and registration in Level II or above of a Civil or Materials Engineering program
Antirequisite(s): MECHENG 2P04, ENGINEER 2P04, ENGPHYS 2P04

CIVENG 2X03 - INTRODUCTION TO CIVIL ENGINEERING

- classroom and field-based course introducing students to civil engineering works in the urban and natural environment, software commonly used in industry, and local firms, sites, and facilities related to civil engineering.

Two lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): Registration in Level II of a Civil Engineering program or permission of the Department

CIVENG 3A03 - GEOTECHNICAL ENGINEERING I

Composition of soils, soil identification and classification; compaction; seepage theory; effective stress concept; stresses and displacements using elastic solutions; consolidation theory; numerical solutions.
Two lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): CIVENG 2J03 or CIVENG 2J04

CIVENG 3B03 - GEOTECHNICAL ENGINEERING II

Shear strength characteristics and failure criteria for soils; direct shear, triaxial, plane strain and field tests; earth pressure theory; bearing capacity theory; slope stability and embankment analysis.
Two lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): Credit or registration in CIVENG 3A03

CIVENG 3C03 - ENGINEERING SYSTEMS

Mathematical models and systems; economic comparison of projects; optimization; linear, nonlinear and dynamic programming; simulation modelling. With an emphasis on transportation and other civil engineering applications.
Two lectures, one tutorial (two hours); first term
Prerequisite(s): Registration in Level III or above of any Engineering program

CIVENG 3G04 - STRUCTURAL ANALYSIS

Structural analysis and modelling of linear elastic truss, beam and frame structures; stress resultants and deformations of statically determinate structures; methods for analysis of indeterminate structures; stiffness matrix method; plane frame computer analysis.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): CIVENG 2C04 and CIVENG 2P04

CIVENG 3J04 - REINFORCED CONCRETE DESIGN

Design by limit states methods to ensure adequate capacities for bending moment, shear and diagonal tension, axial force, bond and anchorage; and design to satisfy serviceability requirements for deflection and cracking; practical design requirements; interpretation of building code for behaviour of structures.
Three lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): Credit or registration in CICENG 3G04, 3P03 or 3P04

CIVENG 3K03 - INTRODUCTION TO TRANSPORTATION ENGINEERING

- transportation impact study serves as the focus for group projects, and provides the context for application of material on traffic flow characteristics, capacity and control for signalized and unsignalized intersections, and travel demand forecasting. Safety; social impacts.

Two lectures, one tutorial (two hours); first term
Prerequisite(s): Registration in Level III or above of any Engineering program

CIVENG 3L03 - WATER QUALITY

Physical, chemical and biological characteristics of water; stoichiometry; thermodynamics; acid/base chemistry; carbonate system; nitrogen and phosphorous cycles; mathematical modeling of physical systems; water quality standards.
Two lectures, one tutorial (two hours), one lab (three hours); second term
Prerequisite(s): Credit or registration in CHEMENG 2D04 or CIVENG 2B04

CIVENG 3M03 - MUNICIPAL HYDRAULICS

Analysis/design of water distribution networks; analysis and design of wastewater collection systems; pumps; surface and groundwater supplies.
Two lectures, one tutorial (two hours); second term
Prerequisite(s): CIVENG 2O04; and credit or registration in either STATS 3J04

CIVENG 3P04 - CIVIL ENGINEERING MATERIALS AND DESIGN

Characteristics, behaviour and use of Civil Engineering materials: concrete, metals, wood, and composites; Physical, chemical and mechanical properties; Quality control and material tests; Concepts of Structural design, limit states design, estimation of structural loads.
Three lectures, one tutorial (two hours), one lab (three hours); first term
Prerequisite(s): CIVENG 2C04; and MATLS 1M03 or ENGINEER 1P13 A/B or IBEHS 1P10 A/B

CIVENG 4A04 - ENGINEERING HYDROLOGY

Hydrologic cycle; climate; hydraulic and hydrologic processes, precipitation; unit hydrographs; hydrologic statistics, hydrologic routing; introduction to groundwater flow.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3M03

CIVENG 4BP4 - BUILDING SCIENCE

Building science theory, heat, air and moisture transfer, building envelope, building systems, energy consumption, sustainability considerations, LEED design.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3P04 and CIVENG 3J04 or registration in Level IV or above in the Integrated Biomedical Engineering & Health Sciences (IBEHS) program

CIVENG 4CA4 - CONSTRUCTION MANAGEMENT AND AUTOMATION

This course covers the fundamental concepts of construction projects and construction management as well as tools and techniques in construction scheduling, estimating, and project control. The course includes an introduction to a range of computer-aided construction management tools and concepts including Building Information Modeling (BIM), automation and telematics, and advanced technological trends in construction.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): ENGINEER 2B03 or ENGINEER 3PX3 or IBEHS 4P04
Antirequisite(s): CIVENG 3RR3, 4CM4

CIVENG 4DD4 - STRUCTURAL DYNAMICS AND SEISMIC DESIGN

Introduction to linear elastic structural dynamics including single and multi degree-of-freedom systems. Introduction to seismic design philosophy including capacity design, ductility, and collapse mechanisms. Design, detailing, and analysis of selected lateral force resisting systems will be covered using current design codes.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3G04 and CIVENG 3J04 and credit or registration in CIVENG 4N04
Antirequisite(s): CIVENG 4ED4, 4SD4

CIVENG 4G04 - PAVEMENT MATERIALS AND DESIGN

Components of highway pavements; ground water and drainage for highway facilities; soil compaction and stabilization; aggregates; bituminous materials; asphalt mix design; flexible and rigid pavement design; embankment design.
Three lectures, one tutorial (two hours), one lab (three hours); one term
Prerequisite(s): CIVENG 3B03

CIVENG 4K04 - MODERN METHODS OF STRUCTURAL ANALYSIS

Stiffness method; development and applications in structural analysis. Introduction to finite element method. Influence lines, elastic stability analysis of frames with and without sway effects. Application of computer programs.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3G04

CIVENG 4L04 - DESIGN OF WATER RESOURCES SYSTEMS

Investigation, planning, analysis and design of water resources systems, climate change. Introduction to GIS tools. Frequency analysis, design storms, urban drainage and analysis, floodplain analysis and flood control.
Two lectures, one tutorial (two hours), one lab (three hours); one term
Prerequisite(s): CIVENG 3M03

CIVENG 4N04 - STEEL STRUCTURES

Introduction to structural design in steel: gravity and lateral loads and load paths in buildings, tension members, bolted and welded connections, compression members, braced and unbraced beams, combined axial and flexural loading.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3G04, CIVENG 3P04

CIVENG 4P04 - ENGINEERING HYDROGEOLOGY

This course covers the fundamental concepts of movement and storage of water within aquifer systems and its importance in the hydrologic cycle. The topics include Darcy's equation, the groundwater flow equations, aquifer properties, heterogeneity, anisotropy, aquifer testing, well hydraulics, groundwater-surface water interaction, groundwater resources and management. Physical processes influencing groundwater contamination are also introduced.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 2O04, CIVENG 2J03 or CIVENG 2J04, MATH 2Z03
Antirequisite(s): EARTHSC 3W03

CIVENG 4S04 - FOUNDATION ENGINEERING

Principles of foundation design; stability analysis; bearing capacity, settlement and location, footings, deep foundations, piles, pile groups and drilled piers; retaining walls.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3B03

CIVENG 4SM4 - STORMWATER MANAGEMENT MODELING AND ANALYSIS

The course introduces various structural and non-structural stormwater management measures. The design and performance of some of the structural stormwater management measures are examined in detail. Modeling and analyses conducted for the planning, design and operation of stormwater management systems are the focus of this course.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3M03

CIVENG 4T04 - TRANSIT MODELLING AND INTELLIGENT TRANSPORTATION SYSTEMS

Introduction to advanced traffic signal modelling, basic Transit Engineering concepts and Intelligent Transportation Systems.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3K03

CIVENG 4TA4 - TRAFFIC ANALYSIS: THEORY AND SIMULATION

Traffic operation and transportation network analysis, including traffic studies, traffic flow models, shockwave analysis, advanced analysis of signalized intersections, capacity and level of service analysis, and road network simulation.
Three lectures, one tutorial (two hours), one lab (two hours); one term
Prerequisite(s): CIVENG 3K03

CIVENG 4V04 - BIOLOGICAL ASPECTS OF WASTEWATER TREATMENT

Microbial kinetics and cell yield in biological wastewater treatment; conventional activated sludge systems; models of activated sludge systems; aeration systems; sedimentation; membrane bioreactors; biological nutrient removal; sequential batch reactors; biosolids treatment, including sludge thickening, anaerobic digestion and dewatering; attached growth reactors, including trickling filters, rotation disk contactors and fluidized bed reactors.
Three lectures, one tutorial (two hours), one lab (three hours); one term
Prerequisite(s): CIVENG 3L03 or CHEMENG 2D04 or permission of the department
Antirequisite(s): ENGINEER 4U03

CIVENG 4W04 - DESIGN OF LOW RISE BUILDINGS

Structural systems and load distribution, design of masonry, wood, and cold-formed steel. Introduction to building envelope design.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3J04,CIVENG 3G04 and credit or registration in CIVENG 4N04

CIVENG 4X06 A/B - DESIGN AND SYNTHESIS PROJECT IN CIVIL ENGINEERING

Capstone project supervised by faculty members in civil engineering, involving design and synthesis that reinforces concepts from structural and/or municipal engineering. Exposure to elements of teamwork, sustainability, social responsibility and project management.
Three lectures, two hours of design studio; both terms
Prerequisite(s): CIVENG 3G04, CIVENG 3L03, CIVENG 3J04 and registration in a final level of a Civil Engineering program or permission from the Department
Co-requisite(s): CIVENG 4N04
Cannot be taken concurrently with any co-op work term course.

CIVENG 4Y04 - BRIDGES AND OTHER STRUCTURAL SYSTEMS

Bridge loads and analysis for load effects. Design of (steel beam - concrete slab) composite floor system and steel plate girders. Stresses, ultimate strength, and design of pre-stressed concrete girders. Fatigue Design.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): CIVENG 3G04, 3J04 or registration in CIVENG 4N04

CIVENG 4Z04 A/B S - INDEPENDENT STUDY

An experimental and/or analytical investigation related to any branch of civil engineering, under the direction of a faculty member. Students choose a project from a list of department approved projects. The student may be required to present a seminar and will submit a final written report before April 1.
Two labs (three hours); both terms. The hours assigned can be freely scheduled to suit those involved in a particular project and may include computation classes, laboratory work, discussion or individual study.
Prerequisite(s): Registration in a final level of a Civil Engineering program, and a SA of at least 9.5 and permission of the department
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03

Collaborative

Nursing Consortium (A) Stream (Collab) courses are administered by the School of Nursing.
Health Sciences Centre, Room 2J16, ext. 22407
http://www.fhs.mcmaster.ca/nursing/

Note

The following courses are open only to those students at the Mohawk College or Conestoga College sites who are registered in the McMaster/Mohawk/Conestoga Collaborative B.Sc.N program (A or E Streams) with the exception of COLLAB 2F03 (Medical Informatics) and (Introduction to Health Informatics) which are also open to students registered in the B.Sc.N. (A) Stream (McMaster Site).

Courses

See also courses in *Nursing*.

COLLAB 1AS3 - AGING AND SOCIETY

This course includes a multidisciplinary examination of the ways in which human aging is viewed - how we perceive the process of growing older and how society responds to the issues and challenges of aging. Course content will largely be based on the Canadian context, but will also include international research and knowledge.
Lecture (two hours), tutorial/fieldtrip (one hour); one term
Prerequisite(s): Permission of the instructor; and registration in either the B.Sc.N. Basic (A) Stream (Conestoga College site), or the Post Diploma R.P.N (E) Stream (Conestoga College site)
Antirequisite(s): HLTHAGE 1BB3

COLLAB 2P03 - EPIDEMIOLOGY IN PUBLIC HEALTH

This course is designed to provide an introduction to the applications of epidemiology in public health. Fundamental methods will be introduced so that

the work of public health professionals can fully be appreciated.
Lecture (one hour), tutorial (two hours); one term
Prerequisite(s): Registration in B.Sc.N. Basic (A) Stream or Post Diploma R.P.N. (E) Stream (Conestoga College site)

COLLAB 2T03 - AGING IN PLACE

This course will explore and discuss the research, evidence, and trends related to predictors of 'Aging in place', which acknowledges that older adults wish to live in their own communities for as long as possible and that home and community services will support this aim while being cost effective. Throughout the course, knowledge related to theory and experience will be applied to examples of those who are part of this population or will become part in the near future.
Lecture (one hour), tutorial (two hours); one term
Prerequisite(s): Registration in Level II or above in either the B.Sc.N. Basic (A) Stream or Post Diploma R.P.N. (E) Stream (Conestoga College site).

COLLAB 3IP3 - INTERPROFESSIONAL CASE MANAGEMENT

This interprofessional case management course is designed to immerse nursing students and pharmacy students in an active, collaborative learning process. Using a practice-based approach, students will gain knowledge and apply the theoretical foundations of teamwork to optimize patient care.
Tutorial (three hours); one term
Prerequisite(s): Registration in the BScN Basic (A) Stream or Post Diploma R.P.N.(E) Stream (Conestoga College site).

COLLAB 4H03 - INTRODUCTION TO CONCEPTS IN GLOBAL HEALTH

An introduction to the determinants of inequalities in the health of select populations in a Canadian and international context as viewed through the lenses of historical development, political economy and medical anthropology.
Lecture/seminar (three hours); one term
Prerequisite(s): HTHSCI 2RR3; and registration in either Level III or above of the B.Sc.N. Basic (A) Stream (Mohawk or Conestoga College Site) or Level III or above of the B.Sc.N. Post Diploma R.P.N. (E) Stream (Mohawk or Conestoga College site)
Antirequisite(s): HTHSCI 4H03, NURSING 4H03

Commerce

Courses in Commerce are administered by the DeGroote School of Business (Faculty of Business).
DeGroote School of Business, Room A102, ext. 24433
http://www.degroote.mcmaster.ca/
Faculty Notes

1. The Commerce courses for the Minor in Finance, the Minor in Accounting and Financial Management Services and the Minor in Information Systems are open to students admitted to the Minor. Please take note that all prerequisites for these courses must also be satisfied. Students taking the Minor in Accounting and Financial Management Services or the Minor in Finance will also be required to have obtained an average of at least 7.0 in ECON 1B03 and 1BB3 as a prerequisite.
2. Non-Commerce students may enrol in specific upper-year Commerce courses if they have been accepted into a Specialized Minor offered by the Faculty of Business or can demonstrate that they are pursuing an interdisciplinary minor for which the specific Commerce courses are included.

Courses

COMMERCE 1AA3 - INTRODUCTORY FINANCIAL ACCOUNTING

This is an introduction to the basic principles and practices of financial accounting, which includes an examination of income measurement and asset and liability valuation, to provide an understanding of financial accounting information and the ethics of financial reporting.
Lectures (three hours)
Antirequisite(s): IBH 1AA3

COMMERCE 1B03 - BUSINESS ENVIRONMENT & ORGANIZATION

This course will examine the relationship between business organizations, their functional areas and the environments - social, political, legal, regulatory and technological - that affect them.
Lectures (three hours)
Prerequisite(s): Registration in Level I or above in any Humanities, Social Sciences, Health Sciences, or Science program.
Antirequisite(s): COMMERCE 1E03; Not open to students registered in an Engineering, Business, or Commerce program.

COMMERCE 1BA3 - ORGANIZATIONAL BEHAVIOUR

The central objective of this course is to develop an understanding of human behaviour in organizations with a view toward effective management of such behaviour.
Lectures (three hours)
Antirequisite(s): IBH 1BA3

COMMERCE 1DA3 - BUSINESS DATA ANALYTICS

The main emphasis will be on the applications of statistical data analysis in business. Students learn different aspects of working with and making sense of data and learn how to use data to provide insight into different business problems. Some examples include the application of visualization, probabilities, confidence intervals, hypothesis testing, simple and multiple regressions, etc. Application of data analysis techniques in business problems will be introduced and practiced using software (through a course project).
Lectures (three hours), tutorials (one hour)
Antirequisite(s): ARTSSCI 2R03, COMMERCE 2QA3, ECON 2B03, IBEHS 4C03, HTHSCI 1F03, HTHSCI 2GG3, IBH 2AD3, NURSING 2R03, PNB 3XE3, SOCSCI 2J03, STATS 2B03, 2MB3, 3J04, 3N03, 3Y03

COMMERCE 1DE0 - BUSINESS I ORIENTATION

This course provides students with information and activities to facilitate their successful transition to university and success in the Business Program. Students will gain knowledge of the academic regulations, strategies for success, and the services available to them within the university.
Lectures (three hours)
Prerequisite(s): Registration in Business I

COMMERCE 1E03 - BUSINESS ENVIRONMENT AND ORGANIZATION

This course will examine the relationship between business organizations, their functional areas and the environments - social, political, legal, regulatory and technological - that affect them.
Lectures (three hours)
Prerequisite(s): Registration in Business I
Antirequisite(s): IBH 1AB3

COMMERCE 1GR0 A/B - DEGROOTE STUDENT EXPERIENCE AND DEVELOPMENT I

This course provides experiential activities for students to develop (or enhance) and apply foundational knowledge of highly sought skills in the workplace such as critical thinking, collaboration, communication and self-management. Further, this course offers career development tools and learning experiences that facilitate students' transition to university and success in the Business Program. Students will gain knowledge of McMaster University's academic regulations, strategies for academic success, and the various services available to them within the university.
Course will consist of in-person and online learning experiences such as presentations, videos, resources, self-assessment, workshops, competitions, conferences, etc.
Prerequisite(s): Registration in Level I or above in any Bachelor of Commerce Program
Antirequisite(s): COMMERCE 1TS0

COMMERCE 1MA3 - INTRODUCTION TO MARKETING

This foundation course introduces the basic principles and frameworks of marketing emphasizing the importance of a focus on the customer.
Lectures (three hours)
Antirequisite(s): COMMERCE 2MA3 and IBH 2AA3

COMMERCE 1TS0 - ORIENTATION FOR NEW TRANSFER STUDENTS

- series of workshops designed to equip students with the tools necessary to successfully navigate the rules and resources of the Commerce program. Topics include: program requirements, student services, areas of focus, minors, internship, and international exchange.

Lectures (one hour)
Prerequisite(s): Registration in Business I or an Honours Bachelor of Commerce Program.
Antirequisite(s): COMMERCE 1GR0 A/B

COMMERCE 2AB3 - MANAGERIAL ACCOUNTING I

An introduction to concepts underlying the use of cost accounting information for managerial planning and control and for inventory valuation. The nature and analysis of costs and the usefulness and limitations of accounting data for decision-making, including ethical considerations, will be discussed.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 1AA3, IBH 1AA3, GENTECH 3FS3 or GENTECH 3FF3; and registration in any four or five level program or applicable minor (see Faculty Note 2.)
Antirequisite(s): IBH 2BA3

COMMERCE 2BC3 - HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS

This course builds on COMMERCE 1BA3, focusing on human resource management and labour relations issues and practices from a general management education perspective.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 1BA3, WORKLABR 1A03, or WORKLABR 1E03; and registration in any four or five level program or applicable minor (see Faculty Note 2.)
Antirequisite(s): IBH 2AC3

COMMERCE 2DA3 - DECISION MAKING WITH ANALYTICS

The course will study five widely used quantitative management science tools (problem modelling, linear programming, decision analysis, simulation, and waiting lines) used in business data analytics when conditions are reasonably certain or somewhat uncertain. All five tools are implemented in Excel. The course is taught through lectures, computer work with Excel, lecture notes and textbook readings, practice problems, and online podcasts.
Lectures (three hours), tutorials (one hour)
Prerequisite(s): COMMERCE 1DA3 or equivalent; and registration in any four or five level program or applicable minor (see Faculty Note 2.)
Antirequisite(s): COMMERCE 3QA3 and IBH 2AD3

COMMERCE 2FA3 - INTRODUCTION TO FINANCE

This course introduces the main instruments and institutions in the Canadian financial system. The basic concepts and models of modern financial theory are introduced through lectures and 'hands-on' problem solving. Topics include: the time value of money, capital budgeting, the trade-off between risk and return and security valuation.
Lectures (two hours), tutorial (one hour)
Prerequisite(s): COMMERCE 1AA3 and ECON 1B03 (or ECON 1BX3); one of MATH 1A03, 1LS3, 1M03, 1MM3, 1N03, 1X03, 1ZA3 or 1Z04; and registration in any four or five level program or applicable minor (see *Faculty Note 2.*)
Antirequisite(s): ECON 2I03, ENGINEER 2B03, IBH 2BB3

COMMERCE 2FB3 - MANAGERIAL FINANCE

This course examines various aspects of the financial management of the firm including the sources and methods of financing, capital structure, dividend policy, leasing, mergers and acquisitions, working capital management, effects of taxation on financial decisions and international aspects of finance.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 2FA3, ECON 2I03, GENTECH 2EE3, GENTECH 3EE3 or ENGINEER 2B03; and registration in any four or five level program or applicable minor (see *Faculty Note 2.*)
Antirequisite(s): COMMERCE 3FA3; IBH 3AC3

COMMERCE 2GR0 - DEGROOTE STUDENT EXPERIENCE AND DEVELOPMENT II

This course builds on COMMERCE 1GR0 A/B and continues to provide experiential activities for students to develop (or enhance) and apply foundational knowledge of highly sought skills in the workplace such as critical thinking, collaboration, communication and self-management. Further, this course offers career development tools and learning experiences that facilitate students success in the Business Program and their careers. Students will gain strategies for academic success, and knowledge of the various services and opportunities available to them within the university.
Course will consist of in-person and online learning experiences such as presentations, videos, resources, self-assessment, workshops, competitions, conferences, etc.
Prerequisite(s): COMMERCE 1GR0 A/B or 1TS0 and registration in Level II or above in the Honours Bachelor of Commerce Program

COMMERCE 2IN0 - CAREER DEVELOPMENT COURSE

- Career Development course designed to equip students with the tools necessary to successfully participate in summer, internship and full time job searches. Topics include: skills assessment, resume and cover letter development, interview skills, networking, job search strategies, business etiquette. Successful completion of this course is one of the requirements to participate in the Honours Commerce Internship and

Integrated Business and Humanities with Internship Programs.
Lectures (two hours)
Prerequisite(s): Registration in Level II of a Bachelor of Commerce Program or Permission of the Manager of the Career and Professional Development

- separate course fee of $175 will be applied to your student account upon enrolment in the course. For more information on Commerce 2IN0 see http://ug.degroote.mcmaster.ca/course-outlines/. Please refer to the Honours Commerce with Internship and Integrated Business and Humanities with Internship Program sections of the Undergraduate Calendar for a complete listing of requirements for participation.

COMMERCE 2KA3 - INFORMATION SYSTEMS IN MANAGEMENT

This course emphasizes the strategic role of information systems in modern business. Topics include: the technical foundations of information systems, the impact of information systems on business operations and decision-making and the processes that are required for successful implementation of business information systems.
Lectures (three hours)
Prerequisite(s): Registration in any four or five level program or applicable minor (see *Faculty Note 2*.)
Antirequisite(s): IBH 2AB3

COMMERCE 2MA3 - INTRODUCTION TO MARKETING

This course introduces the conceptual underpinnings and operational facets of marketing with a primarily consumer (as opposed to industrial) focus.
Lectures (three hours)
Prerequisite(s): ECON 1B03; and registration in any four or five level program or applicable minor (see *Faculty Note 2*.)
Antirequisite(s): IBH 2AA3

COMMERCE 2NG3 - NEGOTIATIONS

The purpose of this course is to provide students with foundational knowledge on the theories and practice of negotiation and its sub-processes; they will also learn important skills on the use of strategies and tactics, conflict resolution, and the tenets of ethical bargaining. Embracing experiential learning, students will take part in case studies and exercises to deepen their knowledge of the skills required in negotiations.
Lectures (two hours); tutorial (one hour)
Prerequisite(s): COMMERCE 1BA3; and registration in any four or five level program or applicable minor (see Faculty Note 2.)
Antirequisite(s): COMMERCE 3S03, IBH 3AA3

COMMERCE 2OC3 - OPERATIONS MANAGEMENT

The course will cover both manufacturing and service operations topics at the strategic, tactical and operational levels. Topics include capacity planning, layout of facilities, forecasting, aggregate planning, scheduling, inventory control, purchasing, supply chains and quality control. Emphasis will also be placed on process improvement and project management. The course will look at supply chain issues related to globalization and sustainability including environmental and social issues.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): COMMERCE 1DA3 or equivalent; and registration in any four or five level program or applicable minor (see Faculty Note 2.)
Antirequisite(s): COMMERCE 4QA3, IBH 2BC3 (or 3BE3), MECHENG 4C03
This course is not open to students in any Engineering and Management program.

COMMERCE 2QA3 - APPLIED STATISTICS FOR BUSINESS

An introduction to the application of statistical analysis in managerial decision-making. The concepts of statistical analysis are applied to a variety of topics, including decision-making, estimation by sampling, hypothesis testing, analysis of variance, simple linear and multiple regression and forecasting.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): Finite Math (or Mathematics of Data Management U or equivalent) or STATS 1L03; and registration in any four or five level program or applicable minor (see *Faculty Note 2*.)
Antirequisite(s): ARTSSCI 2R03, ECON 2B03, ELECENG 3TQ3, ENGPHYS 3W04 A/B, HTHSCI 1F03, 2A03, IBH 2AD3, NURSING 2R03, SOCSCI 2J03, STATS 1CC3, 2B03, 2MB3, 3J04, 3N03, 3Y03

COMMERCE 3AB3 - INTERMEDIATE FINANCIAL ACCOUNTING I

- first course in intermediate financial accounting dealing with the theory and practice of financial statement preparation and reporting. The emphasis will be on asset valuation and the related impact on income measurement.

Lectures (three hours), tutorial (one hour)
Prerequisite(s): COMMERCE 1AA3 or IBH 1AA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3AC3 - INTERMEDIATE FINANCIAL ACCOUNTING II

- second course in intermediate financial accounting dealing with reporting issues that relate to liabilities and owners' equity. In particular, the concepts of recognition, measurement and disclosure of such items as bonds, taxes, leases and pensions as well as the phenomenon of off-balance sheet financing are examined.

Lectures (three hours)
Prerequisite(s): COMMERCE 1AA3 or IBH 1AA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3DA3 - PREDICTIVE ANALYTICS

This course is designed to introduce the basics of predictive analytics to undergraduate students. The course takes a computational approach to address the concept of prediction and forecasting within business problems. Students will learn about the most commonly used predictive analytics tools and methodologies and get to apply them to a series of problems to gain hands-on experience. In this process, students learn the basics of predictive data analytics using state of the art analytics computational platforms and tools. Upon completion of the course, students are expected to have gained a broad understanding of predictive data analytics methods and algorithms (including some machine learning algorithms), and are able to use Python to perform a preliminary predictive analysis on a given data set. The course does not require any prior programming experience.
Lectures (three hours)
Prerequisite(s): COMMERCE 2DA3 (or 3QA3); and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3FA3 - MANAGERIAL FINANCE

This course examines various aspects of the financial management of the firm including the sources and methods of financing, capital structure, dividend policy, leasing, mergers and acquisitions, working capital management, effects

of taxation on financial decisions and international aspects of finance.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3 ; and registration in any Honours Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics, or four or five-level non-Commerce program.
Antirequisite(s): IBH 3AC3

COMMERCE 3FB3 - SECURITIES ANALYSIS

This course is concerned with the analysis of marketable securities, especially common stocks. Topics include: the institutional characteristics and operation of financial markets, securities analysis and valuation, investment characteristics and strategies to increase return.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3FC3 - INTERNATIONAL FINANCE

This course provides a framework for examining financial management decisions in an international setting. Issues examined include: foreign exchange risk management, multinational working capital management, foreign investment analysis and financing foreign operations.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3FD3 - FINANCIAL MODELLING

This course provides an introduction to financial modelling with MS-Excel and Python. The main focus is on configuring and solving real-world applications in corporate finance and investments. By the end of this course, students will be able to use quantitative tools (such as spreadsheets and financial libraries/functions) to model problems on topics such as capital budgeting, firm valuation, portfolio management, and option pricing. Strong knowledge of statistics is highly recommended. Working knowledge of MS Excel is assumed, but no prior experience with Python is required.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or IBH 2BB3 ; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3FH3 - ALTERNATIVE INVESTMENTS AND PORTFOLIO MANAGEMENT

This course introduces students to a wide range of alternative investments, including hedge funds, private equity, commodities, real estate, and infrastructure. Students are also provided a deeper, cutting-edge treatment of modern hedge fund investment strategies as well as a rigorous analysis of the practical portfolio management process. This course is highly recommended for any student considering a career in investments, portfolio management, corporate finance, or the broader financial services.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3FI3 - MARKET TRADING WITH OPTIONS AND FUTURES

This experiential course develops practical skills in trading financial securities - money market instruments, bonds, equities, indices, ETFs, currencies, commodities, and their corresponding derivatives options focusing on trading strategies that minimize market exposure through risk management. The course uses industry tools such as Thomson Reuters Refinitiv and Bloomberg Professional.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3FK3 - INTERMEDIATE CORPORATE FINANCE

This course will provide an overview of the theory, methods and concerns of Corporate Finance. The course will examine the important issues in corporate finance (capital budgeting, capital structure, dividend policy, interaction of investment and financing decisions) from the perspective of the financial manager. Although lecture-based, the course will also use a number of cases to illustrate the theory.
Lecture (3 hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3 and registration in level III or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3FL3 - SUSTAINABLE AND SOCIAL FINANCE

Students will discuss how financial markets can play a socially-beneficial role. How public companies play a role in creating a more sustainable world. What role endowments play in the success of the nonprofit sector. The role socially-responsible businesses, impact investments and green bonds play in helping to improve social outcomes. A major focus will be learning to evaluate public companies from an Environmental, Social and Governance (ESG) perspective. ESG has become a critical skill set in evaluating investments.
Lecture (3 hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3; and registration in level III or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3FM3 - THE HISTORY OF FINANCE

This course explores the emergence, evolution, and future of the tools and organizations that make modern finance possible. By studying the history of payments, debt, banking, corporations, markets, derivatives, pensions, insurance companies and investment funds, students will learn why such institutions are organized as they are today and how we might design better versions to tackle the challenges of the twenty-first century. This course will be of particular interest to students interested in fintech as it explores the core functions of financial institutions and their modern innovations.
Prerequisite(s): COMMERCE 2FA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3FN3 - BIG DATA IN FINANCE

This course introduces business students to the applications of data science, its key statistical tools, and the underlying technology to large datasets in the finance area. Students gain a deeper understanding of how finance, technology, and statistics intersect in an applied setting to solve big data problems in innovative ways. The course is intended to equip students with skills in solving problems requiring large datasets.

Lecture (3 hours) and Project Work
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3 ; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor.

COMMERCE 3GR0 - DEGROOTE STUDENT EXPERIENCE AND DEVELOPMENT III

This course builds on COMMERCE 2GR0 and continues to provide experiential activities for students to develop (or enhance) and apply foundational knowledge of highly sought skills in the workplace such as critical thinking, collaboration, communication and self-management. Further, this course offers career development tools and learning experiences that facilitate students success in the Business Program and their careers.
Prerequisite(s): COMMERCE 2GR0 and registration in Level III or above in the Honours Bachelor of Commerce or Bachelor of Commerce Programs

COMMERCE 3KA3 - SYSTEM ANALYSIS AND DESIGN

This course examines the role of the system analyst in today's business environment. Traditional and modern approaches to systems analysis and design will be covered. Students participate in a hands-on team project for a real-world business application.
Lectures (three hours)
Prerequisite(s): COMMERCE 2KA3 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3KD3 - DATABASE DESIGN MANAGEMENT AND APPLICATIONS

This course is designed to introduce the basic concepts of database design, implementation and management. Students will gain hands on experience through assignments and a team project.
Lectures (three hours)
Prerequisite(s): COMMERCE 2KA3 or ENGINEER 1D04 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 3KE3 - MANAGEMENT OF ENTERPRISE DATA ANALYTICS AND ARTIFICIAL INTELLIGENCE

This course provides students with an overview of enterprise data analytics and an introduction to the concepts which underlie its effective deployment and management. The course encompasses managerial, technical and statistical perspectives, demonstrating how each area is dependent on the other to make enterprise analytics work. This course incorporates a variety of teaching and learning methods including lectures, assignments, case studies, group work, presentations, and readings.
Lectures (three hours)
Prerequisite(s): COMMERCE 2KA3 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3MA3 - MARKETING RESEARCH

This course covers the effective obtaining, communicating and using of competitive and market intelligence. Students work in groups with a company or public organization and receive training and experience in making business presentations.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3) or IBH 2AA3; COMMERCE 1DA3 (or 2QA3) or IBH 2AD3; or COMMERCE 1MA3 (or 2MA3) or IBH 2AA3 and one of STATS 2MB3, 3J04, 3N03 or STATS 3Y03; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3MB3 - CONSUMER BEHAVIOUR

This course examines why people buy, ways of satisfying consumer needs more effectively and the creation of communications that will influence consumers.
Lectures (3 hours)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3) or IBH 2AA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 3MC3 - APPLIED MARKETING MANAGEMENT

Builds upon material in COMMERCE 1MA3 (or 2MA3) but is more applied in nature and covers the marketing mix in greater depth. It relies more on practical, real world cases. A major field project (for example, student teams working with companies) is a critical part of the course.
Lectures (three hours)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3); and registration in Level III or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)
Antirequisite(s): IBH 3AB3

COMMERCE 3MD3 - INTRODUCTION TO CONTEMPORARY APPLIED MARKETING

This course will introduce students to key marketing principles and concepts and explore their practical applications in business situations. Case studies are used to give practice in analyzing opportunities, solving marketing issues, and preparing implementation plans. This course is taught through a combination of lectures, case discussions, readings, assignments and a field project.
Lectures (three hours)
Prerequisite(s): Registration in Level III or above
Antirequisite(s): COMMERCE 1MA3;(or 2MA3), 3MC3, IBH 2AA3. Not open to students registered in any Commerce, or Engineering & Management program

COMMERCE 3QA3 - MANAGEMENT SCIENCE FOR BUSINESS

This course is a study of analytical approaches that assist managerial decision-making; it provides coverage of decision theory and an introduction to optimization methods, computer simulation and the general approach of management science.
Lectures (three hours)
Prerequisite(s): COMMERCE 2QA3 or IBH 2AD3 ; and registration in any Bachelor of Commerce program; or one of ELECENG 3TQ3, 3TQ4, STATS 2MB3, 3J04, 3N03, 3Y03, ENGPHYS 3W04 (or 3W04 A/B) and registration in any Engineering and Management program
Antirequisite(s): COMMERCE 2DA3

COMMERCE 3S03 - MANAGEMENT SKILLS DEVELOPMENT

The purpose of this course is to provide the necessary cognitive and behavioural skills that students need to develop themselves as competent managers through the acquisition and practice of personal, interpersonal, and group skills.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see

Faculty Note 2.)
Antirequisite(s): IBH 3AA3

COMMERCE 4AA3 - MANAGERIAL ACCOUNTING II

- consideration of advanced topics in management planning and control including cost behaviour determination, production planning, innovation in costing, cost allocations, variance analysis and performance evaluation for responsibility centres.

Lectures (three hours)
Prerequisite(s): COMMERCE 2AB3 or IBH 2BA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4AC3 - ADVANCED FINANCIAL ACCOUNTING

An advanced accounting course considering specific problems of accounting for the corporate entity, such as, business combinations, intercorporate investments, consolidated financial statements, accounting for foreign operations and foreign currency transactions, segment reporting.
Lectures (three hours)
Prerequisite(s): COMMERCE 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4AD3 - INTRODUCTION TO AUDITING

An examination of the attest function in accounting including ethical, legal, and statutory influences in the development of auditing standards. Control structure and audit evidence will be examined.
Lectures (three hours)
Prerequisite(s): COMMERCE 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4AF3 - ACCOUNTING THEORY

- review of accounting theory as a background for applying underlying concepts to current accounting problems. The course emphasizes current literature.

Lectures (three hours)
Prerequisite(s): COMMERCE 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4AK3 - ACCOUNTING INFORMATION FOR DECISION MAKING

This course covers the basic principles in financial and managerial accounting as well as the use of accounting information in decision making. In the financial accounting part of the course, the course covers the conceptual framework of accounting, Generally Accepted Accounting Principles, financial statements, and financial statement analysis. In the managerial accounting part of the course, the course covers cost behaviour, cost-volume profit relationships, budgeting, and the use of cost information in decision making.
Lectures (three hours)
Antirequisite(s): COMMERCE 1AA3, 2AB3, IBH 1AA3, 2BA3
Not open to students registered in any Commerce, or Engineering and Management program.

COMMERCE 4BB3 - RECRUITMENT AND SELECTION

This course exposes students to staffing issues in the Canadian context. Topics include job analysis, methods of recruitment and selection, human rights legislation and decision making strategies.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3; and registration in any Bachelor of Commerce Labour Studies, or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BC3 - COLLECTIVE BARGAINING

- survey of the nature, determinants, and impact of collective bargaining in Canada. Both the procedural and substantive aspects of collective bargaining will be studied.

Lectures (three hours)
Prerequisite(s): One of COMMERCE 2BC3, COMMERCE 2NG3, IBH 2AC3, or LABRST 2A03; and registration in Level III or above in any four or five level program (see Faculty Note 2.)

COMMERCE 4BD3 - SETTLEMENT OF INDUSTRIAL DISPUTES

The nature and the role of industrial conflict as well as the techniques which have been developed to control the incidence of conflict in union-management situations.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 2BC3, IBH 2AC3, or LABRST 2A03; and registration in any Bachelor of Commerce, Labour Studies or Engineering and Management program or relevant minor (see *Faculty Note 2*.). COMMERCE 4BC3 is recommended.

COMMERCE 4BE3 - STRATEGIC COMPENSATION/REWARD SYSTEMS

Key issues in designing effective pay systems are discussed. Topics include: job evaluation, market pay surveys, pay structures, performance incentives, knowledge pay and employee benefits.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3 ; and registration in any Bachelor of Commerce, Labour Studies or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BF3 - LABOUR LAW AND POLICY

An analysis of the concepts and fundamentals of Canadian labour law and analysis of Canadian labour policy.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)
Cross-list(s): LABRST 3C03
This course is administered by the School of Labour Studies.

COMMERCE 4BG3 - PUBLIC SECTOR COLLECTIVE BARGAINING

This course examines unionization and collective bargaining for employees in the public sector. Topics include: bargaining issues, bargaining outcomes and impasse resolution.
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.). COMMERCE 4BC3 is also recommended.

COMMERCE 4BI3 - TRAINING AND DEVELOPMENT

This course provides a framework for establishing, revising and examining training programs in organizations. Topics include: needs assessment,

development of training objectives, planning and delivery of instruction, learning principles and evaluation of training.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3; and registration in any Bachelor of Commerce, Labour Studies or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BK3 - THE MANAGEMENT OF TECHNOLOGY

An introduction to the innovative management of technology including the integration of the firm and technology strategy, external sourcing of technology and the internationalization of technology management.
Lectures (three hours)
Prerequisite(s): COMMERCE 1BA3 or IBH 1BA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BL3 - OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

This course enhances students' knowledge on managing occupational health and safety, teaches research skills, and assists students in developing strategies for creating healthy workplaces.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BM3 - STRATEGIC HUMAN RESOURCE PLANNING

This course provides an understanding of the essential elements of Human Resource Planning processes in organizations. Students will acquire knowledge in analyzing, assessing and programming for human resource requirements of the organizational business plans and strategies.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 or IBH 2AC3 ; and registration in any Bachelor of Commerce, Labour Studies or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4BN3 - LEADERSHIP DEVELOPMENT

This highly participative learning portfolio-based course on Leadership focuses on the potential for personal and professional growth of the student. The course provides an initial understanding of the fundamentals and theories of leadership, and then moves to an appreciation of students' own leadership styles, behaviors, and experiences as well as an understanding of other individuals' leadership styles, behaviors, and experiences. A major objective of the course is to encourage the student to become more reflective and self-aware.
Lectures (three hours)
Prerequisite(s): COMMERCE 1BA3; and registration in Level IV or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)
Antirequisite(s): IBH 4BA3

COMMERCE 4BP3 - PRINCIPLES OF LEADERSHIP

This course reviews the key concepts, approaches, models and theories of leadership. It develops students' understanding of major elements of leadership research and will equip students to critically evaluate the popular writing on leadership and consider their own leadership potential and how to develop it. Fundamental leadership skills will be introduced with opportunities for student self-diagnosis.
Lectures (three hours)
Prerequisite(s): COMMERCE 1BA3 or IBH 3AA3; and registration in Level IV or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 4BQ3 - SOCIAL ENTREPRENEURSHIP

This course offers a practical introduction for students interested in the increasingly popular phenomenon of social entrepreneurship. The course focuses on key concepts in the field of social entrepreneurship and social enterprise, introducing students to the range of business models used to pursue both social and financial objectives. It presents and details the challenges facing social entrepreneurs and reviews strategies for recognizing social opportunities, developing a strategic plan, funding social ventures, and measuring social impact.
Lectures (three hours)
Prerequisite(s): COMMERCE 2BC3 and registration in any Bachelor of Commerce Labour Studies, or Engineering and Management program or relevant minor (see Faculty Note 2.)
Antirequsite(s): IBH 3BA3

COMMERCE 4BX3 - SPECIAL TOPICS IN HUMAN RESOURCE MANAGEMENT

Various topics in Human Resource Management are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of course offering. For information on course offerings, please refer to the School of Business website at http://ug.degroote.mcmaster.ca/course-outlines/ or contact the Student Experience Academic Office, DSB 112.
Lectures (three hours)
Prerequisite(s): COMMERCE 1BA3 or IBH 1BA3 ; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4CA3 - MANAGING AND PROMOTING HEALTH AND HEALTHCARE SERVICES

This course provides coverage through a health lens of Social Marketing, Strategy, Segmentation and Targeting, Consumer Behaviour, Marketing Research and Ethical Issues, the '4Ps' and Controlling/Monitoring.
Prerequisite(s): COMMERCE 3MC3 or IBH 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4DA3 - MODELLING AND PRESCRIPTIVE ANALYTICS

This course will enable students to gain familiarity with analytics, and then develop a comprehensive understanding of prescriptive analytics. They will develop the ability to logically model managerial problems drawn from various functional areas in a spreadsheet domain (and in some instances mathematically). Students will use the optimization and simulation modules in Analytic Solver (a spreadsheet add-in) and other software to solve the posed problems, and to analyze them to develop useful managerial insights.
Lectures (three hours)
Prerequisite(s): COMMERCE 2DA3 (or 3QA3) or 4QA3; and registration in any Bachelor of Commerce or Engineering and Management program

COMMERCE 4EL3 - EXPERIENTIAL LEARNING IN BUSINESS

This course is defined as a structured experiential learning based project that a student undertakes under the supervision of a faculty member, with the authorization of the Associate Dean (Academic), from the DeGroote School of Business. It may be completed as a team activity or as an independent project / leadership activity. The focus is on developing managerial decision making, project management, resource management and leadership skills in preparation for a career in business.
Prerequisite(s): Registration in Level III or above in any Bachelor of Commerce or Engineering and Management program
Antirequisite(s): COMMERCE 4EL3 (regardless of topic)
Project proposal forms are available online and must be completed by the student and signed by the Supervisor and Associate Dean Academic prior to enrolment.

COMMERCE 4FA3 - APPLIED CORPORATE FINANCE

This course examines the application of financial theory to a variety of problems in corporate finance. The appropriate use of valuation principles and techniques, and the design of corporate strategies intended to create shareholder wealth, are considered.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FB3 - VALUATION FOR FINANCE PROFESSIONALS

The goal of the course is to build students' skills and confidence in answering the question: 'What is a company worth?' Through the use of case analysis (supplemented with lecture-based background material), we will examine the drivers of corporate value, traditional and alternative valuation models and approaches, and various valuation situations (IPO valuation, private equity and LBO valuation, valuation of high-growth and mature firms, among others).
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FC3 - ETHICS AND PROFESSIONAL PRACTICE IN FINANCE

This course introduces students to the practices and codes of conduct involved in the finance function. The course covers ethical issues and the roles of the corporate financial manager, other stakeholders and other participants in the investment industry. The emphasis of the course will be on readings, rules, and regulations from the CFA Institute. Cases and speakers will be employed to bring a real world perspective to the classroom.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FD3 - FINANCIAL INSTITUTIONS

This course examines, from a managerial perspective, the major types of financial institutions in Canada: chartered banks, trust companies, insurance companies, investment banks and other institutional investors.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management, Actuarial Financial Mathematics program, or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FE3 - OPTIONS AND FUTURES

This course provides an integrated approach to understanding the relations between options, futures, and their underlying assets. The theory of pricing of options and futures and the application of the theory to instruments currently traded in financial markets are considered.
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FF3 - PORTFOLIO THEORY AND MANAGEMENT

This course offers an advanced treatment of investment decision-making and the role of financial markets in pricing securities. Topics include: portfolio selection models, the institutional environment of investment decisions, and investment and asset pricing theory.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce, Engineering and Management, Actuarial Financial Mathematics program, or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FG3 - FINANCIAL THEORY

This course explores the theoretical foundations of finance and their applications to corporate finance policy. Topics covered include rational investment decisions, asset pricing, efficient markets, financial decisions and the role of information in financial decision-making.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3 or ECON 2I03 and ECON 3G03; and registration in any Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FH3 - MERGERS, ACQUISITIONS AND CORPORATE CONTROL

This course examines the process by which mergers and other types of corporate control transactions take place, and the role of restructuring shifts in resource allocation by corporations.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FJ3 - FIXED INCOME ANALYSIS

This course provides an advanced treatment of investments in the field of fixed income analysis and focuses on fixed income securities, fixed income portfolio management and fixed income derivatives.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4FK3 - FINANCIAL STATEMENT ANALYSIS

This course provides a comprehensive and up-to-date treatment of the analysis of financial statements as an aid to decision making. The relationship between financial markets and financial statements is studied using computerized data sets on personal computers.
Lectures (three hours)

Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FL3 - PERSONAL FINANCIAL MANAGEMENT

The course covers various topics that are relevant to the financial decision making of individuals. These decisions include investment, retirement planning, debt and credit management, renting vs. buying a home, insurance and risk management and personal income tax planning and strategies.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3 ; and registration in any Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FM3 - PERSONAL FINANCIAL PLANNING AND ADVISING

Students will examine financial planning concepts by undertaking a major integrative project. This course is strongly recommended for students working towards the CFP designation.
Lectures (three hours)
Prerequisite(s): COMMERCE 4FL3 or COMMERCE 4FP3; and registration in any Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FN3 - FINANCIAL RISK MANAGEMENT

This course provides a systematic and advanced treatment of financial risk management. It focuses on interest rate risk, market risk, liquidity risk, credit risk and operational risk. It is designed for students pursuing careers in operations management as well as finance and accounting.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce, Engineering and Management or Actuarial Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FO3 - SMALL BUSINESS AND ENTREPRENEURIAL FINANCE

This course is intended for students who wish to enhance their skills and knowledge in those areas of business that lead to successful entrepreneurship and/or small business management. The focus will be on those financial issues and decisions of particular concern to sole proprietors, partnerships, family-owned businesses and small non-public corporations.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FP3 - PERSONAL FINANCE

- major objective of the course is to provide students with the tools and skills needed to make sound financial decisions throughout their lives. Financial planning is the process of managing one's money to achieve personal economic satisfaction. This process involves setting realistic goals and organizing financial activities toward the achievement of the goals. It also depends on the control of financial affairs by avoiding excessive debt, building up wealth, and managing financial risk.

Lectures (three hours)
Antirequisite(s): COMMERCE 4FL3 Not open to students registered in any Commerce, or Engineering & Management program; or the Minor in Finance.

COMMERCE 4FQ3 - WORKING CAPITAL MANAGEMENT

The course will apply the principles and concepts of financial theory to problems and decisions associated with short-term (working) capital and how it affects firm liquidity, default risk and shareholder wealth.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FR3 - INSURANCE AND RISK MANAGEMENT

The course covers different types of insurance, including life, health and disability, home, property and automobile insurance. Risk management is a lifelong process that involves five steps: identification, evaluation, control, financing and monitoring.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3; and registration in any Bachelor of Commerce, Engineering and Management or Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FS3 - PENSION, RETIREMENT AND ESTATE PLANNING

The course examines financial needs at retirement including inflation and taxation. It also examines methods of accessing savings at retirement. Estate planning ensures that assets are distributed with the wishes of the testator and the needs of the beneficiaries.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FA3 or ECON 2I03 or IBH 2BB3; and registration in any Bachelor of Commerce, Engineering and Management or Actuarial Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FT3 - REAL ESTATE FINANCE AND INVESTMENT

Concepts and techniques introduced in the course include investing, financing, appraising, consulting, managing real estate portfolios, leasing, managing property, analyzing site locations and managing corporate real estate assets.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FU3 - BEHAVIOURAL FINANCE: THE PSYCHOLOGY OF MARKETS

An introduction to the emerging field of behavioural finance. Psychology and finance are integrated in studying how investors' emotions affect stock prices and markets.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce, Engineering and Management, Honours Actuarial and Financial Mathematics program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FV3 - VENTURE CAPITAL

This course focuses on financing and value creation strategies for early- and growth-stage companies. It is designed for students considering careers in financial services or as entrepreneurs.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FW3 - FINANCE FOR ENTREPRENEURS

This course is intended for students who wish to enhance their skills and knowledge in those areas of business that lead to successful entrepreneurship and/or small business management. The focus will be on those financial issues and decisions of particular concern to sole proprietors, partnerships, family-owned businesses and small non-public corporations. This will include the financial aspects of the relationship between the firm and its owners.
Lectures (three hours)
Prerequisite(s): Students in a third or fourth year non-Commerce program or relevant minor (see *Faculty Note 2*.)
Antirequisite(s): COMMERCE 4FO3
Not open to students registered in any Commerce, or Engineering & Management program; or the Minor in Finance.

COMMERCE 4FX3 - SPECIAL TOPICS IN FINANCE

Various topics in Finance are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.
For information on course offerings, please refer to the School of Business web site at http://ug.degroote.mcmaster.ca/course-outlines/ or contact the Student Experience Academic Office, DSB 112.
Lectures (three hours)
Prerequisite(s): Announced at time of offering. COMMERCE 4FX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4FY3 - INTRODUCTION TO FINTECH

The course provides a broad overview of the financial technology (FinTech) industry. Specifically, it will cover; how financial services have evolved key players and their roles; existing products, how FinTech has evolved key players and their innovations; technologies underpinning FinTech innovations, major FinTech innovations and their impact on financial services, regulations governing the financial services industry and how to identify and analyze future trends/opportunities of FinTech.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4FZ3 - ISLAMIC FINANCE

With rapid globalization, the world economy is becoming increasingly integrated across countries and societies with divergent economic practices. Predominantly Islamic countries are becoming important suppliers and users of financial capital. In this course, students will gain an appreciation of common Islamic financial concepts (Murabaha, Musharaka, Istisna) instruments (Sukuk), relevant legal (Western and Islamic) jurisprudence, and regulatory and disclosure standards.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4GR3 - DEGROOTE STUDENT EXPERIENCE AND DEVELOPMENT IV

This course builds on the knowledge, skills, and experiences gained through the GR0 series and required Commerce courses. Students will work in project groups to further develop their self-leadership and collaboration skills. Classroom and experiential activities will be utilized to develop a comprehensive and integrated understanding of the various business disciplines studies throughout the program.
Prerequisite(s): COMMERCE 3GR0 and registration in Level IV or above in the Honours Bachelor of Commerce or Bachelor of Commerce Programs

COMMERCE 4IA0 - INTERNSHIP 1

Full-time paid employment in an approved internship providing students with work experience related to their academic curriculum. After securing an internship position, students must successfully complete a minimum twelve months of experience as per the details outlined within their letter of offer, obtain satisfactory employer evaluation(s) and receive a passing grade on the work term report. All internship students will be enrolled in COMMERCE 4IA0 for the first term of their internship.
Prerequisite(s): COMMERCE 2IN0 and permission of the Manager of Student Experience - Career and Professional Development
This course will be evaluated on a complete/incomplete basis.

COMMERCE 4IB0 - INTERNSHIP 2

Full-time paid employment in an approved internship providing students with work experience related to their academic curriculum. After securing an internship position, students must successfully complete a minimum twelve months of experience as per the details outlined within their letter of offer, obtain satisfactory employer evaluation(s) and receive a passing grade on the work term report. All internship students will be enrolled in COMMERCE 4IB0 for the second term of their internship.
Prerequisite(s): COMMERCE 2IN0, COMMERCE 4IA0 and permission of the Manager of Student Experience - Career and Professional Development
This course will be evaluated on a complete/incomplete basis.

COMMERCE 4IC0 - INTERNSHIP 3

Full-time paid employment in an approved internship providing students with work experience related to their academic curriculum. After securing an internship position, students must successfully complete a minimum twelve months of experience as per the details outlined within their letter of offer, obtain satisfactory employer evaluation(s) and receive a passing grade on the work term report. Students completing a 16-month internship will be enrolled in COMMERCE 4IC0 for the third term of their internship.
Prerequisite(s): COMMERCE 2IN0, 4IA0, 4IB0 and permission of the Manager of Student Experience - Career and Professional Development
This course will be evaluated on a complete/incomplete basis.

COMMERCE 4ID0 - INTERNSHIP FINAL TERM

Full-time paid employment in an approved internship providing students with work experience related to their academic curriculum. After securing an internship position, students must successfully complete a minimum twelve months of experience as per the details outlined within their letter of offer, obtain satisfactory employer evaluation(s) and receive a passing grade on the work term report. All internship students will be enrolled in COMMERCE 4ID0 for their final term of their internship.
Prerequisite(s): COMMERCE 2IN0, 4IA0, 4IB0 and permission of the Manager of Student Experience - Career and Professional Development
This course will be evaluated on a pass/fail basis.

COMMERCE 4KF3 - PROJECT MANAGEMENT

Topics include: project selection, project organization structures, life cycles, planning, estimation, budgeting, resource allocation, contracting, project management software, reporting and controlling issues and conflict management.
Lectures and online (three hours)

Prerequisite(s): Registration in level II or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)
Antirequisite(s): COMMERCE 4QF3

COMMERCE 4KG3 - DATA MINING FOR BUSINESS ANALYTICS

Business Analytics (BA) is a technology-driven process for analysing data and presenting actionable information to help corporate executives, business managers and other end users make more informed business decisions. The course is designed for students in multiple business areas. Students will learn the concepts, techniques, and applications of data mining and business analytics through lectures, class discussions, hands-on assignments, and seminar presentations.
Lectures (two hours), tutorial (one hour)
Prerequisite(s): COMMERCE 1DA3 (or 2QA3) or IBH 2AD3 or equivalent; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4KH3 - STRATEGIES FOR ELECTRONIC AND MOBILE BUSINESS

This course covers the strategic issues that the modern business manager must deal with in making strategic decisions concerning the choice, implementation and execution of electronic and mobile business solutions for start-ups and established enterprises.
Lectures (three hours)
Prerequisite(s): COMMERCE 2KA3 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4KI3 - BUSINESS PROCESS MANAGEMENT

This course enables students to learn about the methodologies used in business process management and related information technologies in support of process innovation. These techniques are learned through hands-on practice with SAP Business One (B1) software and simulation targeted to small and medium sized enterprises.
Lectures (three hours)
Prerequisite(s): COMMERCE 2KA3 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*) or permission of the instructor

COMMERCE 4KX3 - SPECIAL TOPICS IN INFORMATION SYSTEMS

Various topics in information systems are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of course offering. For information on course offerings, please refer to the School of Business web site at http://ug.degroote.mcmaster.ca/course-outlines/ or contact the Academic Programs Office, DSB 112.
Prerequisite(s): COMMERCE 2KA3 or IBH 2AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)
COMMERCE 4KX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4MA3 - ADVERTISING AND INTEGRATED MARKETING COMMUNICATION

The course introduces learners to the strategic role of advertising and its various forms - print, radio, television, social, experiential, events, viral and consumer generated content - in effective marketing. Students understand how to develop communications objectives, formulate a creative strategy, compare and select various forms of media to deliver on brand goals. It offers opportunity to practice the process of analyzing an opportunity, formulating strategy, developing creative and implementing an IMC plan.
Lectures (three hours)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3) or IBH 2AA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4MC3 - NEW PRODUCT MARKETING

This course covers the management of new products from the idea stage through to product launch with a strong practical orientation. A field project is a major component of the course.
Lectures (three hours)
Prerequisite(s): COMMERCE 3MC3 or IBH 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4MD3 - BUSINESS MARKETING

An overview of business marketing including: derived demand, vendor analysis, the multiple buying unit, value analysis, competitive bidding, industrial design, key accounts, and trade shows.
Lectures (three hours)
Prerequisite(s): COMMERCE 3MC3 or IBH 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4ME3 - SALES MANAGEMENT

Cases, presentations, field work, library research, role playing and group exercises help to understand customers, the selling process, sales presentations, negotiation, legal and ethical responsibilities, self and team management.
Lectures (three hours)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3) or IBH 2AA3; and registration in any Bachelor of Commerce, Engineering and Management program, eligible B.Tech Degree Completion Program, or relevant minor (see *Faculty Note 2*.)

COMMERCE 4MF3 - RETAILING MANAGEMENT

This course will familiarize students with key managerial and policy issues involved in the design, implementation and assessment of the retail mix. It will cover several areas relating to the institution of retailing, elements of the retail environment; and retail strategies.
Lectures (three hours)
Prerequisite(s): COMMERCE 3MC3 or IBH 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4MG3 - STRATEGIC PHILANTHROPY AND LEADERSHIP

In this course you will learn about the philanthropic sector in Canada through the hands-on process of granting over $10,000 to a local charity(s). Seeded by a $10,000 gift from the Learning by Giving Foundation, this course is designed to explore core aspects of the philanthropic and charitable sector. No previous

experience with not-for-profit organizations is required. The purpose of this course is to introduce you to leadership practices in this sector and enhance your future capacity and expertise to make good investments for social, economic and environmental change through the charitable sector, either personally or as a member of a corporate social responsibility team.
Lectures (three hours)
Prerequisite(s): Registration in Level III or above in any four or five year program; or Instructor permission

COMMERCE 4MH3 - DIGITAL MARKETING

The purpose of this course is to explore cutting edge marketing strategies and tactics in a dynamic e-commerce environment. The course will cover a wide range of issues including online consumer behaviours, website analytics, search engine marketing, online CRM, online channel and pricing strategies, social media marketing, and mobile marketing. This course is taught through lectures, case studies, a field project, and guest talks.
Lectures (three hours)
Prerequisite(s): COMMERCE 1MA3 (or 2MA3) or IBH 2AA3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see Faculty Note 2.)

COMMERCE 4MI3 - MARKETING ANALYTICS

Marketing departments are increasingly utilizing data routinely collected by their organizations to improve marketing decision making and more effectively allocate resources. This course will familiarize students with tools necessary for converting raw data into valuable consumer insights. The course offers a hands-on, practical approach, giving students the opportunity to become familiar with data analysis software. The course will emphasize both inference and prediction and highlight the trade-offs associated with different marketing analytics methods.
Prerequisite(s): COMMERCE 1MA3; and registration in any Bachelor of Commerce, Engineering and Management program, eligible B.Tech Degree Completion Program, or relevant minor (see *Faculty Note 2*.)

COMMERCE 4OB3 - ANALYSIS OF PRODUCTION/ OPERATIONS PROBLEMS

An examination of analytical approaches to problems in the field of production/ operations. The course will provide in-depth coverage of a limited number of topics. Enterprise resource planning system SAP is used to highlight some of the concepts covered in this course. This course is used towards SAP Certification in Business Integration.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 2OC3, COMMERCE 4QA3, MECHENG 4C03, or IBH 3BE3 (or 2BC3); and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4OD3 - PURCHASING AND SUPPLY MANAGEMENT

Students will gain skills that are necessary to manage purchasing operations in the private and public sectors. Topics include: purchasing policies, procedures, supplier selection, order management (including quality, quantity, delivery and price decisions), spend analytics, negotiation and contract management, outsourcing, international procurement and sustainability issues. Relevant procurement components of SAPs enterprise resource planning system will be demonstrated. This course can be used towards SAP Certification in Business Integration.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): One of COMMERCE 2OC3, COMMERCE 4QA3, or IBH 3BE3 (or 2BC3); and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4OI3 - SUPPLY CHAIN MANAGEMENT

Supply chain, the network of materials, information and money, has become a key dimension in business competition. In this course, we will present the basic concepts and techniques in supply chain management using an integrated approach. We will also discuss the key drivers in supply chain management, and learn the success and failure stories of supply chain management. Enterprise resource planning system SAP is used to highlight some of the concepts covered in the course. This course is used towards SAP Certification in Business Integration.
Lectures (three hours)
Prerequisite(s): One of COMMERCE 2OC3, 4QA3, or IBH 3BE3 (or 2BC3); and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4OT3 - TRANSPORTATION AND WAREHOUSING MANAGEMENT

Transportation and warehousing play a critical role in the supply chain and the economy. They are a key enablers for customer-oriented strategies such as same-day or overnight deliveries. This course will help students understand the strategic role of transportation and logistics. The course covers concepts such as transportation costing and pricing; warehouse equipment and operations; warehouse layout; order processing; and transportation network design and optimization. The course will also use SAP.
Lectures (three hours)
Prerequisite(s): COMMERCE 2DA3 (or 3QA3); and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4PA3 - BUSINESS POLICY: STRATEGIC MANAGEMENT

As the capstone to the program, this case course is designed to unify the student's learning experience by exploring the formulation and implementation of corporate strategy.
Lectures (three hours)
Prerequisite(s): COMMERCE 3MC3; and registration in Level IV of any Bachelor of Commerce or Level V Engineering and Management program or relevant minor (see *Faculty Note 2*.)
Antirequisite(s): IBH 3BB3

COMMERCE 4QA3 - OPERATIONS MODELLING AND ANALYSIS

- course that looks at productions and operations management as practiced in engineering and manufacturing industries and the services sector.

Lectures (three hours)
Prerequisite(s): One of STATS 2MA3, 3J04, 3N03, 3Y03, MATLS 3J03, ENGPHYS 3W04 A/B, or equivalent, and registration in any Engineering and Management, or Mechanical Engineering program; or registration in Level IV or V of any Engineering Physics program
Antirequisite(s): COMMERCE 2OC3, IBH 2BC3, 3BE3

COMMERCE 4QX3 - SPECIAL TOPICS IN OPERATIONS MANAGEMENT

Various topics in operations management are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the

time of course offering. For information on course offerings, please refer to the School of Business website at http://ug.degroote.mcmaster.ca/course-outlines/ or contact the Academic Programs Office, DSB 112.
Lectures (three hours)
Prerequisite(s): COMMERCE 2OC3 or IBH 3BE3 (or 2BC3) or 4QA3; registration in any Bachelor of Commerce Program or Engineering & Management program

COMMERCE 4SA3 - INTERNATIONAL BUSINESS

The key features of, and trends in, the global business environment. The implications of cultural and political differences. Comparative operational practices and multinational management.
Lectures (three hours)
Prerequisite(s): COMMERCE 3MC3 or IBH 3AB3; and registration in Level IV of any Bachelor of Commerce or Level V of any Engineering and Management program or with instructor permission or relevant minor (see *Faculty Note 2*.)

COMMERCE 4SB3 - INTRODUCTION TO CANADIAN TAXATION

The principles of Canadian federal income taxation are examined in detail, emphasizing the application of both statute and common law to individuals' and businesses' situations.
Lectures (three hours)
Prerequisite(s): Credit or registration in COMMERCE 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4SC3 - ADVANCED CANADIAN TAXATION

This course continues the study of Canadian federal income taxation with an in-depth coverage of selected provisions of the Income Tax Act pertaining to business activities, particularly the activities of corporations.
Lectures (three hours)
Prerequisite(s): COMMERCE 4SB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4SD3 - COMMERCIAL LAW

This course emphasizes those areas of law which are most relevant to business activity. Particular attention is given to the law relating to contracts and business organizations. Other areas of study include: sources of law, the judicial process, real and personal property, torts, agency, credit and negotiable instruments.
Lectures (three hours)
Prerequisite(s): Registration in Level II or above and in any Bachelor of Commerce or Engineering and Management program or Level IV of the Justice, Political Philosophy, and Law Program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4SE3 - ENTREPRENEURSHIP

The problems and experiences encountered in starting and developing new enterprises will be studied. A cornerstone of the course is the development of a detailed business plan for a local entrepreneur.
Lectures (three hours)
Prerequisite(s): COMMERCE 2FB3 (or 3FA3) or IBH 3AC3; and COMMERCE 3MA3, COMMERCE 3MC3, or IBH 3AB3; and registration in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2*.)

COMMERCE 4SG3 - SUSTAINABILITY: CORPORATIONS AND SOCIETY

The goal of this course is to familiarize students with a variety of sustainability related concepts including the triple bottom line, resilience, stakeholder engagement, the tragedy of the commons, sustainability and technology, and sustainable business models. Using cases, simulations, guest speakers, a group project and reflection, students will sharpen their ability to critically analyze and debate complex and systemic issues from an informed position. Students will emerge from this course understanding both the challenges and opportunities inherent in sustainability.
Lectures (three hours)
Prerequisite(s): Registration in Level II or above of a four or five year program or instructor permission

COMMERCE 4SH3 - CASE ANALYSIS AND PRESENTATION SKILLS

Cases allow students to directly apply and integrate theories from various business disciplines to real-world situations/problems. Students will be working in teams and will have the opportunity to present their analysis and recommendations to a panel of judges. Hence, they will also develop their presentation skills, team and time management and communication skills. The first half of the course will provide students with the tools they need to approach case analysis. These tools include problem solving methodologies, communication approaches and team building skills. The final half of the course will allow students to practice applying these tools in case analysis situations in a three hour format. The cases will cover various industries and companies as well as different disciplines. Students will also be able to critique the analysis and presentation skills of their peers.
Lectures (three hours)
Prerequisite(s): Registration in Level IV or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Note 5*)

COMMERCE 4SI3 - INNOVATION FOR SOCIAL IMPACT

This course provides students from Humanities, Social Sciences, and Business the opportunity to learn and apply social innovation skills in the non-profit sector. In the classroom, students will gain an understanding of key social innovation concepts including impact assessment, systems mapping, design thinking, collective impact, and theory of change while also learning about the unique characteristics and work environment of the non-profit sector. In the community, students will engage with a non-profit partner to help them conceptualize, develop, and/or implement a social innovation.
Lectures, Group work, Cases, Guest lectures
Prerequisite(s): Registration in Level IV or above in any Bachelor of Commerce, Social Science, or Humanities program or Instructor Permission. Please note: Spaces are limited.
Cross-list(s): SOCSCI 4SI3, HUMAN 4SI3
This course is administered by the DeGroote School of Business

COMMERCE 4SM3 - SPORTS MANAGEMENT

This course emphasizes management principles as they relate to the business of sports. Students are introduced to the following sports management issues: marketing and advertising of sports events and brands, understanding of legal and ethical issues in sport, media and promotion, sponsorship and event management, sports equipment and product management, recreational sports management and other related areas. There is an emphasis on developing and improving communication skills as much of the course content will be case-based. An overview is provided with regard to career opportunities in the sports management field.

Lectures (three hours)
Prerequisite(s): Registration in Level III or above

COMMERCE 4SX3 - SPECIAL TOPICS IN STRATEGIC MANAGEMENT

Various topics in business are considered. They will vary depending upon recent developments in the field and upon the interests of the instructor. The topics to be included are announced at the time of the course offering.
Lectures (three hours)
Prerequisite(s): Registration in level II or above in any Bachelor of Commerce or Engineering and Management program or relevant minor (see *Faculty Note 2.*)

COMMERCE 4SY3 - INDEPENDENT STUDY IN BUSINESS

Faculty supervised research project. A supervising faculty member from the DeGroote School of Business must be arranged, and authorization of the Associate Dean (Academic) secured, in the term preceding the term of study.
Lectures (three hours)
Prerequisite(s): To be determined by the supervising faculty member and registration in level III or above in any Honours Bachelor of Commerce or Engineering and Management program
Antirequisite(s): COMMERCE 4SY3 (regardless of topic)
Project proposal forms are available online and must be completed by the student and signed by the Supervisor and Associate Dean Academic prior to enrolment.

Communication Studies

Note Regarding Level IV Seminars
Level IV Communication Studies seminars are open only to students registered in Level IV of an Honours program in Communication Studies. The Department is only able to offer a selection of the courses listed below each year. As course size is limited, seminar places in each course will be allotted in March of every year for the succeeding session. It is essential that students apply early to the Department for the seminars they wish to take.
Courses in Communication Studies are administered by the Department of Communication Studies and Media Arts.
Togo Salmon Hall, Room 331A, ext. 23488
http://csma.humanities.mcmaster.ca/
Courses
If no prerequisite is listed, the course is open. See also courses in *Media Arts.*

CMST 1A03 - INTRODUCTION TO COMMUNICATION

This course examines communication and media industries, content, and audiences in historical, social, political, economic, technological, and cultural contexts. Students will be introduced to basic theoretical perspectives, policy concerns, professional practices, and social issues foundational to communication studies.
Three hours (lectures and tutorial); one term

CMST 2BB3 - CULTURE AND COMMUNICATION

An introduction to theoretical and methodological approaches to cultural studies focusing on communicative practice. Students will analyse relationships between cultural identity, producers, consumers, institutions, technologies and practices of mediated communication.
Three hours; one term
Prerequisite(s): CMST 1A03 or MEDIAART 1A03 (or MMEDIA 1A03); and registration in Level II or above

CMST 2DD3 - MEDIA ORGANIZATIONS

An examination of the occupational, professional and organizational structures and processes of media production in the press, radio, television and digital media. Topics include news gathering, radio and TV production practices and media management.
Three hours; one term
Prerequisite(s): CMST 1A03 or MEDIAART 1A03 (or MMEDIA 1A03); and registration in Level II or above

CMST 2EM3 - ENVIRONMENTAL MEDIA

An introduction to communication about the environment. Topics include environmentalist writing and public messaging, climate change as represented across genres and media technologies, ecological art, environmental justice and Indigenous knowledge, animal communication, and the role of ideology in our environmental crises.
Three hours; one term
Prerequisite(s): Registration in Level II or above

CMST 2G03 - PERFORMANCE AND PERFORMATIVITY

An introduction to the study of performative modes of communication such as storytelling, gesture, movement, dress. Students will learn to analyze the relationship between cultural performances, such as games, garage bands, group facilitation, or live theatre and social structures.
Three hours; one term
Prerequisite(s): One of CMST 1A03, MEDIAART 1A03 (or MMEDIA 1A03), IARTS 1T03 (or THTRFLM 1T03); and registration in Level II or above

CMST 2H03 - GENDER AND PERFORMANCE

An examination of gender as identities performed or constructed in complex social, historical and cultural processes and conditions, including how gender gives meaning to different performance texts, as well as to a range of performance practices in daily life.
Three hours; one term
Prerequisite(s): One of CMST 1A03, MEDIAART 1A03 (or MMEDIA 1A03), GENDRST 1A03 (or WOMENST 1A03), or GENDRST 1AA3 (or WOMENST 1AA3); and registration in Level II or above
Antirequisite(s): WOMENST 2J03

CMST 2HM3 - HUMAN COMMUNICATION

This course examines how humans engage in interpersonal communications using self, group, nonverbal, intercultural and workplace communicative methods. Students will learn and demonstrate the importance of listening, critical thinking, and persuasive writing.
Three hours; one term
Prerequisite(s): Registration in Level II or above

CMST 2K03 - POLITICAL ECONOMY OF THE MEDIA

- comparative examination of changing patterns of ownership and control of the mass media in light of globalization, technological change, government policy, market restructuring and corporate consolidation.

Three hours; one term
Prerequisite(s): One of CMST 1A03, MEDIAART 1A03 (or MMEDIA 1A03), POLSCI 1AA3, POLSCI 1AB3, SOCIOL 1C03, or SOCIOL 1Z03, and registration in Level II or above; or registration in Level II or above of the Justice, Political Philosophy and Law program
Cross-list(s): POLSCI 2K03
Antirequisite(s): POLSCI 2EM3

CMST 2LW3 - COMMUNICATION POLICY AND LAW

An examination of communication law and policy. Topics include freedom of expression and the press, telecommunications and broadcasting regulation, Internet law, privacy, and intellectual property.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in the Faculties of Humanites or Social Sciences
Antirequisite(s): CMST 3I03
Cross-list(s): POLSCI 2LW3

CMST 2PR3 - PUBLIC RELATIONS: PRINCIPLES AND PRACTICES

An introduction to fundamental skills, knowledge, theory and problem-solving techniques currently used in the practice of public relations, using the case study method.
Three hours (lectures and tutorial); one term
Prerequisite(s): Completion of CMST 1A03 and registration in Level II or above

CMST 2RA3 - APPLICATION IN COMMUNICATION THEORY AND METHODS

Building from the theoretical and methodological foundations introduced in CMST 2TM6, students develop, refine, and apply research skills in a comprehensive research project in community-informed and in experiential contexts. Multiple modes of writing, presentation, and knowledge mobilization of research will be emphasized.
This is a CORE CMST course. Please complete by the end of your first year in the program.
Three hours (lectures and tutorial); one term
Prerequisite(s): Completion of CMST 2TM6 and registration in Level II or above of a program in Communication Studies
Antirequisite(s): CMST 2A03, 2B03 or 2C03

CMST 2TM6 - FOUNDATIONS IN COMMUNICATION THEORY AND METHODS

- comprehensive introduction to communication research in an integrated format, where students learn about the research process, theoretical frameworks, epistemological questions, research questions, ethics, links between theory and method, and a survey of quantitative and qualitative methods and modes of analysis.

This is a CORE CMST course. Please complete by the end of your first year in the program.
Six hours (lectures and tutorial); one term
Prerequisite(s): Registration in Level II or above of a program in Communication Studies
Antirequisite(s): CMST 2A03, 2B03 or 2C03

CMST 2XX3 - QUEER POPULAR CULTURE

From music and comedy to social media and television, 2STLGBQIA+ people are more visible than ever in popular culture. In this course, we explore how, now and in the past, queer and trans people have shaped popular culture and how popular culture has been a resource for 2STLGBQIA+ survival, community, and joy. We will use diverse case studies and readings to better understand the work of cultural producers and their entertainment industry, social, and political contexts.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

CMST 2ZP3 - ZIP.PING.SPLAT: DIGITAL WAYS OF DOING

Digital tools are inflected with cultural, aesthetic and political meaning. This class explores how to creatively and critically engage digital production practices (e.g. glitches, virality) to create potent and impactful messages in forms such as SMS, infographics, GIFs and more.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

CMST 3B03 - PRACTICAL ASPECTS OF MEDIA PRODUCTION

Through an experiential work placement and coursework, students develop professional skills, explore career options, and connect their course learning with real-life communications and media workplaces. Students must apply for the course, using the application form on the department website.
Prerequisite(s): Registration in Level III or IV of a program in Communication Studies, Media Arts, or Multimedia with a Grade Point Average of at least 8.5 and permission of the Instructor.

CMST 3CY3 - CHILDREN, YOUTH, AND MEDIA

This course explores the relationship between media and diverse childhoods and youth, and takes up central debates, theories, and research. Core concerns involve media literacy; cultural, educational, and social policy; media analysis; identity, reception; social media and new technologies; and youth media production. Attention is paid to race, gender, sexuality, and culture throughout the course.
Three hours; one term
Prerequisite(s): Registration in Level III or above of a program in Communication Studies, Media Arts, Multimedia, Peace Studies, or Global Peace and Social Justice
Antirequisite(s): CMST 2EE3
Cross-list(s): PEACJUST 3CY3

CMST 3DG3 - DIGITAL STORYTELLING

This course conceptualizes digital storytelling as a tool for activism. Concepts covered include hegemony, counter hegemony, and social change. Using open-source software, students will receive hands-on instruction on the production of three-minute digital stories.
Three hours; one term
Prerequisite(s): Registration in Level III or above

CMST 3DJ3 - DIGITAL JUSTICE

This course examines the relationship between technology, power and social justice through anti-oppressive theories, actions, practices and strategies. A range of historical antecedents and contemporary approaches to digital justice are considered, including digital storytelling, counter-archiving, lo-fi and experimental media, maintenance and repair, reverse engineering, and policy and governance intervention.
Three hours; one term
Prerequisite(s): Registration in Level III or above

CMST 3HC3 - HISTORY OF COMMUNICATION

- survey of communication history with attention to the Canadian context. This course will include discussions of orality and literacy; manuscript, print and electronic media; and the role of gender, race, and class in media history. Students will engage with methodologies including archival research, primary source analysis, and digital humanities approaches.

Three hours (lectures and tutorials); one term

Prerequisite(s): Registration in Level III or above of a program in Communication Studies
Antirequisite(s): CMST 2CC3

CMST 3II3 - INTELLECTUAL PROPERTY

An examination of intellectual property from a practical/legal perspective, and in broader context. Exploring the politics of intellectual property online and offline: philosophies and practices, politics and institutions, and alternatives.
Three hours; one term
Prerequisite(s): One of CMST 1A03, MEDIAART 1A03 (or MMEDIA 1A03), POLSCI 1AA3 or POLSCI 1AB3, and registration in Level III or above; or registration in Level III or above of the Justice, Political Philosophy and Law program
Cross-list(s): POLSCI 3IP3

CMST 3JJ3 - THE RISE OF THE MUSIC INDUSTRY

This course examines the role of early media, technology, performance and business practices in the development of popular music styles, audiences and cultural meanings. Topics include Tin Pan Alley, race records and big bands on radio.
Three hours; one term
Prerequisite(s): CMST 1A03 or MEDIAART 1A03 (or MMEDIA 1A03); and registration in Level III or above

CMST 3K03 - MEDIA AUDIENCES AND EFFECTS

An examination of the media/audience relationship in light of different theories of media effects including social learning, agenda-setting, uses and gratifications, active audiences and cultivation analysis.
Three hours; one term
Prerequisite(s): Registration in Level III or above of a program in Communication Studies, Media Arts, or Multimedia

CMST 3PM3 - PUBLIC MEMORY, MEDIA, AND AFRICAN DIASPORA STUDIES

This course considers the role of public space and institutions in communicating and commemorating Black history and in fostering ongoing Black freedom struggles in Canada and the diaspora, including through museums, protest art, and historic site tourism. Core texts draw upon key scholarly debates in African Diaspora Studies and Media Studies. Topics may include Underground Railroad in Canada, #WetheNorth, BLM, Republic of New Afrika's "Free the Land" campaign in the US South, and reparations organizing at the UN.
Three hours; one term
Prerequisite(s): Registration in Level III or above.

CMST 3RR3 - RACE, RELIGION, AND MEDIA

This course examines historical constructions of different races and religions in the media, primarily film, television and the press, and asks how these constructions may manifest themselves in contemporary forms of media and in current events. Students will learn to deconstruct visual and written depictions across a variety of media.
Three hours; one term
Prerequisite(s): CMST 1A03, MEDIAART 1A03, MMEDIA 1A03, POLSCI 1AA3, POLSCI 2F03, PEACJUST 1A03 or PEACJUST 1VM3; and registration in Level III or above
Cross-list(s): PEACJUST 3RR3

CMST 3S03 - TELEVISION AND SOCIETY

This course will examine television as a socio-cultural and political phenomenon. This course will involve theoretical and empirical analysis of the television industry, production, texts and genres, and audiences. Major debates in television studies will be addressed.
Three hours; one term
Prerequisite(s): Registration in Level III or above of a program in Communication Studies, Media Arts, or Multimedia

CMST 3SC3 - STRATEGIC COMMUNICATIONS

Informed by community engagement principles, students learn the key elements of strategic communications. In teams, they work with instructor-selected organizations to develop communications plans. At the end of the year, teams present their plans to a panel of community and academic evaluators.
Three hours; one term
Prerequisite(s): CMST 2PR3 and registration in Level III or above.

CMST 3SM3 - BUILDING PUBLICS USING SOCIAL MEDIA

Survey of social media tools available to communications practitioners. Concept of 'building a public' is examined from an interdisciplinary perspective. Emphasis is placed on the techniques of rhetoric and persuasion.
Three hours; one term
Prerequisite(s): Registration in Level III or above

CMST 3WC3 - WORLD CINEMAS: CRITICAL MEDIA APPROACHES

This course takes a critical media studies approach to world cinema as a concept, critical media category, aesthetics, technology, and discursive repertoire of diverse global traditions. Categories like 'transnational-', 'hybrid-', 'third-', and 'accented' cinema will be explored. Understanding cinema as part of a multinational system of communications networks, international co-productions, and festival distribution, the course integrates broader topics of colonialism, globalisation, diaspora, cinematic style, genre, visual culture and industry.
Three hours; one term
Prerequisite(s): Registration in Level III or above of a program in Communication Studies, Multimedia, Media Arts, Theatre & Film, Peace Studies or Global Peace and Social Justice

CMST 3WR3 - PROFESSIONAL WRITING

This course offers instruction on a variety of professional communication formats and styles in a variety of media and communication contexts. The course will include lecture, workshop, and hands-on practice at writing and revision. Students will gain an advanced skill set and produce portfolio-level professional writing product.
Three hours (lectures and workshops); one term
Prerequisite(s): CMST 1A03 or MEDIAART 1A03 (or MMEDIA 1A03); and registration in Level III or above
Antirequisite(s): CMST 2F03

CMST 3Z03 - MOBILE PRACTICES, TECHNOLOGIES AND ART

Mobility is explored as a concept informing communication technology development, the notion of the ideal consumer/citizen, and as an artistic device. Assignments explore mobility as a trope enabling expression, innovation or resistance via textual and aesthetic interventions.
Three hours; one term

Prerequisite(s): Registration in Level III or above

CMST 4A03 - INDEPENDENT RESEARCH PROJECT

Under the supervision of a Faculty Advisor students will complete an independent, original research project.
Prerequisite(s): Registration in Level IV of a program in Communication Studies with a Grade Point Average of at least 9.0; Departmental permission required

CMST 4D03 - INTERNATIONAL COMMUNICATION

The relationship between globalization and the media is examined in light of the debates over cultural imperialism, information and technology flow, cultural hybridization and the media's impact on socio-economic development.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required

CMST 4E03 - MEDIA AND PROMOTIONALISM

An examination of the media's role in the promotion of different interests, values and patterns of behaviour. Topics include advertising, public relations, social activism and public information campaigns.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required

CMST 4M03 - COMMUNICATION, CULTURE AND TECHNOLOGY

This course surveys social patterns of reception and adaptation of communication technologies and their interaction with cultural constructions of (gendered) bodies, everyday life, organization of space and time, and other cultural distinctions.
Lectures and discussion (Three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required

CMST 4N03 - THE NEWS

News is central to an informed society and to a well-functioning democracy. Print and broadcast news have been replaced by waves of new digital and social media as the predominant means for producing and consuming the news. Digital news is fraught with challenge and opportunity: new political economic models, bias, fake news, censorship, artificial intelligence, data journalism, augmented and virtual reality are changing how people become "informed" today. This course analyzes issues related to the complicated new reality of online, social, print, and broadcast news media.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required.

CMST 4P03 - SOCIAL ACTIVISM AND THE MEDIA

This course examines the role of print, electronic and digital media in the relationship between social movements, the state and corporate interests.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required.

CMST 4Q03 - BROADCASTING TRANSFORMATION IN A MULTIMEDIA ERA

Students examine how public broadcasters in Canada and internationally deal with challenges of political, economic, cultural and technological change, e.g. audience evolution, shifting regional and demographic composition, and new funding models. The course explores how the very model of mass media changes in an interactive, multimedia environment.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required

CMST 4SC3 - STRATEGIC COMMUNICATIONS LEADERSHIP

Informed by community engagement principles, students learn the role of leadership and management in strategic communications. They lead and guide teams of CMST 3SC3 students in developing communications plans for instructor-selected organizations and present the plans to a panel of community and academic evaluators.
Three hours; one term
Prerequisite(s): CMST 3SC3 and registration in Level IV of a program in Communication Studies.
Departmental permission required

CMST 4X03 - COMMUNICATIONS FOR CAMPAIGNS AND ELECTIONS

Examination of tools, tactics and strategies employed by communications practitioners, strategists and managers during campaigns and elections. Effective use and construction of influence is analyzed using case studies and theory.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of a program in Communication Studies; Departmental permission required

Community Engagement

CMTYENGA 2A03 - FOUNDATIONS OF COMMUNITY ENGAGEMENT

Regardless of your degree, you will be a member of many communities - your workplace, your professional group, your neighbourhood, your city, your country, the world. You will be called upon to participate in community activities and community change. This course provides you with an understanding of how communities function, the politics and processes involved in community participation and leadership. It will focus on developing the beginning skills for effective and ethical community engagement.
Three hours; one term
Prerequisite(s): Registration in Level II or above; priority will be given to students in Level II

CMTYENGA 2MC3 - DESIGN AND CREATION OF ENGAGED LEARNING FOR COMMUNITY YOUTH

Students work in teams to produce interactive workshops for young people (ages 7 to 14) in the Hamilton community. Students learn best practices in community engagement, in the design of interactive experience for youth, and in knowledge translation. Students in this class receive direct feedback on their workshop design from a class of elementary school students. The workshops created will become part of the MCYU digital collection, and eventually be deployed by MCYU students working through CMTYENGA 2MD3. For more information, please see the McMaster Children and Youth University at www.

mcyu.ca.
Lectures and tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above

CMTYENGA 2MD3 - COMMUNITY-BASED LEARNING WITH MCMASTER CHILDREN AND YOUTH UNIVERSITY

In partnership with the McMaster Children and Youth University (MCYU), students will take inquiry-based learning activities into Hamilton community schools, community centres and libraries. Completion of CMTYENGA 2MC3 prior to CMTYENGA 2MD3 is recommended. In this course, students will learn how to communicate research effectively to a younger audience and practice leadership, knowledge translation, and project management skills. Students will gain experiential learning opportunities through the deployment of their interactive workshops with youth 7-14 years of age. Additional community engagement experience will also be gained through interacting with McMaster Faculty and students and teachers in the community. For more information, please see our website at www.mcyu.ca.
Three hours; one term
Prerequisite(s): Enrollment in Level II or above. Completion of CMTYENGA 2A03, CMTYENGA 2MC3, or IBH 1AB3 is recommended.

CMTYENGA 3A03 - THE ART OF CHANGE

This interdisciplinary course will equip students with the skills and tools they need to support and lead change-based initiatives for a better world. Building on foundational principles of community engagement, students will learn about theories of change, systems thinking, organizational theory and structures, and facilitation techniques and tools used to support community change. Case studies of real-life change initiatives will ground these theories in real-life contexts that help students to understand both how change happens and how individuals can make change when tackling real-world issues. Students will also be provided with an opportunity to work with the Office of Community Engagement on a collaborative project that applies learning towards a real-life community issue.
Three hours; One term
Prerequisite(s): Registration in Level III or IV.

CMTYENGA 3E03 - COMMUNITY ENGAGEMENT IN PRACTICE WITH EMPOWERMENT SQUARED

Students collaborate with Hamilton-based community organization Empowerment Squared to explore the UBUNTU philosophy of human interdependence and community, learn about culturally responsive approaches to working in community, and develop practical skills while designing and implementing community projects.
Lectures (three hours): one term. May require one Saturday training session.

CMTYENGA 4A06 - SEMESTER AT CITYLAB: DESIGN AND DIALOGUE INQUIRY

Semester at CityLAB (composed of both CMTYENGA 4A06 - Design and Dialogue Inquiry and CMTYENGA 4A09 - Semester at CityLAB: Applied Project Experience) is a project based experiential class where students work in interdisciplinary teams mentored by City of Hamilton staff and course instructors to address real challenges faced by the City. Using an inquiry model and drawing on an associated city-identified challenge, this course develops disciplinary capabilities in design thinking, dialogue, project management, and public communication, and prepares students to co-create, test, and evaluate a project. This course requires permission from the Office of Community Engagement.
Six hours; One term
Co-requisite(s): CMTYENGA 4A09
Antirequisite(s): CMTYENGA 4B06, INSPIRE 4B06
Prerequisite(s): Registration in Level III or IV.

CMTYENGA 4A09 - SEMESTER AT CITYLAB: APPLIED PROJECT EXPERIENCE

Semester at CityLAB (composed of both CMTYENGA 4A06 - Semester at CityLAB: Design and Dialogue Inquiry and CMTYENGA 4A09 Applied Project Experience) is a project based experiential class where students work in interdisciplinary teams mentored by City of Hamilton staff and course instructors to address real challenges faced by the City. In addition to intensive workshops, field trips, and dialogue sessions with staff and community members, students will work in interdisciplinary teams to directly apply their theoretical knowledge and skills to develop and hone a real-life project that addresses a specific challenge faced by Hamilton today. Students will be exposed to, and participate actively in, the civic life of Hamilton. This course requires permission from the Office of Community Engagement.
One term
Co-requisite(s): CMTYENGA 4A06
Antirequisite(s): CMTYENGA 4B06, INSPIRE 4B06
Prerequisite(s): Registration in Level III or IV

CMTYENGA 4B06 - URBAN INNOVATION AND POLICY WITH CITYLAB

Intensive experience where students work in interdisciplinary teams on real-world challenges originating from Hamilton city staff or community organizations. Students attend class daily at the CityLAB space next to Hamilton City Hall and take part in workshops and field trips. The focus is on research and presentation of ideas for urban innovation, and change-making in a complex urban environment. This course requires permission from the Office of Community Engagement. Offered in intercession only.
Prerequisite(s): Registration in Level III or above
Antirequisite(s): CMTYENGA 4A06, CMTYENGA 4A09
Required Components: Lecture, M-F, 9:30 - 3:30 at CityLAB Intercession term.
Crosslist: INSPIRE 4B06

CMTYENGA 4MM3 - COLLABORATIVE LEARNING WITH YOUNG PEOPLE: AN APPLIED APPROACH

This course is focused on community engaged education and the MCYU pedagogy of directly involving young people in the design and delivery of their learning. The course will include a capstone project where students will be paired with an elementary school teacher and their class to co-develop an interactive learning experience. The course will also engage students in learning the pedagogical rationale for interactively engaging young people in diverse learning experience through seminar discussion. This course is intended for students with previous experience in community engaged coursework.
Seminar. Three hours. One Term. Alternates between class meetings and meetings with the partner teacher and elementary school class.
Prerequisite(s): Registration in Level III or above. One of IBH 1AD3, CMTYENGA 2A03, CMTYENGA 2MC3, CMTYENGA 2MD3, ENGLISH 3RW3, or permission of the instructor.

Computer Engineering

Courses in Computer Engineering are administered by the Department of Electrical and Computer Engineering.
Information Technology Building, Room A111, ext. 24347
http://www.ece.mcmaster.ca/

COMPENG 2CF3 - CIRCUITS AND WAVES

Advanced circuit analysis; sinusoids and complex numbers; Laplace transforms with applications; frequency response; 2-port networks; fundamentals of wave propagation; transmission lines and impedance match; radiation and antennas.
Three lectures, one tutorial; second term
Prerequisite(s): ELECENG 2CI5 or ELECENG 2CI4 and PHYSICS 1E03
Antirequisite(s): ELECENG 2FH3, ELECENG 2FH4, ELECENG 2FL3, ELECENG 2CF3, ELECENG 2CJ4

COMPENG 2DI4 - LOGIC DESIGN

Binary numbers and codes; Boolean algebra; combinational circuit design; electrical properties of logic circuits; sequential circuit design; computer arithmetic; programmable logic; CPU organization and design.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): Registration in a program in Computer Engineering, Electrical Engineering, Engineering Physics (Photonics Engineering Stream), Physics, or Integrated Biomedical Engineering and Health Sciences (IBEHS)
Antirequisite(s): COMPSCI 2MF3, SFWRENG 2DA4

COMPENG 2DX3 - MICROPROCESSOR SYSTEMS PROJECT

Microprocessor systems, introduction to the design process, project development by small teams of students, oral presentations and engineering report writing.
One lecture, one lab, one design studio; second term
Prerequisite(s): COMPENG 2SH4 and COMPENG 2DI4 and either ELECENG 2CI5 or ELECENG 2CI4
Antirequisite(s): COMPENG 2DP4, COMPENG 2DX4

COMPENG 2SH4 - PRINCIPLES OF PROGRAMMING

Fundamental concepts of programming languages: data types, assignment, control constructs, basic data structures, iteration, recursion, exceptions; imperative and object-orientated paradigms; composing and testing small programs.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ENGINEER 1D04 or ENGINEER 1P13 and registration in a program in Electrical and Computer Engineering or the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): COMPSCI 1XC3, COMPSCI 2S03, SFWRENG 2S03, and SFWRENG 2XC3

COMPENG 2SI3 - DATA STRUCTURES AND ALGORITHMS

Data abstraction; algorithm analysis; recursion; lists; stacks; queues; trees; searching; hashing; sorting.
Two lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ENGINEER 1D04 or ENGINEER 1P13 and COMPENG 2SH4
Antirequisite(s): COMPSCI 2C03, COMPSCI 2C03, SFWRENG 2C03, SFWRENG 2DM3, COMPENG 2SI4

COMPENG 3DQ5 - DIGITAL SYSTEMS DESIGN

Advanced design methods of digital systems including modelling, simulation, synthesis and verification using hardware description languages, timing analysis and hardware debugging; implementation of computer peripherals in programmable devices.
Three lectures, one tutorial, one lab (three hours) every week; first term
Prerequisite(s): COMPENG 2DI4 and one of COMPENG 2DP4 or 2DX4 or 2DX3
Students taking this course as an elective must receive the permission of the instructor.

COMPENG 3DY4 - COMPUTER SYSTEMS INTEGRATION PROJECT

- computer engineering design and implementation project of reasonable complexity to be completed by small groups of students; oral presentations and written reports.

Two lectures, one lab, one tutorial/design studio 1 hour, second term
Prerequisite(s): COMPENG 2DX4 or COMPENG 2DX3, COMPENG 3DQ5, ELECENG 3EJ4, ELECENG 3TP3
Antirequisite(s): COMPENG 3DR4, ELECENG 3EY4
Co-requisite(s): ELECENG 3CL4, ELECENG 3TR4

COMPENG 3SK3 - NUMERICAL METHODS FOR SCIENTIFIC COMPUTING

Numerical analysis; linear and nonlinear systems; least squares and matrix decomposition; polynomials, elements of linear algebra, optimization; numerical integration and differentiation; interpolation; engineering applications.
Three lectures, one tutorial; second term
Prerequisite(s): ELECENG 2CJ4; and MATH 2Z03
Antirequisite(s): SFWRENG 3X03, SFWRENG 4X03, COMPSCI 4X03, MECHENG 3F04

COMPENG 3SM4 - ALGORITHM DESIGN AND ANALYSIS

Design and analysis of correct and efficient algorithms and related discrete mathematics concepts and data structures. Topics include: sets, function relations; graph theory; graph algorithms (graph traversals, topological sort, minimum spanning trees, shortest paths); balanced trees and advanced data structures; algorithmic design strategies (dynamic programming, greedy algorithms, divide-and-conquer, backtracking); introduction to NP completeness and approximation algorithms.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): COMPENG 2SH4, and COMPENG 2SI4 or COMPENG 2SI3
Antirequisite(s): COMPSCI 2C03

COMPENG 4DK4 - COMPUTER COMMUNICATION NETWORKS

Introduction to switching and communication networks; packet switching; shared media access and LANs; error control; network layer operation and the Internet; ISDN; wireless networks; performance and simulation.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 3TQ4 or 3TQ3
Antirequisite(s): COMPSCI 4C03
There are limited seats available for students taking this course as an elective.

COMPENG 4DM4 - COMPUTER ARCHITECTURE

Overview of CISC/RISC microprocessors; performance metrics; instruction set design; processor and memory acceleration techniques; pipelining; scheduling; instruction level parallelism; memory hierarchies; multiprocessor structures; storage systems; interconnection networks.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): COMPENG 3DR4 or COMPENG 2DX4 or COMPENG 2DX3
Antirequisite(s): COMPSCI 2GA3, SFWRENG 2GA3, SFWRENG 3GA3

COMPENG 4DN4 - ADVANCED INTERNET COMMUNICATIONS

Advanced internet protocols; IPv4/IPv6; wireless networks; network software tools; Berkeley/POSIX socket programming with C and Python, network message transmission, IP multicast, HTTP, CGI and multimedia networking;

quality of service.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): COMPENG 4DK4
There are limited seats available for students taking this course as an elective.

COMPENG 4DS4 - EMBEDDED SYSTEMS

Embedded processor architectures and SOC organization; EDA tools for hardware/software co-design; co-verification and testability; interfacing; co-processors, soft processors and ASIP design; real-time systems; applications.
Two lectures, one tutorial, one lab every week; second term
Prerequisite(s): COMPENG 3DQ5, or permission of the Department

COMPENG 4DV4 - VERY LARGE SCALE INTEGRATION SYSTEM DESIGN

Industry-standard design methodologies and electronic design automation techniques for digital integrated circuits; advanced hardware description languages; cell-based design; design for testability; functional simulation; gate-level synthesis and optimization; technology mapping; intellectual property cores; static timing analysis; physical design automation; power grid planning; placement and routing; clock network synthesis; parasitic extraction; back-annotated gate-level simulation and signoff checks
Three lectures, one tutorial, one lab every other week, second term
Prerequisite(s): COMPENG 3DQ5, enrolment in Computer Engineering or with permission of the instructor

COMPENG 4OH4 - ADVANCED RESEARCH PROJECT

- research-oriented project under the direct supervision of a faculty member to further foster initiative and independent creativity while working on an advanced topic. This research is based on the experience and results achieved in other research-based project courses.

First or second term
Prerequisite(s): COMPENG 4OJ4 or ELECENG 4OJ4; Prior arrangement with an Electrical and Computer Engineering faculty member, a minimum cumulative GPA of 9.5, registration in Level IV or V of any program in the Department of Electrical and Computer Engineering; or permission of the department.
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03

COMPENG 4OJ4 - RESEARCH PROJECT

- research-oriented project under the direct supervision of a faculty member to foster initiative and independent creativity while working on an advanced topic.

First or second term
Prerequisite(s): Prior arrangement with an Electrical and Computer Engineering faculty member, a minimum cumulative GPA of 9.5, registration in Level IV or V of any program in the Department of Electrical and Computer Engineering; or permission of the department
Antirequisite(s): COMPENG 4OK4, ELECENG 4OK4, IBEHS 3I06 A/B S, IBEHS 4H03

COMPENG 4SL4 - FUNDAMENTALS OF MACHINE LEARNING

Fundamental principles and algorithms of machine learning: linear and logistic regression, nearest neighbours, decision trees, neural networks, support vector machines, ensemble methods; clustering and principal component analysis; basics of reinforcement learning.
Three lectures, one tutorial, one lab every other week, first term
Prerequisite(s): COMPENG 2SI4 or COMPENG 2SI3, STATS 3Y03 or HTHSCI 2G03, and ELECENG 3TQ3 or ELECENG 3TQ4
Antirequisite(s): CHEMENG 4H03, COMPSCI 4ML3, STATS 3DS3

COMPENG 4SP4 - HIGH-PERFORMANCE PROGRAMMING

High-performance computing; code and loop optimization; performance analysis; compilers and basic code analysis; vectorization; code specialization and irregular computing; parallelism in CPU and GPUs; cache-aware and cache-oblivious algorithms; and runtime systems.
Two lectures, one tutorial, one lab every week, first term
Prerequisite(s): COMPENG 2SI3, enrolment in Computer Engineering or with permission of the instructor

COMPENG 4TL4 - DIGITAL SIGNAL PROCESSING

Discrete time signals and systems including z-transform, DFT and FFT; Classical filter theory, FIR and IIR digital filters; effects of finite precision; implementation of DSP systems; adaptive filtering; spectral analysis, signal compression.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 3TP4 or ELECENG 3TP3 or IBEHS 3A03

COMPENG 4TN4 - IMAGE PROCESSING

Digital image formation and representation; filtering, enhancement and restoration; edge detection; discrete image transforms; encoding and compression; segmentation; recognition and interpretation; 3D imagery; applications.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3TP4 or ELECENG 3TP3 or IBEHS 3A03; one of ELECENG 3TQ4, ELECENG 3TQ3 or STATS 3Y03 or permission of the instructor

COMPENG 4TS3 - INTRODUCTION TO DIGITAL SEQUENCES

Fundamentals of sequence generation and their basic properties; pseudo-noise sequences for communication synchronization; Costas arrays for radar systems; De-Bruijn sequences for cryptography; circuit testing and robotic positioning systems; Gray codes for noise reduction in analogy-to-digital conversions; square-free sequences for information storage in DNA molecules
Three lectures, one tutorial; first term
Prerequisite(s): MATH 1ZC3 or permission of the instructor

Computer Science

Courses in Computer Science are administered by the Department of Computing and Software.
Information Technology Building, Room 202, ext. 24614
http://www.cas.mcmaster.ca/

Department Notes

1. Students wishing to pursue a Minor in Computer Science should see the "Minor in Computer Science" section of this Calendar.
2. Please note that not all elective courses will be offered in each academic year.
3. In the prerequisites for COMPSCI courses, the phrase "registration in any Computer Science program" refers to registration in any of the following:
   - Honours Computer Science
   - Honours Computer Science as a Second Degree
   - Honours Economics and Computer Science
   - Honours Mathematics and Computer Science
   - Combined Honours Program in Arts & Science and Computer Science

Courses

COMPSCI 1DM3 - DISCRETE MATHEMATICS FOR COMPUTER SCIENCE

Sets, functions, relations, trees and graphs; counting principles, modular arithmetic, discrete probabilities; induction and recursion, recurrence relations.
Three lectures, one tutorial (two hours), second term; may be offered also in the first term

Prerequisite(s): One of the following: Registration in Computer Science 1 and one of MATH 1B03, 1ZC3 One of MATH 1B03, 1ZC3 with a result of at least B
Antirequisite(s): COMPSCI 2DM3, SFWRENG 2DM3, 2E03, 2F03

COMPSCI 1JC3 - INTRODUCTION TO COMPUTATIONAL THINKING

Exploration of thinking that is inspired, supported, and enabled by computing. Survey of the salient ideas, methods, and technologies in the major areas of computing including basic data types, logic, operating systems, computer networking, web computing, information security, digital media, software development, and problem solving techniques. Introduction to the fundamentals of functional programming.
Three lectures, one tutorial (two hours), first term; may be offered also in the second term (Computer Science students need to take this course in the first term)

Prerequisite(s): One of MATH 1K03, Grade 12 Advanced Functions and Introductory Calculus U, Grade 12 Calculus and Vectors, or registration in Computer Science 1

COMPSCI 1MD3 - INTRODUCTION TO PROGRAMMING

Introduction to fundamental programming concepts: values and types, expressions and evaluation, control flow constructs and exceptions, recursion, input/output and file processing.
Three lectures, one tutorial (one hour); first term; may be offered also in the second term (Computer Science students need to take this course in the first term)

Prerequisite(s): One of MATH 1K03, 1LS3, Grade 12 Advanced Functions and Introductory Calculus U, Grade 12 Calculus and Vectors, or registration or credit in ARTSSCI 1D06 A/B
Antirequisite(s): ENGINEER 1D04, 1P13 A/B, IBEHS 1P10 A/B, MATH 1MP3

COMPSCI 1XC3 - COMPUTER SCIENCE PRACTICE AND EXPERIENCE: DEVELOPMENT BASICS

Acquiring familiarity with professional software development settings via practical experience with interaction with UNIX-like systems, programming in C, with documentation, testing, benchmarking, profiling and debugging; shell interaction and programming, pipes and filters; revision control.
Two lectures, two labs (two hours each); second term; may be offered also in the first term

Prerequisite(s): One of the following:

- COMPSCI 1MD3 and registration in Computer Science 1
- One of COMPSCI 1MD3 or MATH 1MP3 with a result of at least B
- One of ENGINEER 1D04 or 1P13 A/B, or IBEHS 1P10 A/B with a result of at least B, and registration in Level II or above of an Engineering program other than Software Engineering, Mechatronics Engineering, Electrical Engineering, and Computer Engineering

Antirequisite(s): COMPENG 2SH4, COMPSCI 1XA3, 2XA3, 2S03, MECHTRON 2MP3, SFWRENG 2MP3, 2S03, 2XA3, 2XC3

COMPSCI 1XD3 - COMPUTER SCIENCE PRACTICE AND EXPERIENCE: INTRODUCTION TO SOFTWARE DESIGN USING WEB PROGRAMMING

Introduction to different aspects of design: Identifying user needs, goals and desires and translating them into software, and structuring and communicating the structure of software to improve reliability, readability and adaptability. Topics include web languages and protocols, types and design patterns.
Two lectures, two labs (two hours each); second term; may be offered also in the first term

Prerequisite(s): COMPSCI 1JC3 and registration in Computer Science 1, or COMPSCI 1JC3 with a result of at least B; COMPSCI 1MD3 or MATH 1MP3
Antirequisite(s): COMPSCI 1XA3

COMPSCI 2AC3 - AUTOMATA AND COMPUTABILITY

Finite state machines, regular languages, regular expressions, applications of regular languages, grammars, context-free languages, models of computation, computability and decidability.
Three lectures, one tutorial (two hours); second term; may be offered also in the first term

Prerequisite(s): COMPSCI 2LC3, 2C03
Antirequisite(s): COMPSCI 2FA3, 2MJ3, SFWRENG 2FA3

COMPSCI 2C03 - DATA STRUCTURES AND ALGORITHMS

Basic data structures: stacks, queues, hash tables, and binary trees; searching and sorting; graph representations and algorithms, including minimum spanning trees, traversals, shortest paths; introduction to algorithmic design strategies; correctness and performance analysis.
Three lectures, one tutorial (one hour); first term; may be offered also in the first term

Prerequisite(s): COMPSCI 1DM3 or 2DM3; COMPSCI 1XC3 or 1XD3 or 1MD3 or MATH 1MP3, and registration in any Computer Science program (see Department Note 3 in the course listing) or in the Minor in Computer Science.
Antirequisite(s): SFWRENG 2C03, COMPENG 3SM4

COMPSCI 2DB3 - DATABASES

Data modelling, integrity constraints, principles and design of relational databases, relational algebra, SQL, query processing, transactions, concurrency control, recovery, security and data storage.
Three lectures, one tutorial (one hour); second term; may be offered also in the first term

Prerequisite(s): COMPSCI 1DM3 or 2DM3. Recommended are COMPSCI 1XC3 and 2LC3
Antirequisite(s): COMPSCI 3DB3, 4DB3, SFWRENG 3DB3, 3H03, 4M03, 4DB3

COMPSCI 2GA3 - COMPUTER ARCHITECTURE

Introduction to logic gates, computer arithmetic, instruction-set architecture, assembly programming, translation of high-level languages into assembly. Computer system organization: datapath and control, pipelining, memory hierarchies, I/O systems; measures of performance.
Three lectures, one tutorial, (one hour); first term; may be offered also in the second term

Prerequisite(s): One of the following:
COMPSCI 1XC3 and 1DM3 and registration in any Computer Science program (see Department Note 3 in the course listing) or in the Minor in Computer Science.
Antirequisite(s): COMPENG 3DR4, 4DM4, SFWRENG 2GA3, 3GA3

COMPSCI 2LC3 - LOGICAL REASONING FOR COMPUTER SCIENCE

Introduction to logic and proof techniques for practical reasoning: propositional logic, predicate logic, structural induction; rigorous proofs in discrete mathematics and programming.
Three lectures, one tutorial (two hours); first term; may be offered also in the second term
Prerequisite(s): COMPSCI 1DM3, 1JC3; one of COMPSCI 1MD3, 1XC3, 1XD3, MATH 1MP3 and registration in any Computer Science program (see Department Note 3 in the course listing) or in the Minor in Computer Science.
Antirequisite(s): COMPSCI 2DM3, SFWRENG 2DM3

COMPSCI 2ME3 - INTRODUCTION TO SOFTWARE DEVELOPMENT

Classes and inheritance, class invariants, interface specifications; object-oriented design patterns; exception handling; tools for interface documentation, testing, program analysis; requirements documentation; quality attributes; development models.
Three lectures one tutorial (two hours); first term; may be offered also in the second term
Prerequisite(s): COMPSCI 1XC3 or 1XD3, and registration in any Computer Science program (see Department Note 3 in the course listing) or in the Minor in Computer Science
Co-requisite(s): COMPSCI 2LC3
Antirequisite(s): SFWRENG 2AA4, SFWRENG 3K04, MECHTRON 3K04

COMPSCI 2SD3 - CONCURRENT SYSTEMS

Models of concurrency: process algebras, Petri nets, temporal logics and model checking; concurrency as software structuring principle: processes, threads, synchronization mechanisms, resource management and sharing; deadlock, safety and liveness; design, verification and testing of concurrent systems.
Three lectures, one tutorial (two hours); second term; may be offered also in the first term
Prerequisite(s): COMPSCI 2C03, 2LC3 or 2DM3, 2ME3
Co-requisite(s): COMPSCI 2AC3
Antirequisite(s): COMPSCI 3SD3, SFWRENG 3BB4

COMPSCI 2XC3 - COMPUTER SCIENCE PRACTICE AND EXPERIENCE: ALGORITHMS AND SOFTWARE DESIGN

Implementation of computational solutions to practical problems that combine algorithmic design and analysis with software design principles, through an experiential approach in simulated workplace environments. Communication skills: Technical documentation and presentation.
Two lectures, one lab (three hours), second term
Prerequisite(s): COMPSCI 1XC3, 2C03, 2ME3
Antirequisite(s): COMPSCI 2XB3, SFWRENG 2XB3

COMPSCI 3AC3 - ALGORITHMS AND COMPLEXITY

Basic computability models; the Church-Turing thesis, complexity classes; P versus NP; NP-completeness, reduction techniques; algorithmic design strategies; flows, distributed algorithms, advanced techniques such as randomization.
Three lectures, one tutorial (one hour), second term (may be offered also in the first term)
Prerequisite(s): COMPSCI 2C03 or SFWRENG 2C03, COMPSCI 2AC3 or 2FA3 or SFWRENG 2FA3

COMPSCI 3DM3 - INTRODUCTION TO DATA MINING

Core techniques in big data analytics (knowledge discovery, data mining). Basic concepts of frequent patterns, algorithms for mining frequent patterns from large scale transactional databases. Clustering and classification: k-means, hierarchical k-means, DB-Scan, Gaussian mixture models, decision trees, Bayesian methods, linear classification methods, support vector machines. Practice of big data analytics in business intelligence: data warehousing, data lakes.
Three lectures; one tutorial (one hour); one term
Prerequisite(s):

- One of COMPSCI 2DB3, COMPSCI 3DB3, SFWRENG 3DB3;
- one of COMPSCI 2C03, SFWRENG 2C03, SFWRENG 2MD3, MECHTRON 2MD3;
- one of COMPSCI 2ME3, SFWRENG 2AA4, SFWRENG 3K04, MECHTRON 3K04;
- one of STATS 2D03, STATS 3Y03, IBEHS 3S03, IBEHS 4C03

Offered on an irregular basis.

COMPSCI 3DP3 - DATA PRIVACY

Basics of data privacy, de-anonymization, membership and reconstruction attacks, differential privacy, privacy-preserving mechanisms, privacy-utility trade-offs and cost of privacy, adaptive data analysis
Three lectures; one tutorial (one hour); one term
Prerequisite(s): One of COMPSCI 2C03, SFWRENG 2C03, SFWRENG 2MD3, MECHTRON 2MD3; one of STATS 2D03, 3Y03, IBEHS 3S03, 4C03; one of MATH 1B03, 1ZC3; basic Python programming.
Offered on an irregular basis.

COMPSCI 3EA3 - SOFTWARE AND SYSTEM CORRECTNESS

Formal specifications in software and system development; validation; verification; presentation of information; practical experience in formal specification and tool-supported verification.
Three lectures; one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2LC3 or 2DM3, 2AC3 or 2FA3, 2ME3, 2SD3 or 3SD3
Offered on an irregular basis.

COMPSCI 3GC3 - COMPUTER GRAPHICS

Mathematical foundations, the graphics pipeline, geometrical transformations, 3D visualization, clipping, illumination and shading models and the impact of graphics on society.
Three lectures, one tutorial (two hours every other week); one term
Prerequisite(s): MATH 1B03 or 1ZC3, and COMPSCI 2C03
Antirequisite(s): SFWRENG 3GC3
Offered on an irregular basis.

COMPSCI 3MI3 - PRINCIPLES OF PROGRAMMING LANGUAGES

Principles of definition of and reasoning about programming languages and domain-specific languages; use of semantics for interpretation and in program analyses for correctness, security and efficiency.
Three lectures; one tutorial (one hour); first term
Prerequisite(s): COMPSCI 2C03, and COMPSCI 2LC3 or 2DM3, and COMPSCI 2AC3 or 2FA3, and COMPSCI 2ME3

COMPSCI 3N03 - COMPUTER NETWORKS AND SECURITY

Physical networks, TCP/IP protocols, switching methods, network layering and components, network services. Information security, computer and network

security threats, defence mechanisms, encryption.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): Credit or registration in COMPSCI 3SH3
Antirequisite(s): COMPSCI 3CN3, 3C03, COMPSCI 4C03, SFWRENG 4C03, COMPENG 4DK4, COMPENG 4DN4

COMPSCI 3RA3 - SOFTWARE REQUIREMENTS AND SECURITY CONSIDERATIONS

Software requirements gathering. Critical systems requirements gathering. Security requirements. Traceability of requirements. Verification, validation, and documentation techniques. Software requirements quality attributes. Security policies. Measures for data confidentiality. Design principles that enhance security. Access control mechanisms.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2AC3 or 2FA3, COMPSCI 2ME3
Antirequisite(s): SFWRENG 3RA3 Not open to students in a Software Engineering or Mechatronics Engineering program.

COMPSCI 3SH3 - COMPUTER SCIENCE PRACTICE AND EXPERIENCE: OPERATING SYSTEMS

Processes and threads, synchronization and communication; scheduling, memory management; file systems; resource protection; structure of operating systems.
Two lectures, one tutorial, two labs (one hour each); first term
Prerequisite(s): COMPSCI 2SD3 or 3SD3, COMPSCI 2C03, and COMPSCI 2GA3
Antirequisite(s): SFWRENG 3SH3

COMPSCI 3TB3 - SYNTAX-BASED TOOLS AND COMPILERS

Lexical analysis, syntax analysis, type checking; syntax-directed translation, attribute grammars; compiler structure; implications of computer architecture; mapping of programming language concepts; code generation and optimization.
Three lectures, one lab (two hours); second term
Prerequisite(s): COMPSCI 2C03, and COMPSCI 2GA3, and COMPSCI 2AC3 or 2FA3, and COMPSCI 3MI3
Antirequisite(s): COMPSCI 4TB3, SFWRENG 4TB3

COMPSCI 3VA3 - INFORMATION VISUALIZATION AND VISUAL ANALYTICS

The course focuses on building web applications to visualize abstract data (information visualization) and apply computation techniques for analysis (visual analytics). Students will learn practical web application-building skills mixed with data analytics and visualization design theory. We will cover the design principles that consider human perception, cognition, and decision-making and create intuitive interfaces for analyzing data on the web.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): COMPSCI 1XD3, 2C03, 2DB3, 2ME3
Offered on an irregular basis.

COMPSCI 3X03 - SCIENTIFIC COMPUTATION

Computer arithmetic, stability, sensitivity. Numerical methods for polynomial manipulation, interpolation, data fitting, integration, differentiation, solving linear and non-linear systems, ordinary differential equations and eigenvalue problems.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): MATH 1AA3 or 1ZB3, and MATH 1B03 or 1ZC3; COMPSCI 2C03; One of MATH 2C03 or 2Z03 is recommended.
Antirequisite(s): COMPENG 3SK3, 3SK4, COMPSCI 4X03, MECHTRON 3X03, SFWRENG 3X03, 4X03. MECHTRON 3X03, MATH 3NA3, 4NA3, CHEMENG 2E04, CIVENG 2E03, ENGPHYS 2CE4, 3NM4, MECHENG 3F04.
Not open to students in a Software Engineering or Mechatronics Engineering program

COMPSCI 4AD3 - ADVANCED DATABASES

Advanced topics in database systems technology and design. Topics include: query processing; query optimization; data storage; indexing; crash recovery; physical database design; introductory data mining techniques.
Three lectures, one tutorial; one term
Prerequisite(s): COMPSCI 2DB3 or 3DB3
Antirequisite(s): SFWRENG 4AD3
Offered on an irregular basis.

COMPSCI 4AL3 - APPLICATIONS OF MACHINE LEARNING

Overview of data engineering. Human-computation architectures. Supervised approaches (neural networks). Unsupervised approaches (clustering/topic modelling). Human-in-the-loop approaches (reinforcement learning).
Three lectures, one tutorial (one hour); first term
Prerequisite(s): COMPSCI 2C03, COMPSCI 2ME3, STATS 2D03 or 3Y03
Antirequisite(s): SFWRENG 4AL3, MECHENG 4AI3

COMPSCI 4AR3 - SOFTWARE ARCHITECTURE

Software architecture concepts; architectural styles; design patterns, components, libraries, configurations; modelling languages; software re-engineering.
Three lectures, one tutorial; one term
Prerequisite(s): Credit or registration in COMPSCI 3RA3
Offered on an irregular basis.

COMPSCI 4CR3 - APPLIED CRYPTOGRAPHY

Stream ciphers, Block ciphers, Hash functions, Public-key cryptography (RSA, Discrete logarithm, Elliptic curves), digital signatures, and some discussions on post-quantum cryptography.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): MATH 1B03 or MATH 1ZC3; COMPSCI 1DM3 or SFWRENG 2DM3; COMPSCI 2C03 or SFWRENG 2C03
Antirequisite(s): COMPSCI 3IS3
Offered on an irregular basis.

COMPSCI 4DC3 - DISTRIBUTED COMPUTING

Models of distributed computation, formal reasoning about distributed systems, time and message complexity, distributed agreement under adversarial attacks, distributed coordination and symmetry breaking, peer-to-peer computing, simulation as a tool for building more advanced functionality, actor-model programming.
Three lectures, one tutorial; one term
Prerequisite(s): One of COMPSCI 2C03 or SFWRENG 2C03 or SFWRENG 2MD3 or MECHTRON 2MD3, and one of COMPSCI 2SD3 or 3SD3 or SFWRENG 3BB4 or SFWRENG 3SH3
Offered on an irregular basis.

COMPSCI 4E03 - PERFORMANCE ANALYSIS OF COMPUTER SYSTEMS

Use of queuing models and simulation to predict computer system performance and find bottlenecks in a system. Types of models, distributions. Markov models. Modelling storage and network behaviour, locks, critical sections,

concurrency. Introduction to analytical system reliability.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): COMPSCI 2C03, 3SH3, and one of STATS 2D03, 2MA3, 3N03 or 3Y03, or IBEHS 3S03 or 4C03
Antirequisite(s): SFWRENG 4E03. Not open to students in a Software Engineering or Mechatronics Engineering program.

COMPSCI 4EN3 - SOFTWARE ENTREPRENEURSHIP

Issues in starting up a new software enterprise, with the focus on independent startups. This course will cover the technical, financial, legal and operational issues encountered by software startups. Small groups of students will take an idea and turn it into a prototype, a business plan, and a sales pitch. Lectures will cover issues from team formation to appropriate software development processes to patent protection to venture capital.
Lectures, discussion, group project, seminars (two three-hour slots); one term.
Prerequisite(s): Registration in Level III or IV of any Computer Science program
Offered on an irregular basis.

COMPSCI 4F03 - PARALLEL COMPUTING

Parallel architectures, design and analysis of parallel algorithms; distributed-memory, shared-memory and GPU computing; communication cost, scalability; MPI, OpenMP and OpenACC; tuning parallel programs for performance.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2SD3 or 3SD3. Completion of COMPSCI 3N03 or 4C03 is recommended.
Antirequisite(s): SFWRENG 4F03
Offered on an irregular basis.

COMPSCI 4FP3 - FUNCTIONAL PROGRAMMING

- selection of topics in advanced functional programming (focusing on Haskell and its derivatives). Example topics: Techniques for embedded domain-specific languages, generic and type-level programming, reasoning about programs, and (co)effects.

Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 1JC3 or SFWRENG 3FP3, COMPSCI 1XC3 or SFWRENG 2S03 or SFWRENG 2XC3, COMPSCI 2C03 or SFWRENG 2C03, COMPSCI 2LC3 or 2DM3 or SFWRENG 2DM3, COMPSCI 2ME3 or SFWRENG 2AA4
Antirequisite(s): COMPSCI 3FP3
Offered on an irregular basis.

COMPSCI 4HC3 - HUMAN COMPUTER INTERFACES

Design of user interfaces. Principles of good interface design. Task-oriented design. User experience design. Inclusive design. Communicating with graphics. Modes and mode awareness problem. Human cognition (memory, perception, motor systems). Help systems. Interface design tools.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2C03
Antirequisite(s): SFWRENG 4HC3. Not open to students in a Software Engineering or Mechatronics Engineering program

COMPSCI 4IS3 - INFORMATION SECURITY

Basic principles of information security; threats and defences; cryptography; introduction to network security and security management.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2AC3 or 2FA3 or SFWRENG 2FA3, COMPSCI 2C03 or SFWRENG 2C03, COMPSCI 3SH3 or SFWRENG 3SH3 or 3BB4, COMPSCI 3N03 or 4C03 or SFWRENG 4C03
Antirequisite(s): COMPSCI 3IS3
Offered on an irregular basis.

COMPSCI 4ML3 - FUNDAMENTALS OF MACHINE LEARNING

Regression, Classification and Decision Theory, Bias-Variance Trade-off, Linear Models, Kernel Methods, Probabilistic Models, Neural Networks, Model Aggregation, Unsupervised Learning.
Three lectures, one tutorial; one term
Prerequisite(s): One of COMPSCI 2C03 or SFWRENG 2C03 or SFWRENG 2MD3 or MECHTRON 2MD3. One of STATS 2D03, STATS 3Y03, IBEHS 3S03, 4C03. One of MATH 1B03 or 1ZC3. One of COMPSCI 4O03 or 4TE3 or 4X03 or SFWRENG 3O03 or 4TE3 or 4X03 is recommended.
Antirequisite(s): COMPENG 4SL3, 4SL4
Offered on an irregular basis.

COMPSCI 4NL3 - NATURAL LANGUAGE PROCESSING

Overview of natural language processing with a focus on recent developments: Basics of data processing and machine learning in the context of NLP, text classification and sequence labeling, vector semantics, embeddings, language modeling, translation, question answering, parsing, dialogue and conversational systems, discourse processing, and large language models. Practices and developments will be discussed with practical exercises focusing more heavily on recent neural network approaches.
Three lectures, one tutorial (one hour); one term.
Prerequisite(s): One of COMPSCI 2C03 or SFWRENG 2C03 or SFWRENG 2MD3 or MECHTRON 2MD3; one of STATS 2D03, STATS 3Y03, IBEHS 3S03, 4C03; and one of MATH 1B03 or 1ZC3.

COMPSCI 4O03 - LINEAR OPTIMIZATION

Modelling and solutions for engineering and science problems using linear optimization, including networks, transportation, assignment, and scheduling problems. Solution methods include combinatorial algorithms such as simplex methods, primal-dual formulations, branch and bound formulations for mixed integer programming, and heuristics.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): COMPSCI 2C03
Antirequisite(s): SFWRENG 3O03, 4O03. Not open to students in a Software Engineering or Mechatronics Engineering program

COMPSCI 4SD3 - DATA-DRIVEN ALGORITHMS FOR SEQUENTIAL DECISION MAKING

Problems and algorithmic solutions in sequential decision making based on data, as appear in many applications including online ad-placement, A/B testing for software services, financial portfolio management, medical trials, and more. Topics include best-arm identification, multi-armed bandit problems and solutions, online learning, prediction with expert advice, and optimal stopping problems.
Three lectures, one tutorial (one hour); one term.
Prerequisite(s): COMPSCI 2C03 or SFWRENG 2C03 or SFWRENG 2MD3 or MECHTRON 2MD3; STATS 2D03 or 3Y03
Offered on an irregular basis.

COMPSCI 4TE3 - CONTINUOUS OPTIMIZATION

Fundamental algorithms and duality concepts of continuous optimization. Motivation, applicability, information requirements and computational cost of the algorithms is discussed. Practical problems will illustrate the power of

continuous optimization techniques.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): One of MATH 2A03 or 2ZZ3
Antirequisite(s): SFWRENG 4TE3. Not open to students in a Software Engineering or Mechatronics Engineering program
Offered on an irregular basis.

COMPSCI 4TH3 - THEORY OF COMPUTATION

Formal languages, models of computation, decidability, reduction techniques, time and space complexity classes.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2AC3 or 2FA3, 2C03
Antirequisite(s): SFWRENG 4TH3
Offered on an irregular basis.

COMPSCI 4TI3 - FUNDAMENTALS OF IMAGE PROCESSING

Discrete-time signals and systems, digital filter design, photons to pixels, linear filtering, edge-detection, non-linear filtering, multi-scale transforms, motion estimation.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): Registration in Level III or above of a program offered by the Department of Computing and Software
Offered on an irregular basis.

COMPSCI 4WW3 - WEB SYSTEMS AND WEB COMPUTING

Network protocols underlying the world wide web; client-side programming: markup, styles, scripts, design, mobile/desktop; server-side programming: databases, dynamic languages; web services; cloud technologies; security.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): COMPSCI 2ME3 or SFWRENG 2AA4; completion of COMPSCI 2DB3 or 3DB3, 3IS3, or 3N03 or 4C03 is recommended.
Offered on an irregular basis.

COMPSCI 4Z03 - DIRECTED READINGS

Directed readings in an area of computer science of interest to the student and the instructor.
Prerequisite(s): Departmental permission, and registration in Level IV of an Honours program in Computer Science.
Interested students need to work out a proposal with a faculty member of the Department of Computing and Software

COMPSCI 4ZP6 A/B - CAPSTONE PROJECT

Students, in teams of two to four students, undertake a substantial project in an area of computer science by performing each step of the software life cycle. The lecture component presents an introduction to software management and project management.
Lecture component in term 1, weekly tutorials; two terms
Prerequisite(s): Registration in Level IV of an Honours Computer Science program, of an Honours Computer Science as a Second Degree (B.A.Sc.) program, or of the Combined Honours in Arts & Science and Computer Science program
Cannot be taken concurrently with any co-op work term course.

Critical Challenges

Critical Challenges
Courses in Critical Challenges are administered by the Department of Engineering Physics.
John Hodgins Engineering Building, Room A315, ext. 27925
https://www.eng.mcmaster.ca/engphys/
Department Note
All Critical Challenges courses are open to students in any program at McMaster who meet the prerequisites. If no prerequisite is listed, the course is open.

CHALLENG 2CC3 - CRITICAL CHALLENGES FOR HUMANITY

We explore selected critical challenges for humanity, including energy needs and climate change, deployment of artificial intelligence and genetic engineering, and confronting the possibilities of nuclear and biological warfare. We present relevant key concepts in science, engineering, social science, and humanities and apply them to help to understand the scale of these challenges and their potential impacts on future humanity, including social, environmental, and economic implications.
Three lectures; first term
Prerequisite(s): Registration in Level II or above of any program

Data Science

Courses with the subject code DATASCI are administered by the Faculty of Science.
Burke Science Building, Room 136, ext. 27590
http://www.science.mcmaster.ca/
science@mcmaster.ca
Courses
If no prerequisite is listed, the course is open.

DATASCI 2G03 - SCIENTIFIC COMPUTING

- hands-on introduction to modern scientific structured programming using standard C/C++ under Linux. Assumes no prior programming experience. Students develop a programming project on a research topic of their choosing (e.g. living populations, disease simulation, dynamics, economics). The course covers programming fundamentals, floating point and number representation and introduces algorithms and numerical methods. Class discussions include topics such as scripting, web content, objects/classes, graphics and parallel programming, according to student interest. Students are required to have a laptop for in-class work.

Two lectures, two labs; one term
Prerequisite(s): One of ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1A03, 1LS3, 1X03, 1ZA3
Antirequisite(s): PHYSICS 2G03
This course is administered by the Department of Physics and Astronomy.

DATASCI 3ML3 - INTRODUCTION TO NEURAL NETWORKS AND MACHINE LEARNING

- practical introduction to neural network algorithms and their applications in machine learning using Python. Supervised learning (logistic regression, perceptrons, classification, trees, cost functions, non-linear regression, boosting) and unsupervised learning (autoencoder, principal component analysis, clustering, k-means) will be discussed. Students will conduct a series of projects to explore topics such as optimization, spam classification, image recognition, fraud detection and medical data analysis.

Three lectures; one term
Prerequisite(s): One of COMPSCI 1MD3, DATASCI 2G03, MATH 1MP3, PHYSICS 2G03; one of MATH 1B03, 1ZC3; and one of ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1AA3, 1LT3, 1XX3, 1ZB3; or permission of the instructor

Antirequisite(s): PHYSICS 3G03
This course is administered by the Department of Physics and Astronomy.

DATASCI 4X03 - DATA ANALYSIS PROJECT COURSE

- project-based course covering the basics of modern scientific data acquisition, mining and analysis. Students will complete a series of projects in data analysis using experimental data covering topics such as the fundamentals of image reduction and analysis, time-series analysis and spectroscopy.

Lectures, laboratory/tutorial; one term
Prerequisite(s): One of COMPSCI 1MD3, DATASCI 2G03, MATH 1MP3, PHYSICS 2G03; and registration in Level III or above in a program in the Faculty of Science.
Antirequisite(s): ASTRON 4X03
May be offered in alternate years.
This course is administered by the Department of Physics and Astronomy.

Earth Sciences

Courses in Earth Sciences are offered by the School of Earth, Environment & Society.
General Science Building, Room 206, ext. 24535
https://sees.mcmaster.ca/

School Notes

1. Students aiming to fulfill the academic requirements for professional registration of Geoscientists in Ontario should seek academic advice from the School of Earth, Environment & Society during March counselling in Level II to ensure that their program and course choices are appropriate.
2. Students are advised that not all courses will be offered in every year.
3. Some courses are offered in a hybrid or online delivery format. Students are advised to check course outlines and Mosaic for specific scheduling details.

Courses

If no prerequisite is listed, the course is open.
See also courses in *Environmental Science* and *Environment & Society.*

EARTHSC 1G03 - EARTH AND THE ENVIRONMENT

An introduction to Earth's composition and processes including topics such as rocks, fossils, plate tectonics, earthquakes, volcanoes, and glaciers. We will consider the interactions between people and Earth's environments and the implications for sustainable development. Two field trips will be held during regular lab periods.
Three lectures, one lab (two hours); one term
Antirequisite(s): ENVIRSC 1G03
Not open to students with credit or registration in ISCI 1A24 A/B.

EARTHSC 2E03 - EARTH HISTORY

Geological evolution of the Earth and paleontological evidence for the evolution of marine life, with emphasis on the geological history of North America. Students enrolling in this course must purchase a mineral kit available at the Campus Store.
Three lectures, one lab (three hours); one term
Prerequisite(s): EARTHSC 1G03 or ISCI 1A24 A/B
Not open to students with credit or registration in ISCI 2A18 A/B.

EARTHSC 2FE3 - INTRODUCTION TO FIELD METHODS IN EARTH SCIENCES

- field camp to introduce students to field equipment and methodologies used by earth and environmental scientists focusing on recognition and description of rock types, construction of geological maps and cross-sections. Most of this course occurs outside the regular academic term, usually the first two weeks of May; details and applications are available in January. Students enrolling in this course must pay both the incidental fees as prescribed by the School of Earth, Environment & Society and the regular tuition fees. Students intending to enrol in this course must submit an application by February 15 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after January 15. Students will be informed of acceptance of their application by March 1 subject to fulfillment of the requirements.

Prerequisite(s): One of EARTHSC 1G03, ISCI 1A24 A/B; and permission of the instructor

EARTHSC 2G03 - EARTH SURFACE PROCESS

An introductory geomorphology course outlining the major landscape features on the Earth's surface and the processes that lead to their formation through gravity, water, wind, and ice. A local field trip will be held during regular lab hours.
Two lectures, one lab (three hours); one term
Prerequisite(s): EARTHSC 1G03 or ISCI 1A24 A/B

EARTHSC 2GG3 - NATURAL DISASTERS

- study of natural processes including plate tectonics, earthquakes, volcanoes, landslides, river erosion and climate change and their impacts on human populations.

Lectures (three hours); one term
Prerequisite(s): Registration in Level II or above
This course may be offered in-person or virtually. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

EARTHSC 2K03 - OPTICAL CRYSTALLOGRAPHY AND MINERALOGY

Introduction to crystallography, optical theory, and the polarizing microscope. Identification of minerals in igneous and sedimentary rocks and discussion of their structure and chemistry.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 1G03, ISCI 1A24 A/B

EARTHSC 2T03 - GEOLOGY OF CANADA

Description and understanding of the tectonic processes involved in the development and evolution of the Precambrian rocks of Canada. Analysis of igneous and metamorphic rocks and interpretation of geologic maps will be introduced. Students enrolling in this course must purchase a mineral kit available at the Campus Store.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 1G03, ISCI 1A24 A/B

EARTHSC 3CC3 - EARTH'S CHANGING CLIMATE

The earth's climatic history including natural causes of past climate change and human influences on climate will be explored.
Lectures (three hours); one term
Prerequisite(s): One of EARTHSC 2E03, ENVIRSC 2C03, 2Q03, ISCI 2A18 A/B; and registration in Level III or above

EARTHSC 3E03 - SEDIMENTARY ENVIRONMENTS

Sedimentary processes, stratigraphy and depositional environments of clastic and carbonate systems. A mandatory local field trip will be included.

Three lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 2E03, ISCI 2A18 A/B

EARTHSC 3FE3 - FIELD CAMP

- field camp to introduce students to field equipment and methodologies used by earth and environmental scientists. Most of this course occurs outside the regular academic term, usually the two weeks preceding the start of term in September; details and applications are available in March.

Students enrolling in this course must pay both the incidental fees as prescribed by the School of Earth, Environment & Society and the regular tuition fees. Students intending to enrol in this course must submit an application by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application by April 15 subject to fulfillment of the requirements.
Prerequisite(s): One of EARTHSC 2E03, ISCI 2A18 A/B; and EARTHSC 2T03; and registration in Level III or above of Honours Earth and Environmental Sciences; and permission of the instructor

EARTHSC 3K03 - PETROLOGY

Introduction to igneous and metamorphic petrology, including thin section examination of rock suites, use of phase diagrams in petrology, and discussion of petrogenesis.
Two lectures, one lab (three hours); one term
Prerequisite(s): EARTHSC 2K03

EARTHSC 3P03 - PALEOECOLOGY

Fossil communities and their past environmental interactions. Methods in paleoecology and aspects of the major invertebrate fossil groups will be examined. One mandatory two-day long fieldtrip will occur on a weekend during the term.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 2E03, ISCI 2A18 A/B

EARTHSC 3RD3 - RESEARCH DESIGN AND DISSEMINATION IN EARTH AND ENVIRONMENTAL SCIENCES

Review of approaches to the formulation of research questions, and to the gathering and interpretation of evidence, using a variety of environmental and earth sciences-based topics. The course includes the formulation of a research proposal, and develops skills in the communication of research results.
Two lectures, one lab (two hours); one term
Prerequisite(s): Registration in Level III or above of an Honours B.Sc. program in the School of Earth, Environment & Society (Faculty of Science)

EARTHSC 3V03 - ENVIRONMENTAL GEOPHYSICS

Introduction to principles and applications of geophysics in groundwater and environmental investigations. Practical demonstrations in magnetics, gravity, shallow seismic, radar, borehole logging, surface EM and electrical methods.
Two lectures, one lab (three hours); one term
Prerequisite(s): EARTHSC 2E03; and one of PHYSICS 1A03, 1C03, 1V03; or ISCI 2A18 A/B
Antirequisite(s): EARTHSC 4VV3

EARTHSC 3W03 - PHYSICAL HYDROGEOLOGY

Mechanisms and processes of water movement in the subsurface including the saturated zone (groundwater) and the unsaturated zone (soil water).
Two lectures, one lab (three hours); one term
Prerequisite(s): One of CIVENG 2J04, ENVIRSC 2B03, 2W03; and one of ISCI 1A24 A/B, MATH 1A03, 1B03, 1K03, 1LS3, 1M03, 1N03, 1ZA3

EARTHSC 3Z03 - STRUCTURAL GEOLOGY

Introduction to mapping and geometric description of geologic structures and analysis of stress and strain in the subsurface.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 2E03, 2T03, ISCI 2A18 A/B. Completion of PHYSICS 1A03 (or 1C03 or 1V03) is strongly recommended.

EARTHSC 4CC3 - STABLE ISOTOPES IN EARTH AND ENVIRONMENTAL SYSTEMS

Stable isotopes are widely used in modern earth and environmental sciences because of their unique chemical properties that enable us to trace past and current environmental processes. This course will discuss the basic principles of stable isotope geochemistry and their applications to Earth systems processes, including paleo and modern climate reconstruction, biogeochemical cycling, and environmental processes.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 3CC3, ENVIRSC 2Q03. One of EARTHSC 2E03, ISCI 2A18 A/B is strongly recommended.
Co-requisite(s): WHMIS 1A00, if not already completed, must be completed prior to the first lab.

EARTHSC 4FF3 - TOPICS OF FIELD RESEARCH

Selected topics in field research in the environmental and earth sciences. Topics may vary from year to year, and the timing of the course will depend on the destination. Details will be posted in the School. Students enrolling in this course must pay the incidental fees, as prescribed by the School of Earth, Environment & Society, and the regular tuition fees. Students intending to enrol in this course must submit an application by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application by April 15 subject to fulfillment of the requirements.
Two lectures (one hour); one term
Prerequisite(s): Registration in Level III or above of an Honours B.Sc. program and permission of the instructor
EARTHSC 4FF3 may be repeated, if on a different topic, with the permission of the School of Earth, Environment & Society.

EARTHSC 4G03 - GLACIAL SEDIMENTS AND ENVIRONMENTS

The development and movement of glaciers, glacial depositional processes and sedimentary successions in terrestrial, lacustrine and marine environments. A mandatory one day, local field trip will be included. Students enrolling in this course must pay both the incidental fees as prescribed by the School of Earth, Environment & Society and the regular tuition fees.
Two lectures, one lab (two hours); one term
Prerequisite(s): EARTHSC 3E03

EARTHSC 4MT6 A/B - SENIOR THESIS

Students will select research topics and prepare a thesis either individually or in teams. Students intending to enrol in this course must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application on April 15 subject to fulfillment of the GPA requirement.

Two terms
Prerequisite(s): One of EARTHSC 3RD3, ENVSOCTY 3MA3; and registration in Level IV of an Honours program in the School of Earth, Environment & Society; and a GPA of at least 7.5; and permission of the course coordinator
Cross-list(s): ENVIRSC 4MT6 A/B, ENVSOCTY 4MT6 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

EARTHSC 4PA3 - PALEOENVIRONMENTAL ANALYSIS

Reconstructing past environmental change using sediment archives in lakes and ocean basins. Practical aspects of reconstructing anthropogenic and climate change including age dating, lithological, biological and geochemical proxies. One mandatory day-long fieldtrip will occur on a weekend during the term.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 2E03, 2G03, ISCI 2A18 A/B
Priority will be given to students in an Honours Earth & Environmental Sciences program or an Honours Environmental Sciences program.

EARTHSC 4T03 - PLATE TECTONICS AND RESOURCES

Synthesis of plate tectonics, with application to crustal evolution and genesis of ore deposits.
Two lectures, one lab (two hours); one term
Prerequisite(s): One of EARTHSC 2E03, ISCI 2A18 A/B. EARTHSC 2K03 and EARTHSC 2T03 are strongly recommended.

EARTHSC 4V03 - EXPLORATION GEOPHYSICS

Advanced geophysical mapping and modelling; applications in environmental geosciences and resource exploration. Selected topics in gravity, magnetic, electromagnetic, and seismic field data acquisition and interpretation.
Two lectures, one lab (three hours); one term
Prerequisite(s): EARTHSC 2E03; and EARTHSC 3V03

EARTHSC 4WB3 - CONTAMINANT HYDROGEOLOGY

Physical and chemical aspects of the fate and transport of contaminants in soils and groundwater, including fundamental processes, multiphase flow and groundwater remediation.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): Credit or registration in EARTHSC 3W03

Economics

Courses in Economics are administered by the Department of Economics.
Kenneth Taylor Hall, Room 426, ext. 22765
http://www.economics.mcmaster.ca

Department Notes

1. Not all the Economics courses listed in this Calendar are taught every year. Students are advised to consult the timetable published by the Office of the Registrar, or the Department website for information on current offerings.
2. Students who complete ECON 2I03 are well placed to enrol in the Canadian Securities Course (a correspondence course operated by the Canadian Securities Institute which represents the licensing requirement for individuals training to become investment advisors).
3. Students interested in an M.A. in Economics should consider the Honours Economics (Specialist Option). Also note that some, but not all, graduate programs in Economics require ECON 3G03, 4T03 and 4TT3. For this reason, students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.
4. MATH 1M03 (or 1MM3) is required for any student planning to transfer into Commerce and strongly recommended for any student with a minor in Business or Finance. MATH 1M03 (or 1MM3) is required for ECON 3G03 and is strongly recommended for students planning any graduate study in economics.

Courses
If no prerequisite is listed, the course is open.

ECON 1B03 - INTRODUCTORY MICROECONOMICS

An introduction to the method and theory of microeconomics, and their application to the analysis of contemporary economic problems.
In-class and online; one tutorial; one term
Antirequisite(s): ARTSSCI 2E03, ECON 1BX3
ECON 1B03 and ECON 1BB3 can be taken in either order or concurrently.

ECON 1BB3 - INTRODUCTORY MACROECONOMICS

An introduction to the method and theory of macroeconomics, and their application to the analysis of contemporary economic problems.
In-class and online; one tutorial; one term
Antirequisite(s): ARTSSCI 2E03
Cross-list(s): ECON 1BA3
ECON 1B03 and 1BB3 can be taken in either order or concurrently.

ECON 1ME3 - INTRODUCTION TO MATHEMATICAL ECONOMICS

This course is an introduction to mathematical and statistical methods applied in economics. It will improve the mathematical skills required to study intermediate economic theories and analyze economic data. Topics include partial derivatives, optimization, basic probability and statistics, and linear algebra. The mathematical results are illustrated through fundamental economic applications.
Three hours, one tutorial; one term
Prerequisite(s): Registration in Economics I; Social Sciences 1, Honours Health and Society 1, or in level 2 of any Social Sciences program; completion of Grade 12 Calculus or MATH 1F03. Not open to students with credit or registration in MATH 1A03, 1M03, 1MM3, 1LS3, 1X03, 1ZA3.

ECON 2A03 - ECONOMICS OF LABOUR-MARKET ISSUES

This course applies economic analysis to issues of importance in the labour market. Topics vary and may include: women in the Canadian labour market; discrimination in hiring and promotion; unemployment; job loss and workplace closing; work sharing.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3 or ARTSSCI 2E03
Cross-list(s): WORKLABR 3A03
Antirequisite(s): LABRST 3A03
Not open to students with credit or registration in ECON 3D03.

ECON 2B03 - ANALYSIS OF ECONOMIC DATA

Application of statistical concepts to the analysis of economic data, with attention to Canadian sources. Regression analysis and the use of spreadsheets are included. Topics may also include index numbers.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3 and one of ECON 1BB3, 1BA3; or ARTSSCI 2E03; and one of ECON 1ME3, COMMERCE 1DA3, STATS 1L03, STATS 1LL3, or Grade 12 Mathematics of Data Management U, or permission of the department
Antirequisite(s): COMMERCE 2QA3, ENVSOCTY 3MB3, GEOG 3MB3
Not open to students with credit or registration in ARTSSCI 2R03, CHEMENG 4C03, ELECENG 3TQ4, HTHSCI 2A03, MATLS 3J03, POLSCI 3N06 A/B, 3NN3,

PNB 2XE3, 3XE3, SOCIOL 3H06 A/B, STATS 2B03, 2D03, 2MB3, 3Y03. Not open to students enrolled in any Business 1 or Bachelor of Commerce program.

ECON 2CC3 - HEALTH ECONOMICS AND ITS APPLICATION TO HEALTH POLICY

Economic analysis of health and health care, with a special emphasis on policy issues in the Canadian health care system.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HLTHAGE 2C03
Not open to students registered in an Economics program or with credit or registration in ECON 2Z03, or ECON 3Z03. Students excluded from ECON 2CC3 or those wishing to do further work in Health Economics are referred to ECON 3Z03. May not be used to satisfy Economics unit requirements by students in Economics programs or a minor in Economics.

ECON 2D03 - ECONOMIC ISSUES

Applications of economics to important public issues, from a general interest perspective. Since topics vary from year to year, interested students should consult the Economics Department for further details.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3 and one of ECON 1BB3, 1BA3; or ARTSSCI 2E03

ECON 2I03 - FINANCIAL ECONOMICS

Detailed investigation of the financial sector. Topics include the role of capital markets in facilitating investment and growth, bond markets, stock markets, financial statements and taxation.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3 and one of ECON 1BB3, 1BA3; or ARTSSCI 2E03
Not open to students with credit or registration in COMMERCE 2FA3. Not open to students enrolled in any Business 1 or Bachelor of Commerce program.

ECON 2J03 - ENVIRONMENTAL ECONOMICS

Allocation of environmental services: efficiency and market failure; measuring environmental benefits; environmental regulation in Canada and elsewhere: taxes, tradable permits and other instruments; further topics.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3, or ARTSSCI 2E03

ECON 2K03 - ECONOMIC HISTORY OF CANADA

- survey of the changing structure of the Canadian economy from the colonial period to the present; early significance of primary production for export markets; emerging domestic markets and industrialization; government's role in promoting the development of the national economy.

Fully online; one term
Prerequisite(s): ECON 1B03 (or 1BX3) and one of ECON 1BB3, 1BA3; or ARTSSCI 2E03

ECON 2MP3 - MACROECONOMIC POLICY

The course studies the determinants of national income, employment, interest rate, and price level and how macroeconomic policies impact them.
Three hours, one term.
Prerequisite(s): One of ECON 1BB3, 1BA3, or ARTSSCI 2E03; and one of MATH 1K03 or Grade 12 Advanced Functions U. Students without credit in one of MATH 1F03, 1M03, Grade 12 Calculus and Vectors U (or Grade 12 Advanced Functions and Introductory Calculus U) or equivalent are strongly advised to register in MATH 1F03 or MATH 1M03, 1MM3 concurrently with ECON 2Y03.
Antirequisite(s): ECON 2H03

ECON 2N03 - PUBLIC POLICY TOWARD BUSINESS

The economic effects of federal competition policy and the regulation of business by all levels of government.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3; or ARTSSCI 2E03
Antirequisite(s): ECON 3N03

ECON 2P03 - ECONOMICS OF PROFESSIONAL SPORTS

The application of economic principles to team and individual professional sports. Theory of sports leagues, demand for sports, the market for athletes, broadcasting rights, competition policy issues, the public finance aspects of stadium financing.
Fully online; one term
Prerequisite(s): One of ECON 1B03, 1BX3; or ARTSSCI 2E03

ECON 2Q03 - ECONOMICS OF BAD BEHAVIOUR

This course will apply economic principles to analyze human behaviour. Topics include 'bad' behaviour on the part of individuals, firms, and society.
Fully on-line; one term
Prerequisite(s): One of ECON 1B03, 1BX3 and one of ECON 1BB3, 1BA3; or ARTSSCI 2E03

ECON 2T03 - ECONOMICS OF TRADE UNIONISM AND LABOUR

Topics include the economics of the labour market, of trade unionism, of work, the impact of trade unions on the labour market, economic theories of strikes and trade unions and the state.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3 or ARTSSCI 2E03
Cross-list(s): WORKLABR 3B03
Antirequisite(s): LABRST 3B03

ECON 2Y03 - INTERMEDIATE MACROECONOMICS I

This course uses macroeconomic theory based on microeconomic underpinnings to study common topics, including consumption-savings decisions, business cycles and economic growth.
Three hours, one term.
Prerequisite(s): One of ECON 1BB3, 1BA3, or ARTSSCI 2E03; and one of MATH 1K03 or Grade 12 Advanced Functions U. Students without credit in one of MATH 1F03, 1M03, Grade 12 Calculus and Vectors U (or Grade 12 Advanced Functions and Introductory Calculus U) or equivalent are strongly advised to register in MATH 1F03 or MATH 1M03, MATH 1MM3 concurrently with ECON 2Y03.
Antirequisite(s): ECON 2HH3

ECON 2YY3 - INTERMEDIATE MACROECONOMICS II

This course builds on ECON 2Y03, exploring advanced topics such as credit market imperfections, search and unemployment, monetary models, banking, and the open economy.
Three hours, one term.
Prerequisite(s): ECON 2Y03

ECON 2Z03 - INTERMEDIATE MICROECONOMICS I

Theory of consumer choice; elements of production and cost; price and output determination in perfectly competitive markets.
Three hours; one tutorial; one term
Prerequisite(s): One of ECON 1B03 (or 1BX3), 1BA3 (or 1BB3), or ARTSSCI 2E03; and credit or registration in ECON 1ME3, or completion of one of MATH 1A03, 1LS3, or 1M03 or 1MM3 (or equivalent such as ARTSSCI 1D06 A/B, MATH 1N03, 1X03, 1Z04, or 1ZA3)
Antirequisite(s): ECON 2G03, ECON 2X03

ECON 2ZZ3 - INTERMEDIATE MICROECONOMICS II

Firm and consumer behaviour in imperfectly competitive markets and the markets for factors of production; the role of taxes and subsidies; theory of exchange, welfare economics and general equilibrium analysis. May include other special topics.
Three lectures; one term
Prerequisite(s): ECON 2Z03; and one of ECON 1ME3, MATH 1A03, 1LS3, 1M03, or 1MM3 (or equivalent such as ARTSSCI 1D06 A/B, MATH 1N03, 1X03, 1Z04, or 1ZA3)

ECON 3B03 - PUBLIC SECTOR ECONOMICS: EXPENDITURES

Theory and practice of public finance. Topics are selected from growth of the public sector, market failure, theory of public goods, incentive mechanisms, logic of group decisions and the political process, theory of benefit-cost analysis, intergovernmental fiscal relations, government budgeting.
Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3BE3 - BEHAVIOURAL ECONOMICS

Economic theory rests upon the assumptions that all economic actors (consumers, firms, governments) are fully rational and narrowly self-interested. Behavioural economics examines the consequences and realism of these assumptions by designing laboratory and field experiments and conducting empirical analyses that test economic theory and its core assumptions and by incorporating psychologically plausible assumptions and motivations into economic theory. This course provides a survey of some of the central and current topics in behavioural economics.
Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3C03 - PUBLIC SECTOR ECONOMICS: TAXATION

Theory and practice of public finance: analysis and comparison of the efficiency, equity and distribution effects of the taxation of income, wealth and expenditure, analysis of social insurance, intergovernmental fiscal relations.
Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3D03 - LABOUR ECONOMICS

Introduction to the economics of the labour market; demand for labour by the firm and industry; supply of labour by the individual; investment in human capital.
Three lectures; one term
Prerequisite(s): ECON 2Z03
Not open to students with credit or registration in ECON 2A03.

ECON 3E03 - APPLIED ECONOMETRICS

Students acquire hands-on experience, using statistical software, in the application of econometric methods to empirically analyze economic issues. This course emphasizes understanding economic data, economic model estimation, hypothesis testing, and interpretation of results.
Three hours; one tutorial; one term
Prerequisite(s): ECON 2Z03; and 2H03 or 2Y03; and 2B03 and enrolment in an Honours Economics program
Antirequisite(s): ECON 3EE3
ECON 2B03 may be substituted with one of CHEMENG 4C03, COMMERCE 2QA3, POLSCI 3N06 A/B, 3NN3, PNB 2XE3, 3XE3, SOCIOL 3H06 A/B, STATS 2D03 or another course that is approved by a departmental counselor as equivalent to ECON 2B03.
Not open to students with credit in STATS 2MB3, 3D03 or credit or registration in ECON 4G03.

ECON 3E03 A/B S - APPLIED ECONOMETRICS

Students acquire hands-on experience, using statistical software, in the application of econometric methods to empirically analyze economic issues. This course emphasizes understanding economic data, economic model estimation, hypothesis testing, and interpretation of results.
Three hours; one tutorial; one term
Prerequisite(s): ECON 2Z03; and 2H03 or 2Y03; and 2B03 and enrolment in an Honours Economics program
Antirequisite(s): ECON 3EE3, ECON 2B03 may be substituted with one of CHEMENG 4C03, COMMERCE 2QA3, POLSCI 3N06 A/B, 3NN3, PNB 2XE3, 3XE3, SOCIOL 3H06 A/B, STATS 2D03 or another course that is approved by a departmental counselor as equivalent to ECON 2B03.
Not open to students with credit in STATS 2MB3, 3D03 or credit or registration in ECON 4G03.

ECON 3EE3 - ECONOMETRICS I

Elaboration of regression techniques developed in ECON 2B03 and their applications. Problems of inference and interpretation in the analysis of economic data. Introduction to forecasting in economics.
Three lectures; one tutorial; one term
Prerequisite(s): ECON 2Z03; and 2H03 or 2Y03; and 2B03 with a grade of at least B-; and registration in an Honours Economics program with a GPA of at least 6. The ECON 2B03 prerequisite can be met by getting a grade of at least B+ in one of the following alternative statistics courses: CHEMENG 4C03, COMMERCE 2QA3, POLSCI 3N06 A/B, POLSCI 3NN3, PNB 2XE3, 3XE3, SOCIOL 3H06 A/B, STATS 2D03 or another course that is approved by a departmental counselor as equivalent to ECON 2B03.
Antirequisite(s): ECON 3E03

ECON 3G03 - INTRODUCTION TO ADVANCED ECONOMIC THEORY

An introduction to the application of mathematics in economic theory.
Three lectures; one term
Prerequisite(s): A grade of at least B- in each of ECON 2ZZ3 and ECON 2HH3 (or 2YY3) and registration in an Economics program

ECON 3H03 - INTERNATIONAL MONETARY ECONOMICS

Macroeconomic problems of an open economy with special reference to Canada; the international financial system and proposals for its reform.
Three hours (lectures and seminars); one term
Prerequisite(s): ECON 2H03 or 2Y03

ECON 3HH3 - INTERNATIONAL TRADE

Real theory of international trade; interregional and international specialization; effect of commercial and industrial policies.
Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3K03 - MONETARY ECONOMICS

Introduction to a modern treatment of monetary theory. Topics include why does money exist; links between monetary policy, inflation and business cycles; how might inflation and economic growth be connected?
Three lectures; one term
Prerequisite(s): ECON 2Z03; and ECON 2H03 or 2Y03

ECON 3M03 - INTRODUCTION TO GAME THEORY

An introduction to the theory of games, including strategic, extensive and coalitional games. Applications in economics, political science and evolutionary biology are discussed.
Three lectures; one term
Prerequisite(s): One of ECON 1B03, 1BX3, or ARTSSCI 2E03; and MATH 1K03 (or equivalent)
Not open to students with credit in ECON 3Y03 if the topic was Introduction to Game Theory.

ECON 3Q03 - THE ECONOMICS OF AGING

Topics include the macroeconomics of population aging and its impact on national pension and health plans and the microeconomics of retirement and income security.
Three lectures; one term
Prerequisite(s): ECON 2Z03; and ECON 2H03 or 2Y03

ECON 3S03 - INDUSTRIAL ORGANIZATION

- study of the structure, conduct and performance of industrial markets.

Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3T03 - ECONOMIC DEVELOPMENT

Topics may include the measurement of structural change, dual economies, agriculture and production, technical and institutional change, and health and nutrition.
Three lectures; one term
Prerequisite(s): ECON 2Z03

ECON 3W03 - NATURAL RESOURCES

Competitive and socially optimal management of nonrenewable resources; market failure as illustrated by mineral cartels, fisheries and forestry, including analysis of bioeconomic models.
Three hours (lectures and seminars); one term
Prerequisite(s): One of ECON 2Z03 or ECON 2J03

ECON 3Y03 - SELECTED TOPICS

Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered.
Three hours; one term
Prerequisite(s): ECON 2Z03 and ECON 2H03 or 2Y03

ECON 3Z03 - HEALTH ECONOMICS

Analysis of allocation of resources in health care. Topics include markets for health care, insurance, biomedical research, technology assessment, organization and public policy.
Three lectures; one term
Prerequisite(s): ECON 2Z03. ECON 2B03 or another course in statistics is recommended.

ECON 4A03 - HONOURS ECONOMIC ANALYSIS

Students discuss papers on a theme that is specific to each section and write short paper reviews and policy briefs on current economics issues.
Three hours (seminars); one term
Prerequisite(s): ECON 4F03 or ECON 4FF3; and ECON 3E03 or ECON 3EE3; and ECON 2GG3, and ECON 2HH3 (or 2YY3); and enrolment in level IV of an Honours Economics Program
Antirequisite(s): ECON 4AA3

ECON 4AA3 - ECONOMIC SPECIALIST SEMINAR

Under the supervision of a faculty member students present and discuss papers and write a paper presenting original research.

- hours; one term

Prerequisite(s): ECON 4FF3 with a grade of at least B-, and ECON 3EE3 with a grade of at least B-; or ECON 3E03 with a grade of at least A-, and an average of at least 6 in ECON 2H03 and 2HH3 (or 2Y03 and 2YY3), and enrolment in Level III or Level IV Honours Economics (Specialist Option) with a GPA of at least 6.
Antirequisite(s): ECON 4A03

ECON 4B03 - SELECTED TOPICS

Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered.
Three hours; one term
Prerequisite(s): Permission of the Department

ECON 4F03 - METHODS OF INQUIRY IN ECONOMICS

This course develops skills for investigating a research question in economics, through workshops (eg. writing, library, internet, data), and the subsequent application of the skills to an economic issue.
Three hours; one term
Prerequisite(s): ECON 2ZZ3 and ECON 2HH3 (or 2YY3); Credit or registration in ECON 3E03 or ECON 3EE3, registration in Level III or Level IV of an Honours Economics program
Antirequisite(s): ECON 4FF3
This course is only offered in the Fall term.

ECON 4FF3 - RESEARCH METHODS IN ECONOMICS

Students discuss and present papers, learn research methods and write a critical review of the literature on an economic topic of their choice.

- hours; one term

Prerequisite(s): ECON 2ZZ3 with a grade of at least C+; and ECON 2HH3 (or 2YY3) with a grade of at least C+; and Credit or enrolment in ECON 3EE3; or a grade of at least A- in ECON 3E03; and registration in Level III or Level IV of an Honours Economics program with a GPA of at least 6.
Antirequisite(s): ECON 4F03
This course is only offered in the Fall term.

ECON 4G03 - ECONOMETRICS II

Development of regression models appropriate to economics. Illustrations from applied micro- and macroeconomics.
Three lectures; one tutorial; one term
Prerequisite(s): ECON 2Z03 and ECON 2H03 (or 2Y03); and at least B- in ECON 3EE3 or at least A- in ECON 3E03 or another course that is approved by the department.

ECON 4M06 A/B S - DIRECTED RESEARCH I

- reading and/or research program supervised by a Department member. A major paper is required. Interested students should consult the Department concerning admission.

Prerequisite(s): Permission of the Department

ECON 4N03 - DIRECTED RESEARCH II

As per ECON 4M06 A/B S.
Prerequisite(s): Permission of the Department

ECON 4T03 - ADVANCED ECONOMIC THEORY I

Mathematically oriented approaches to the analysis of the behaviour of individual consumers, workers and firms.
Three lectures; one term
Prerequisite(s): A grade of at least C in one of ECON 3G03, MATH 2MC3, MATH 2X03, MATH 2XA3; and a grade of at least B- in ECON 2ZZ3 and ECON 2HH3 (or 2YY3) and registration in an Economics program.

ECON 4TT3 - ADVANCED ECONOMIC THEORY II

Analysis of dynamic macroeconomic models including models of endogenous growth and other selected topics.
Three lectures; one term
Prerequisite(s): A grade of at least C in one of ECON 3G03, MATH 2MC3, MATH 2X03, MATH 2XA3; and a grade of at least B- in ECON 2ZZ3 and ECON 2HH3 (or 2YY3) and registration in an Economics program.

Electrical Engineering

Courses in Electrical Engineering are administered by the Department of Electrical and Computer Engineering.
Information Technology Building, Room A111, ext. 24347
http://www.ece.mcmaster.ca/

Department Notes

1. All students in the Electrical Engineering program initially follow a common curriculum consisting of a combination of Electrical Engineering and Computer Engineering courses. In their senior year, students are given the opportunity to customize their program by selecting from a wide range of technical electives.
2. All Electrical and Computer Engineering courses are open to students registered in any Electrical or Computer Engineering program or the Electrical and Biomedical Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments or faculties.

ELECENG 2CI4 - INTRODUCTION TO CIRCUIT ANALYSIS

Current, potential difference; Kirchhoff's laws; Ohm's Law; circuit elements; mesh/nodal analysis of electrical circuits; Thevenin and Norton equivalent circuits; maximum power transfer; first and second order circuits; complex arithmetic; phasors, impedance and admittance; AC power.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): Registration in a Computer Engineering or Electrical Engineering program
Antirequisite(s): ELECENG 2CI5

ELECENG 2CJ4 - CIRCUITS AND SYSTEMS

Advanced circuit analysis including dependent sources; second order circuits; Laplace transforms with applications; frequency response; 2-port networks; coupled circuits; power relationships.
Three lectures, one tutorial, and one lab every other week; second term
Prerequisite(s): ELECENG 2CI5 or ELECENG 2CI4
Antirequisite(s): ELECENG 2CF3, COMPENG 2CF3

ELECENG 2EI4 - ELECTRONIC DEVICES AND CIRCUITS I

Semiconductor devices and electronic circuits; electrical characteristics, principles of operation, circuit models of diodes, field-effect and bipolar transistors, and operational amplifiers; analysis and design of basic application circuits.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 2CI5 or ELECENG 2CI4
Antirequisite(s): ELECENG 2EI5

ELECENG 2FH4 - ELECTROMAGNETICS I

Mathematical foundations of electromagnetics (selected topics of vector calculus); electrostatics, magnetostatics and conduction; introduction to time-varying fields through Faraday's law.
Three lectures, two tutorials; second term
Prerequisite(s): ELECENG 2CI5 or ELECENG 2CI4 and PHYSICS 1E03, registration in Electrical Engineering or the Integrated Biomedical Engineering and Health Sciences (IBEHS) Program

ELECENG 2MM3 - ELECTRICAL CIRCUITS AND POWER

Fundamentals of electromechanical energy conversion. Motors and generators, transformers, single and polyphase power circuits, synchronous and induction machines, power measurements.
Two lectures and one lab or tutorial; first term
Prerequisite(s): PHYSICS 1E03; MATH 2Z03
Antirequisite(s): ENGINEER 3M03, ENGINEER 2MM3

ELECENG 3CL4 - INTRODUCTION TO CONTROL SYSTEMS

Modelling of control systems in the continuous-time domain; state space representations; model linearization; performance of control systems in time and frequency; stability; control design.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3TP4 or ELECENG 3TP3
Antirequisite(s): IBEHS 4A03, MECHENG 4R03, MECHTRON 3DX4, SFWRENG 3DX4

ELECENG 3EJ4 - ELECTRONIC DEVICES AND CIRCUITS II

Analog and digital electronics; operational amplifier circuits; multistage amplifiers; oscillators; analog and digital integrated circuits; data converters; amplifier frequency response; feedback and stability; computer aids to analysis and design.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 2CJ4 or ELECENG 2CF3 or COMPENG 2CF3, ELECENG 2EI5 or ELECENG 2EI4, ELECENG 2CI5 or ELECENG 2CI4

ELECENG 3EY4 - ELECTRICAL SYSTEMS INTEGRATION PROJECT

An electrical engineering design and implementation project of reasonable complexity to be completed by small groups of students; oral presentations and written reports.
Two lectures, one lab, one tutorial/design studio; second term
Prerequisite(s): COMPENG 2DX4 or 2DX3, ELECENG 3TP3 or ELECENG 3TP4 or IBEHS 3A03, ELECENG 2CI5 or ELECENG 2CI4, ELECENG 2CJ4, COMPENG 2DI4, COMPENG 2SH4
Antirequisite(s): COMPENG 3DY4

ELECENG 3FK4 - ELECTROMAGNETICS II

Time-varying fields, uniform plane waves, reflection and transmission, dispersion, transmission lines and impedance matching, waveguides, elements of theory of radiation and antennas.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 2FH3 or ELECENG 2FH4 or ENGPHYS 2A04

ELECENG 3N03 - ANALOG ELECTRONICS FOR MEASURING SYSTEMS

This course gives a concise introduction to the main elements of a low-frequency analog signal acquisition chain. Topics include sensors (voltage, current, charge, and resistance), signal conditioning circuits, passive filters, operational amplifiers, circuits with and without feedback, differential and instrumentation amplifiers, rectifier circuits, filter design for anti-aliasing purposes, analog-to-digital converters, sources of noise, noise reduction, and design for the best trade-off.
Two lectures, one tutorial, one lab (three hours) every other week; first term
Prerequisite(s): ENGPHYS 2E03 or ELECENG 2MM3

ELECENG 3PI4 - ENERGY CONVERSION

Analyze, model, and predict the performance of energy conversion devices and systems including single-phase and balanced three-phase systems, transformers, introduction to electric machines, AC generators and AC motors.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 2CJ4, ELECENG 2FH3 or ELECENG 2FH4, and ELECENG 2CI5 or ELECENG 2CI4

ELECENG 3TP3 - SIGNAL & SYSTEMS

Complex variables and integration in the complex plane; Fourier transforms, properties; Laplace transforms and inversion; input-output relations of linear systems; discrete time systems.
Three lectures, one tutorial; first term
Prerequisite(s): ELECENG 2CJ4 or ELECENG 2CF3 or COMPENG 2CF3 and ELECENG 2CI5 or ELECENG 2CI4
Antirequisite(s): ELECENG 3TP4, IBEHS 3A03, MECHENG 4R03, MECHTRON 3MX3, SFWRENG 3MX3

ELECENG 3TQ3 - ADVANCED PROBABILITY AND RANDOM PROCESSES

Probability theory; random variables; expectations; random processes; autocorrelation; power spectral densities.
Three lectures, one tutorial; first term
Prerequisite(s): MATH 2Z03
Antirequisite(s): COMMERCE 2QA3, ELECENG 3TQ4

ELECENG 3TR4 - COMMUNICATION SYSTEMS

Review of continuous-time signals and systems; amplitude modulation, phase and frequency modulation schemes; digital modulation; stochastic processes; noise performance.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3TP4 or ENGPHYS 3W04; One of ELECENG 3TQ4, ELECENG 3TQ3 or STATS 3Y03; or ENGPHYS 3W04 A/B

ELECENG 4BB3 - CELLULAR BIOELECTRICITY

Generation and transmission of bioelectricity in excitable cells; ionic transport in cellular membranes; propagation of electricity within and between cells; cardiac and neural physiology; measurement of extracellular fields; electrical stimulation of excitable cells.
Three lectures, one tutorial; second term
Prerequisite(s): Registration in Level III Electrical and Biomedical Engineering or level IV or V of the Integrated Biomedical Engineering and Health Sciences (IBEHS) Program or level IV of Electrical Engineering
Antirequisite(s): ELECENG 3BB3

ELECENG 4BF4 - ADVANCED MEDICAL IMAGING

Physical principles of medical image acquisition and formation; post-processing for magnetic resonance imaging and spectroscopy; comparisons to other medical imaging modalities.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 2FH3 or 2FH4 or ENGPHYS 2A04, ELECENG 3TP4 or 3TP3 or IBEHS 3A03
Antirequisite(s): MEDPHYS 4D03

ELECENG 4CL4 - CONTROL SYSTEM DESIGN

Design of linear control systems using classical and state-space techniques; performance limitation; sampled-data control; nonlinear systems; multi-input multi-output control systems.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 3CL4 or IBEHS 4A03, ELECENG 3TP4 or 3TP3 or IBEHS 3A03

ELECENG 4EK4 - MICROELECTRONICS

CMOS and MOSFET integrated circuit design; fabrication and layout; simulation; digital and analog circuit blocks; computer-aided design and analysis; testing and verification.
Two lectures, one tutorial (two hours), one lab every other week; first term
Prerequisite(s): ELECENG 3EJ4, or ENGPHYS 3BA3
Antirequisite(s): COMPENG 4EK4

ELECENG 4EM4 - PHOTONIC DEVICES AND SYSTEMS

Fundamentals of light. Optical fibers and their propagation characteristics. Lasers and photodiodes. Optical amplifiers and modulators. Photonic networks.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3EJ4; or ENGPHYS 3BA3 or 3BA4 and ENGPHYS 3BB3 or 3BB4
Antirequisite(s): ENGPHYS 4K03

ELECENG 4FJ4 - DEVICES AND ANTENNAS FOR WIRELESS SYSTEMS

This course provides the fundamentals of the technology of wireless communications. transmission lines and waveguides, scattering parameters, impedance matching, power dividers, directional couplers, microwave

resonators and filters, microwave sources and active devices, antenna fundamentals, microwave and antenna measurements.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 2FL3 or ELECENG 3FK4 or ELECENG 2CF3 or COMPENG 2CF3

ELECENG 4OH4 - ADVANCED RESEARCH PROJECT

- research-oriented project under the direct supervision of a faculty member to further foster initiative and independent creativity while working on an advanced topic. This research is based on the experience and results achieved in other research-based project courses.

First or second term
Prerequisite(s): COMPENG 4OJ4 or ELECENG 4OJ4; Prior arrangement with an Electrical and Computer Engineering faculty member, a minimum cumulative GPA of 9.5, registration in Level IV or V of any program in the Department of Electrical and Computer Engineering; or permission of the department.
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03

ELECENG 4OI6 A/B - ENGINEERING DESIGN

The design process; safety; a term project composed of small teams of students including an oral presentation and written report.
Lectures, tutorials, one capstone project; both terms
Prerequisite(s): Registration in Level IV or V of any Electrical or Computer Engineering program
Antirequisite(s): ELECENG 4BI6 A/B, ENGINEER 4M06 A/B, IBEHS 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

ELECENG 4OJ4 - RESEARCH PROJECT

- research-oriented project under the direct supervision of a faculty member to foster initiative and independent creativity while working on an advanced topic.

First or second term
Prerequisite(s): Prior arrangement with an Electrical and Computer Engineering faculty member, a minimum cumulative GPA of 9.5, registration in Level IV or V of any program in the Department of Electrical and Computer Engineering; or permission of the department.
Antirequisite(s): COMPENG 4OK4, ELECENG 4OK4, IBEHS 3I06 A/B S, IBEHS 4H03

ELECENG 4PK4 - POWER ELECTRONICS

To analyze, model, and predict the performance of basic power converter configurations. To explain topologies of power electronics, AC/DC, DC/DC, DC/AC and AC/AC. To design proper switching circuits.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 2CJ4, ELECENG 3EJ4

ELECENG 4PM4 - ELECTRICAL POWER SYSTEMS

Analysis of transmission lines, unsymmetrical electrical systems, load flow studies, dynamic stability of electrical power systems, power system protection, emerging systems and issues relating to electrical power quality and the impact thereof on plant and customer loads, new generation and connection concepts for large electrical power systems with-regard-to sustainable energy resources, their management, technical challenges and solutions, high voltage DC (HVDC) networks.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite(s): ELECENG 3PI4

ELECENG 4PN4 - ELECTRIC MOTOR DRIVES

Fundamentals of electric motor drives are studied. The operating principles of different electric motor types and drives, speed and position control, starting, and braking are covered.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3PI4

ELECENG 4PP4 - SMART AND MICRO GRIDS

Micro grids for transportation systems and terrestrial applications are studied. Then, fundamentals of renewable energies are explained, and the concept of smart grid is introduced.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3CL4 or IBEHS 4A03, and ELECENG 3PI4, and ELECENG 4PK4 and ELECENG 4PM4

ELECENG 4PR4 - NET-ZERO EMISSION POWER SYSTEMS

Enabling technologies to reach the net-zero emission electricity sector are studied. This includes renewable energies, storage systems, and multi-energy systems. Sizing and modeling these technologies are explained and real-life examples are discussed.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite(s): ELECENG 3CL4, ELECENG 3PI4, ELECENG 4PM4, and ELECENG 4PK4

ELECENG 4QT3 - ADVANCED QUANTUM THEORY AND TECHNOLOGY

Quantum state space; interpretation and dynamics of the wave function; quantum mechanical spin and Q-bits; single versus ensemble systems: pure and mixed states and the density matrix; description of the photon: Fock space and coherent states; types of geometric phases; magnetic effects and spin relaxation: application to imaging; Q-entanglement and the Bell basis: application to Q-protocols in information, computing, and communications.
Three lectures, one tutorial; second term
Prerequisite(s): ENGPHYS 2QM3, ELECENG 3TQ3, and ELECENG 3FK4

ELECENG 4TK4 - DIGITAL COMMUNICATIONS SYSTEMS

Digital modulation systems, inter-symbol interference, equalization, synchronization; ASK, FSK, PSK, MSK, optimal receiver, noncoherent detection; introduction to information theory; entropy, source coding, mutual information, channel capacity.
Three lectures, one two-hour tutorial; first term
Prerequisite(s): ELECENG 3TR4, and ELECENG 3TQ4 or ELECENG 3TQ3
Antirequisite(s): SFWRENG 4J03

Energy Engineering Tech

Courses in Energy Engineering Technologies are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca

Notes

1. Renewable Energy Technologies students must complete (a project in Renewable Energy Technology), and .

ENRTECH 3CS3 - COMMUNICATION SYSTEMS

Signal and system representations, Fourier transform and LTI systems, filtering; analog communication systems: amplitude modulation, frequency modulation and phase modulation; digital communication systems: pulse modulation,

digital transmission at baseband, digital modulation techniques: amplitude-shift keying, phase-shift keying, and frequency-shift keying.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 3IE3

ENRTECH 3EM3 - TRANSMISSION LINES AND ELECTROMAGNETICS

Formerly ENRTECH 4EM3
Field concepts. Maxwells equations, integral and differential forms. Free space and guided wave propagation, transmission lines. Radiation from current elements.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 4EM3

ENRTECH 3EP3 - POWER SYSTEMS AND ELECTRICAL MACHINES

Basic electric circuits, basic electrical theorems, network analysis, phasors, three phase systems, transformers, motors, electric power generation, power plants components (transformers, motors, exciters, synchronous machines).
Three lectures; one lab (two hours every other week); one term
Prerequisite(s): Registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 3IN3 - INDUSTRIAL NETWORKS AND COMMUNICATION SYSTEMS

Corporate and industrial network standards; proprietary buses and protocols and interfaces; distributed I/O; drivers and devices and their implementation in PC and PLC based systems.
Three lectures; one lab (two hours every other week); one term
Prerequisite(s): Registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 3MI3 - MEASUREMENTS AND INSTRUMENTATION

Transducers, logic circuits, basic electronic devices and their applications. Calculate/ measure the input(s) and output(s) of various systems. Recognize, install and apply instruments within power plants.
Three lectures; one lab (two hours every other week); one term
Prerequisite(s): Registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 3PD3 - POWER DISTRIBUTION I

Principle concepts and theories of power distribution. Skills required to work at an industrial environment and/or power utilities (generation, transmission, distribution). Based on the Ontario Hydro system, a power flow computer program will be introduced.
Three lectures; one term
Prerequisite(s): ENRTECH 3EP3 and registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 4CA3 - COMPUTER APPLICATIONS IN POWER SYSTEM ENGINEERING

Analysis of load flow, short circuit, transient stability and electromagnetic transients by commercial power system software packages.
Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, ENRTECH 3PD3, 4PM3, and registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 4PD3 - POWER SYSTEM ANALYSIS AND CONTROL

This course introduces the different types of operating constraints as encountered by power system operators and engineers during real time operation of interconnected power grids. For each type of operating constraint, the most common operating strategies and control measures will be discussed and analyzed.
Three lectures; one term
Prerequisite(s): ENRTECH 3PD3 and registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 4PE3 - POWER ELECTRONICS

Introduction to power semiconductor switching devices: power diodes, thyristors, IGBTs, MOSFETs; four types of converters in power conditioning: DC-DC, DC-AC, AC-DC, and AC-AC. Applications of power electronics in electric power transmission and distribution: static var compensators (SVCs), static synchronous condensers (STATCOM), voltage source converters (VSC) and HVDC transmission.
Lectures; one term
Prerequisite(s): ENRTECH 3EP3, ENGTECH 3MA3, ENRTECH 3PD3, and registration in the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 3IE3

ENRTECH 4PM3 - POWER PROTECTION AND MAINTENANCE I

Various power devices such as relays, circuit breaker, power monitor, control devices and other components used in a power system protection. Other devices such as CTs, and Pts and substation hardware will also be covered.
Three lectures; one term
Prerequisite(s): ENRTECH 3MI3, 3PD3, and registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 4PP3 - POWER PROTECTION AND MAINTENANCE II

New generation of digital fault detection systems. Balanced faults, computer-based fault studies, symmetrical components and sequence networks, unbalanced short-circuit and open-circuit faults.
Three lectures; one lab (two hours every other week); one term
Prerequisite(s): ENGTECH 3ET0, ENRTECH 4PM3 and registration in the Power and Energy Engineering Technology Co-op program

ENRTECH 4RG3 - RENEWABLE GENERATION

Operation and planning of renewable generation resources including wind, solar, hydro, biomass, geothermal and fuel cells. The environmental and economical impacts of such technologies, rules, regulations.
Three lectures; one term
Prerequisite(s): ENRTECH 3EP3,ENGTECH 3TD3, and registration in the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 4RT3

Engineering

John Hodgins Engineering Building, Hatch Room 301, ext. 24646
http://www.eng.mcmaster.ca/

Note
Enrolment in these courses is limited to students registered in an Engineering program unless otherwise stated.

ENGINEER 1EE0 - INTRODUCTION TO CAREER PLANNING & EMPLOYMENT

Introduction to career readiness and job search; self-assessment, career planning and decision-making, networking, industry research, cover letter and resume writing, interviewing skills and work place professionalism.
Cross-list(s): IBEHS 1EE0
Prerequisite(s): Registration in B.Eng, B.A.Sc, B.Eng.Mgt, B.Eng.Soc, B.Eng. BioSci, B.Tech 4-YR Not open to students in their final level.

ENGINEER 1P13 A/B - INTEGRATED CORNERSTONE DESIGN PROJECTS IN ENGINEERING

Project-based integrated learning course that introduces a range of foundational (i.e., cornerstone) topics in engineering, including engineering design and communication, computation, graphic design, natural and applied sciences, sustainability and the engineering profession. These topics are applied through a series of integrated team-based design projects in simulated workplace environments.
Three lectures, one tutorial (two hours), two labs (three hours each); both terms
Prerequisite(s): Registration in any Engineering program
Antirequisite(s): ENGINEER 1C03, ENGINEER 1D04, ENGINEER 1P03, ENGINEER 1PA3, ENGINEER 1PB3, ENGINEER 1PC3, IBEHS 1P10 A/B, MATLS 1M03

ENGINEER 1PA3 - INTRODUCTION TO ENGINEERING DESIGN AND PRACTICE

Introduction to professional engineering including ethics, health and safety, engineering communication; design skills; completion of a design project. Graphical visualization and communication; technical sketching, 2D and 3D computer-aided design; use of solid modelling software.
Two lectures, one tutorial (two hours); one term
Prerequisite(s): Registration in any Engineering program, and permission of the department
Antirequisite(s): ENGINEER 1P13 A/B, IBEHS 1P10 A/B, ENGINEER 1C03
Offered only during Spring or Summer term.

ENGINEER 1PB3 - STRUCTURE AND PROPERTIES OF MATERIALS

An introduction to the structure of both crystalline and amorphous solids; the physical and chemical basis for properties exhibited by materials; an overview of material properties including mechanical, electrical, magnetic and thermal behaviour.
Three lectures; one term
Prerequisite(s): Registration in any Engineering program, and permission of the department
Antirequisite(s): ENGINEER 1P13 A/B, IBEHS 1P10 A/B, MATLS 1M03
Offered only during Spring or Summer term

ENGINEER 1PC3 - ENGINEERING COMPUTATION

Development and analysis of simple algorithms. Implementation of algorithms in computer programming language. Design and testing of computer programs.
One lecture, one tutorial (two hours), one lab (three hours); one term
Prerequisite(s): Registration in any Engineering program, and permission of the department
Antirequisite(s): ENGINEER 1P13 A/B, IBEHS 1P10 A/B, ENGINEER 1D04
Offered only during Spring or Summer term

ENGINEER 2EC0 - ENGINEERING WORK TERM

Minimum of 12 weeks of full-time employment in a professional environment.
First or second term
Prerequisite(s): Registration in a Co-op program in the Faculty of Engineering and ENGINEER 1EE0 and permission from the Engineering Co-Op and Career Services.
Not open to students in their final level. Cannot be taken concurrently with any program capstone course.

ENGINEER 2IW3 - INCLUSION IN THE ENGINEERING WORKPLACE

Engineering workplaces are diverse but can pose challenges to underrepresented groups. Students will develop the vocabulary and tools to master perceptual, institutional, and psychological mechanisms of inclusion as allies and targets.
One term
Lectures (three hours); second term
Prerequisite(s): Registration in Level II or above of any Engineering Program

ENGINEER 2PX3 - ENGINEERING COMMUNICATIONS

- multidisciplinary integrated learning course focused on communication and the engineering design cycle. Formal and informal, verbal and written communication skills are fostered through project-based design sprints.

Two lectures, one tutorial (three hours); second term
Prerequisite(s): Registration in Level II or above in any program leading to a B.Eng, B.Eng.Biosci, B.Eng.Mgt, or a B.Eng.Soc degree
Antirequisite(s): CHEMENG 2G03; CIVENG 2I03; COMPENG 2DX4; ENGPHYS 3EC4; MECHENG 2A03; MATLS 2H04; SFWRENG 3I03

ENGINEER 3CX3 A/B - EMERGING LEADERS AND MENTORS

This workshop-based course offers students the opportunity to earn course credit for their leadership and mentorship roles within the McMaster community and beyond. Participants will receive training in various aspects of mentorship and leadership, enhancing their current skills and fostering personal and professional growth. Students must coordinate with the course instructor prior to enrollment.
One lecture (three hours); both terms
Prerequisite(s): Registration in Level II or above of any program and permission of the instructor

ENGINEER 3IC0 - FULL-TIME INTERNSHIP FOR INTERNATIONAL STUDENTS

Full-time, paid internships of 8, 12 or 16 months enable international Engineering students to explore career opportunities and work environments, gain employability skills, and an understanding of employer expectations and employment practices in a Canadian professional work environment.
Prerequisite(s): ENGINEER 1EE0 and permission of the Engineering Career and Co-Op Services.

ENGINEER 3PX3 - ENGINEERING ECONOMICS

Engineering economic analysis explored in the context of an interdisciplinary engineering project. Students perform cost-benefit analysis considering the perspective of the engineering team, client, and society in order to maximize net value of an engineering decision. Factors considered and incorporated include conversion factors, opportunity cost, time value of money, risk analysis,

and technical analysis.
Two lectures, one tutorial (three hours); second term
Prerequisite(s): ENGINEER 2PX3; Registration in Level III or above in any program leading to a B.Eng, B.Eng.Mgt, or a B.Eng.Soc degree
Antirequisite(s): ENGINEER 2B03; CIVENG 3RR3; CHEMENG 4N04

ENGINEER 4A03 - ETHICS, EQUITY AND LAW IN ENGINEERING

General introduction to the ethical, equitable and legal aspects of engineering practice. Topics include the engineering act and code of ethics, employment equity, legal duties and liabilities of the professional engineer, contracts, and the tort of negligence.
Three lectures; both terms
Prerequisite(s): Registration in Level IV or above of any Engineering program or permission of the instructor. Not open to Engineering & Society program.
Antirequisite(s): ENGPHYS 2S03, 4C03

ENGINEER 4EX3 A/B - EXPERIENTIAL ENGINEERING DESIGN

This course will provide students an opportunity for formal recognition of the design-based experiential learning conducted within the atmosphere of technically-oriented McMaster Engineering teams. Arrangements for participation in this course must be made with the course instructor prior to enrolment.
One lecture (three hours); both terms
Prerequisite(s): Registration in Level III or above in the Faculty of Engineering and permission of the instructor

Engineering and Society Program

John Hodgins Engineering Building, Room 316, ext. 27679
https://www.eng.mcmaster.ca/engineering-and-society-program
The Engineering and Society Programs are described in the Faculty of Engineering section in this Calendar. These programs lead to the B.Eng.Society degree.
Courses
If no prerequisite is listed, the course is open.

ENGSOCTY 2X03 - INQUIRY IN AN ENGINEERING CONTEXT I

Inquiry is a non-disciplinary approach to the study of issues of public concern. In terms of the design process, inquiry focuses on the problem definition stage, in which formulating questions, researching underlying issues, and analysing opposing arguments are essential. The first course involves teaching how to use the university and community resources in research, how to write a research paper, and how to express ideas orally.
Three hours (lectures, discussion, group work); first term
Prerequisite(s): Registration in the Engineering and Society Program or permission of the instructor

ENGSOCTY 2Y03 - CASE STUDIES IN HISTORY AND TECHNOLOGY

History and philosophy of technology, from antiquity to modern times, with a special emphasis on the cultural aspects of technology, are addressed on a case study basis.
Three hours (lectures, discussion, group work); second term
Prerequisite(s): Registration in the Engineering and Society Program

ENGSOCTY 3X03 - INQUIRY IN AN ENGINEERING CONTEXT II

This inquiry course builds on the skills developed in previous courses, focusing on a specific issue related to the role of engineering and technology in society. The course is devoted to the study of one topic such as: social control of technology, technology and the quality of life, the deteriorating environment, or the information society.
Three hours (lectures, discussion, group presentations); second term
Prerequisite(s): ENGSOCTY 2X03 and registration in Level IV of the Engineering and Society Program

ENGSOCTY 3Y03 - TECHNOLOGY AND SOCIETY

- study of the nature and structure of technology, the nature of culture, and the role and place of different groups, including engineers, in a culture dominated by technology; and mechanisms for the social control of technology.

Lectures, discussion, group work, seminars (three hours); first term
Prerequisite(s): ENGSOCTY 2Y03 and registration in Level III or above of the Engineering and Society Program

ENGSOCTY 3Z03 - PREVENTIVE ENGINEERING: ENVIRONMENTAL PERSPECTIVES

This experiential course focuses on the application of preventive engineering with specific attention to impacts on the natural environment. Students explore first-hand, through guided site visits and discussion with organizational leaders, the potential solutions and risks of this approach
Three hours (lectures, discussion, group projects); first term
Prerequisite(s): Registration in Level III or IV of the Engineering and Society Program

ENGSOCTY 4X03 A/B - INQUIRY IN AN ENGINEERING CONTEXT III

Under the supervision of a faculty member, students write an inquiry paper and present their findings orally. Topics for inquiry must bear on the relation of technology to society and have implications for the practising engineer.
One lecture (three hours); both terms
Prerequisite(s): ENGSOCTY 3X03 and registration in Level V of the Engineering and Society Program

ENGSOCTY 4Y03 - SOCIETY CAPSTONE DESIGN

In multi-disciplinary teams, students will complete a capstone design project that incorporates holistic design, social sustainability, community resilience and aesthetic elements.
Two lectures; design studio (one hour); first term
Prerequisite(s): Registration in Level V of the Engineering and Society Program
Cannot be taken concurrently with any co-op work term course.

Engineering and Management Program

John Hodgins Engineering Building, Room 316, ext. 27679
https://www.eng.mcmaster.ca/engineering-management-program
The Engineering and Management Programs are described in the Faculty of Engineering section in this Calendar. These programs are administered jointly by the DeGroote School of Business and the Faculty of Engineering and lead to the B.Eng.Mgt. degree.
Courses

If no prerequisite is listed, the course is open.

ENGNMGT 2AA3 - COMMUNICATION SKILLS

Writing skills including formal reports; speaking, listening and presentation skills, speeches, technical presentations and electronic communication technology.
One lecture (three hours); first term
Prerequisite(s): Registration in the Engineering and Management program
Antirequisite(s): ENGNMGT 2AA2

ENGNMGT 3A03 - LEADING HIGH-PERFORMANCE ENGINEERING TEAMS

This course explores the principles and practices of effective team leadership within engineering and management contexts. Students will learn how to build and lead high-performance teams through topics such as team dynamics, communication strategies, conflict resolution, and fostering innovation.
One lecture (three hours); second term
Prerequisite(s): ENGNMGT 2AA3 and registration in Level III or above in the Engineering and Management program

ENGNMGT 4A03 - INNOVATION DRIVEN PROJECT DEVELOPMENT AND MANAGEMENT

What is innovation and how is it managed? Team-based creativity skills will be developed with a focus on delivering innovation. Participants develop teamwork skills while using project management tools to develop a project.
One lecture (three hours); first term
Prerequisite(s): One of CHEMENG 2G03 or ENGNMGT 2AA2 or ENGNMGT 2AA3 or ENGNMGT 3A03; and registration in Level IV or above in the Engineering and Management program

ENGNMGT 5B03 - ENGINEERING AND MANAGEMENT CAPSTONE

Capstone course: Students work in multidisciplinary teams to solve an integrated engineering and business problem in an organization. Team, project and client management skills are developed.
One lecture (three hours); first term
Prerequisite(s): ENGNMGT 4A03 and registration in the Engineering and Management program
Cannot be taken concurrently with any co-op work term course.

Engineering Physics

Courses in Engineering Physics are administered by the Department of Engineering Physics.
John Hodgins Engineering Building, Room A315, ext. 27925
https://www.eng.mcmaster.ca/engphys/

Department Note

All Engineering Physics courses are open to students registered in any Engineering or Science Program who meet the prerequisites unless otherwise stated. Prior permission of the instructor is necessary for students from other Faculties or from Engineering or Science who do not meet the course prerequisites.

ENGPHYS 2A04 - ELECTRICITY AND MAGNETISM

Development of electromagnetic theory - fields, Gauss' law, electric potential, Laplace equation, dielectrics, Ampere's law, magnetism, Faraday's law, inductance, development of Maxwell's equations via vector calculus.
Three lectures, one tutorial, one lab (three hours) every other week, second term
Prerequisite(s): Registration in any Engineering Physics or Mechatronics Engineering Program; PHYSICS 1E03; and credit or registration in ENGPHYS 2E04 and MATH 2ZZ3

ENGPHYS 2CD4 - COMPUTATIONAL MECHANICS: DYNAMICS

Dynamics topics including force, energy, and momentum, linear and angular motion, resonance and coupled oscillators, multiparticle systems, central field problems, non-inertial reference frames, planar mechanisms, generalized coordinates, and Lagrange's equations. Course topics are explored both analytically and computationally.
Three lectures, one lab (three hours); first term
Prerequisite(s): PHYSICS 1D03 and credit or registration in MATH 2Z03. Registration in ENGPHYS 2P04 is recommended.
Antirequisite(s): MECHENG 2Q04, 2QA4, PHYSICS 2E03

ENGPHYS 2CM4 - COMPUTATIONAL MULTIPHYSICS

Mathematical modelling and computational multiphysics for engineering design synthesizing E&M, thermodynamics, statics, dynamics, and quantum mechanics.
Three lectures, one lab (three hours); second term
Prerequisite(s): ENGPHYS 2CD4, 2P04, MATH 2Z03, and credit or registration in ENGPHYS 2A04 and MATH 2ZZ3

ENGPHYS 2E04 - ANALOG AND DIGITAL CIRCUITS

Design and analysis of analog and digital electrical circuits - component analysis, circuit analysis and theorems, binary numbers, Boolean analysis and digital circuit design.
Three lectures, one lab (three hours); first term
Prerequisite(s): PHYSICS 1E03, credit or registration in MATH 2Z03, and registration in an Engineering program

ENGPHYS 2NE3 - THERMAL SYSTEMS DESIGN

Thermal Systems Design covers the physics, thermodynamics and design of energy conversion systems utilized in many engineering systems. The topics include the first and second law of thermodynamics, irreversibility, the Rankine and Brayton cycles, and common refrigeration cycles.
Three lectures, one tutorial; first term
Prerequisite(s): Registration in Level II or above of an Engineering program
Antirequisite(s): MECHENG 2W04

ENGPHYS 2P04 - COMPUTATIONAL MECHANICS: STATICS

Classical mechanics topics including static equilibrium, machines and trusses, determinacy, force and bending moment diagrams, elasticity, shear, principal stresses, tensors, Voigt notation, flexure, and torsion. Course topics are explored analytically and computationally using finite element method and computer algebra system software.
Three lectures, one lab (three hours); first term
Prerequisite(s): PHYSICS 1D03; and credit or registration in MATH 2Z03. Registration in ENGPHYS 2CD4 is recommended.
Antirequisite(s): CIVENG 2P04, ENGINEER 2P04, MECHENG 2P04

ENGPHYS 2QM3 - INTRODUCTION TO QUANTUM MECHANICS

Basic foundations of quantum mechanics; wave-particle duality, uncertainty principle, Hydrogen atom, Schrodinger Equation, barriers and tunnelling, probability, spin, quantum statistics, selected applications.

Three lectures, one tutorial; second term
Prerequisite(s): Registration in Level II or above of an Engineering program
Antirequisite(s): PHYSICS 2C03

ENGPHYS 3BA3 - CIRCUITS WITH NON-LINEAR AND ACTIVE COMPONENTS

P-N junctions, diodes, bipolar junction transistors, field effect transistors, DC and AC modeling, differential amplifiers and operational amplifiers, feedback and oscillators, digital circuits and multivibrators, signal processing.
Two lectures, one lab (three hours); first term
Prerequisite(s): One of ENGPHYS 2A04, 2E04, PHYSICS 2BB3
Antirequisite(s): PHYSICS 3B06, 3BA3, ENGPHYS 3BA4, ENGINEER 3N03, ELECENG 3N03, ELECENG 3EJ4

ENGPHYS 3BB3 - EMBEDDING AND PROGRAMMING A MICRO-CONTROLLER

Design and synthesis project in electronics, focused on integrating analog electronics with a microcontroller to create a PID controlled device. Programming and interfacing the microcontroller are taught in weeks 1-6; the device is designed and built in weeks 7-12. Prior knowledge of basic electronics, including op-amps and transistors is required.
Two lectures, one lab (three hours); second term
Prerequisite(s): One of ENGPHYS 3BA3, 3BA4 or PHYSICS 3BA3
Antirequisite(s): PHYSICS 3B06, 3BB3, ENGPHYS 3BB4

ENGPHYS 3D04 - PRINCIPLES OF NUCLEAR ENGINEERING

Introduction to fission energy systems. Energetics of nuclear reactions, interactions of radiation with matter, radioactivity, design and operating principles of fission reactors. Students perform labs involving the McMaster Nuclear Reactor to gain an understanding of the nuclear physics processes underlying its operation and its applications.
Three lectures, one tutorial, one lab (three hours) four times per term; first term
Prerequisite(s): Registration in Level II or above of an Engineering program or credit in at least one of the following: BIOPHYS 1S03, LIFESCI 1D03, MEDPHYS 1E03, PHYSICS 1AA3, 1CC3, 1E03, ISCI 1A24 A/B
Antirequisite(s): ENGPHYS 3D03

ENGPHYS 3E04 - FUNDAMENTALS OF PHYSICAL OPTICS

Geometrical optics, electromagnetic waves, interference of light, Fraunhofer and Fresnel diffraction, polarized light, Fresnel equations, optical properties of materials, introduction to optical systems and precision optics experiments, selected topics in modern optics.
Three lectures,one tutorial, one lab (three hours) four times per term; first term
Prerequisite(s): Registration in any Engineering Program, and one of ISCI 2A18 A/B, MATH 2MC3, 2X03, 2XA3, 2ZZ3; and one of MATH 2C03, 2Z03; and one of PHYSICS 2B03 or ENGPHYS 2A04 or ELECENG 2FH4
Antirequisite(s): ENGPHYS 3E03, PHYSICS 3N03
Cross-list(s): PHYSICS 3N04

ENGPHYS 3ES3 - INTRODUCTION TO ENERGY SYSTEMS

- survey course on energy systems with emphasis on the analytic tools needed to evaluate them in terms of performance, resources and environmental sustainability, costs, and other relevant factors over their life cycles.

Three lectures; first term
Prerequisite(s): Registration in Level II or above of an Engineering program
Antirequisite(s): MECHENG 4O04 and CHEMENG 4A03

ENGPHYS 3H04 A/B S - RESEARCH PROJECT IN ENGINEERING PHYSICS

- special program of studies to be arranged by mutual consent of a professor and the student, to carry out experiments and/or theoretical investigations. A written report and oral defence are required.

Two terms (Fall/Winter or Spring/Summer)
Prerequisite(s): A GPA of at least 8.0. Registration in the second last year of an Engineering Physics program (for Fall/Winter enrolment) or the third last year for Spring/Summer enrolment. Subject to Department approval, students are permitted to be supervised by faculty members in other Engineering departments. Subject to Department approval, students from other Departments are permitted to take this course if their supervisor is a faculty member of the Department of Engineering Physics.
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03
ENGPHYS 3H04 may be repeated to a total of eight units.

ENGPHYS 3L04 - ENGINEERING METROLOGY

Introductory statistics for engineering, error analysis of experimental data, data visualization and curve fitting, hypothesis testing and making decisions, ANOVA, sensors for engineering measurements, noise and interference, instrument response and uncertainty, reliability, and selected topics in state-of-the-art technologies.
Three lectures, one lab (three hours) every other week, one tutorial; second term
Prerequisite(s): Registration in Level III or above of any Engineering program and credit or registration in ENGPHYS 2A04, 2CD4, 2E04, and 2P04, and MATH 2Z03 and 2ZZ3

ENGPHYS 3NM4 - NUMERICAL METHODS FOR ENGINEERING

Applied numerical methods for engineering including solution of systems of algebraic equations; numerical integration and differentiation; finite difference and finite element methods; ODE solutions; Optimization; Partial differential equations; Monte Carlo simulation.
Three lectures, one lab (three hours); first term
Prerequisite(s): Registration in Level II or above of an Engineering program
Antirequisite(s): ENGPHYS 2CE4, CHEMENG 2E04, CIVENG 2E03, COMPENG 3SK3, MECHENG 3F04, COMPSCI 3X03, 4X03, MECHTRON 3X03, SFWRENG 4X03

ENGPHYS 3O04 - INTRODUCTION TO FLUID MECHANICS AND HEAT TRANSFER

Fluid properties and statics are introduced. Basic equations of continuity, energy and momentum for internal and external flows are discussed. Similitude, dimensional analysis, measuring devices, fluid machinery and hydraulic networks. Conduction and convection heat transfer.
Three lectures, one lab (three hours each) four times per term; one tutorial, second term
Prerequisite(s): MATH 2Z03 and credit or registration in MATH 2ZZ3
Antirequisite(s): CIVENG 2O04, MECHENG 3O04, CHEMENG 2O04

ENGPHYS 3PD4 - PHOTONIC DEVICES

This course covers the theory, design and operation of photonic devices such as waveguides, couplers, modulators, detectors and lasers, and their applications in integrated and fiber optical systems for communications, information processing and sensing.
Three lectures, one lab (three hours), second term
Prerequisite(s): One of ENGPHYS 3E03 or 3E04 or PHYSICS 3N03 or 3N04

Antirequisite(s): ENGPHYS 3PD3

ENGPHYS 3PN4 - SEMICONDUCTOR JUNCTION DEVICES

Electronic properties of semiconductors: non-equilibrium carrier conditions; steady state and non-steady state; p-n junctions; Schottky diodes; bipolar junction transistors. Detailed coverage of a range of diodes including photodiodes, solar cells, light emitting diodes, Zener diodes, and avalanche diodes.
Three lectures, one tutorial, one lab (three hours) every other week; second term
Prerequisite(s): Credit in at least one of the following: ELECENG 2EI4, ENGPHYS 3BA3, 3BA4, MATLS 2Q03 or Credit or Registration in at least one of the following: ENGPHYS 3SM3, PHYSICS 3K03
Antirequisite(s): MATLS 3Q03

ENGPHYS 3SM3 - STATISTICAL MECHANICS

An introduction to statistical distributions and their properties, and the statistical basis of thermodynamics at the microscopic level, with applications to problems originating in a modern laboratory or engineering environment.
Three lectures, one tutorial; second term
Prerequisite(s): Credit or registration in ENGPHYS 2NE3, 2QM3, and 3L04
Antirequisite(s): ENGPHYS 2H04, PHYSICS 2H04, PHYSICS 3K03

ENGPHYS 3SP3 - SPACE SYSTEMS ENGINEERING

- survey of topics required for the development of near-Earth missions, including orbital mechanics (with a relativity primer), propulsion and power systems, radio and optical communications, effects of radiation, and observational instrumentation.

Three lectures; first term
Prerequisite(s): Registration in Level III or above of an Engineering or Honours Physics program

ENGPHYS 3W03 - SIGNALS AND SYSTEMS FOR ENGINEERING

- systems approach to measurement in which synthesis of topics such as Fourier transforms, signal processing and enhancement, data reduction, modelling and simulation is undertaken.

Three lectures, one lab (two hours) every other week; first term
Prerequisite(s): Registration in Level III or above of any Engineering or Science program
Antirequisite(s): IBEHS 3A03, SFWRENG 3MX3, MECHTRON 3MX3, ELECENG 3TP3, ENGPHYS 3W04

ENGPHYS 4A06 A/B - ENGINEERING PHYSICS DESIGN AND SYNTHESIS PROJECT

Engineering design capstone project synthesizing undergraduate Engineering Physics knowledge to select a meaningful real-world problem, and engineer a solution by mathematically modelling the impact of design decisions and implementing them physically as part of an engineering team.
Two labs (three hours each), one capstone project; both terms
Prerequisite(s): Registration in the final level of the Engineering Physics, Engineering Physics and Management, or Engineering Physics and Society program and credit in ENGPHYS 3L04 and either 3BB3 or 3BB4
Cannot be taken concurrently with any co-op work term course.

ENGPHYS 4B03 - BIOSENSORS - FUNDAMENTALS AND APPLICATIONS

This course covers the underlying operating principles and defining metrics of biological sensors, and it will discuss the integration of these sensors into systems for diagnostics and health monitoring applications.
Three lectures; second term
Prerequisite(s): Registration in Level III or above in any Engineering program or registration in Level IV or above in the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program.

ENGPHYS 4D04 - NUCLEAR REACTOR PHYSICS

Introduction to nuclear fission and the physics of nuclear reactors; reactor statics for homogeneous reactors; reactor kinetics for simple time-dependent situations; effects of saturating fission products (Xe-135); reactivity coefficients. Students perform labs involving the McMaster Nuclear Reactor to gain an understanding of the nuclear physics processes underlying its operation and its applications.
Three lectures, one tutorial, one lab (three hours) four times per term; second term
Prerequisite(s): ENGPHYS 3D03 or 3D04
Antirequisite(s): ENGPHYS 4D03

ENGPHYS 4H04 A/B S - RESEARCH PROJECT IN ENGINEERING PHYSICS

- special program of studies to be arranged by mutual consent of a professor and the student, to carry out experiments and/or theoretical investigations. A written report and oral defence are required.

Two terms (either Fall/Winter or Spring/Summer)
Prerequisite(s): A GPA of at least 8. Registration in the final year of an Engineering Physics program (for Fall/Winter enrolment) or the second last year for Spring/Summer enrolment. Subject to Department approval, students are permitted to be supervised by faculty members in other Engineering departments. Subject to Department approval, students from other Departments are permitted to take this course if their supervisor is a faculty member of the Department of Engineering Physics.
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03
ENGPHYS 4H04 may be repeated to a total of eight units.

ENGPHYS 4I03 - INTRODUCTION TO BIOPHOTONICS

This course covers the basic principles of light interaction with biological systems and specific biomedical applications of photonics such as optical light microscopy, endoscopic imaging, spectroscopy in clinical diagnosis, flow cytometry, micro-optical sensors, etc.
Three lectures; second term
Prerequisite(s): Registration in Level III or above in the Faculties of Engineering, Science, or Health Sciences, or the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program
Cross-list(s): MEDPHYS 4I03

ENGPHYS 4MD3 - NANOSCALE SEMICONDUCTOR DEVICES

Nanoscale semiconductor materials and devices including quantum confinement, quantum dots, dipole radiation, quantum radiation physics, molecular and bulk excitons, advanced molecular electronics, tight-binding modelling, emerging nanoscale MOSFETs, 2-dimensional metal dichalcogenides and graphene.
Three lectures; second term
Prerequisite(s): Credit or registration in at least one of the following: ENGPHYS 3PN4, MATLS 3Q03

ENGPHYS 4NE3 - ADVANCED NUCLEAR ENGINEERING

Details of nuclear safety principles, such as defense in depth. Energy generation and conversion, heat transfer and transport in a nuclear reactor. Thermal margins and safety limits. Aging of reactor components. Safety concepts as they relate to reactor sub-systems: software, reactor physics, pressure boundaries, containment, shutdown systems, emergency core cooling, and beyond design basis protection systems.
Three lectures; second term
Prerequisite(s): ENGPHYS 3D03 or 3D04

ENGPHYS 4P03 - NUCLEAR POWER PLANT SYSTEMS AND OPERATION

Systems and overall unit operations relevant to nuclear power plants; includes all major reactor and process systems; self-study using interactive nuclear power plant.
Three lectures; first term
Prerequisite(s): Registration in Level IV or above of any Engineering program (familiarity with ENGPHYS 4D03/4D04 or other nuclear course desirable)

ENGPHYS 4PP3 - PLASMA PHYSICS APPLICATIONS

An introduction to plasma physics with emphasis on occurrence of plasmas in nature, and applications of plasmas in thermonuclear fusion and other engineering disciplines.
Three lectures; one-time demonstration lab (three hours); first term
Prerequisite(s): ENGPHYS 2A04, or PHYSICS 2B03 and 2BB3, or ELECENG 2FH4

ENGPHYS 4QC3 - INTRODUCTION TO QUANTUM COMPUTING

An introduction to quantum computing including qubits, entanglement, quantum key cryptography, teleportation, quantum circuits and algorithms, spin qubits.
Three lectures; first term
Prerequisite(s): ENGPHYS 2QM3 or PHYSICS 2C03

ENGPHYS 4QM3 - QUANTUM OPTICS AND METROLOGY

An introduction to quantum optics including single photon states, coherent states, standard quantum limit, Heisenberg limit, squeezed light, entanglement, and applications in metrology.
Three lectures; second term
Prerequisite(s): ENGPHYS 4QC3

ENGPHYS 4S04 - LASERS AND ELECTRO-OPTICS

Basic principles and applications of lasers, nonlinear optics (materials and devices), and optical modulation. Introduction to laser-based instrumentation and safety.
Three lectures, one tutorial, one lab (three hours) four times per term; second term
Prerequisite(s): One of ENGPHYS 3E03 or 3E04, PHYSICS 3N03 or 3N04, or ELECENG 3FK4 or 4EM4
Antirequisite(s): ENGPHYS 4S03

ENGPHYS 4X03 - INTRODUCTION TO PHOTOVOLTAICS

- review of photovoltaic devices including solar cell operation, characterization, manufacturing, economics and current and next generation technologies.

Three lectures; first term
Prerequisite(s): One of ENGPHYS 3BA3, 3BA4, or ELECENG 2EI5 or 2EI4, or permission of the instructor with MATLS 3Q03

ENGPHYS 4Z04 - SEMICONDUCTOR MANUFACTURING TECHNOLOGY

Detailed description of fabrication technologies used in the semiconductor industry; computer modelling of device fabrication process and device performance; device fabrication in a cleanroom environment.
Three lectures, one lab (three hours); first term
Prerequisite(s): One of ENGPHYS 3PN4, 3SM3, or MATLS 3Q03
Antirequisite(s): ENGPHYS 4Z03

Engineering Technology

Courses in Engineering Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca

ENGTECH 1AC3 - ANALYTICAL CHEMISTRY

Introduction to laboratory procedures used in chemical analysis for classical wet and instrumental methods; statistical data treatment, gravimetric analysis, volumetric analysis, pH measurements and optical methods.
Three lectures, one lab (three hours); second term
Prerequisite(s): ENGTECH 1CH3 and registration in the Automation Systems Engineering Technology Co-op program or the Biotechnology Co-op program

ENGTECH 1BI3 - BIOLOGY

This course provides basic introduction to the following topics: chemistry of life, cells, genetics, evolution and diversity and plant and animal form and function.
Two lectures, one lab (three hours every other week); second term
Prerequisite(s): Registration in the Biotechnology Co-op program

ENGTECH 1CH3 - CHEMISTRY

Basic chemical concepts, calculations and laboratory procedures. Chemical formulae and equations, chemical stoichiometry, nomenclature, acids and bases, gases, chemical equilibrium, thermochemistry and thermodynamics, redox reactions and electrochemistry.
Two lectures, two tutorials, one lab (three hours every other week); first term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 1CP3 - C++ PROGRAMMING

Programming concepts and introduction to C++ programming. C++ syntax, functions, decision-making, looping, pointers, and arrays, strings, data structures, and file operations.
Two lectures, one lab (two hours); first term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program
Antirequisite(s): ENGTECH 1PP3

ENGTECH 1EL3 - ELECTRICITY AND ELECTRONICS I

Introduction to electronic circuits; DC and AC sources, resistors, inductors, and capacitors; phasors and impedance; transient and steady-state analysis; network analysis; energy and power.

Two lectures, two tutorials, one lab (three hours); second term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 1ET0 - INTRODUCTION TO THE TECHNOLOGY CO-OP PROGRAM

Orientation to Technology Co-op programs and the workplace; self-assessment and goal setting; application procedures and materials; occupational health and safety.
Prerequisite(s): Registration in a Degree Completion Technology Co-op program

ENGTECH 1MC3 - MATHEMATICS I

Pre-calculus concepts: algebra, trigonometry, complex numbers, exponential and logarithmic functions, systems of equations, matrices, determinants and vectors. Limits, continuity, differential calculus, partial derivatives, applications, sequences and series.
Two lectures, two tutorials; first term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 1ME3 - STATICS AND MECHANICS OF MATERIALS

Statics and kinematics of particles and rigid bodies: force vectors; equilibrium; trusses, frames and machines; internal forces; centroids; friction; axial load, torsion, bending and shear; stress and strain. Newton's Second Law; moments of inertia; plane motion.
Four lectures; second term
Prerequisite(s): Registration in the Automotive and Vehicle Engineering Technology Co-op program

ENGTECH 1MT3 - MATHEMATICS II

Integral calculus involving all the techniques of integration, applications, improper integrals, multiple integrals and integral theorems, infinite sequences and series.
Two lectures, two tutorials; second term
Prerequisite(s): ENGTECH 1MC3 and registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 1PH3 - PHYSICS

Sound, light, kinematics, forces, work, energy, fluid and thermal physics.
Four lectures, one lab (two hours every other week); first term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 1PP3 - PYTHON PROGRAMMING

Programming concepts and introduction to Python programming. Python syntax, functions, decision-making, looping, operators, arrays and data structures.
Two lectures, one lab (two hours); first term
Prerequisite(s): Registration in the Biotechnology Co-op program
Antirequisite(s): ENGTECH 1CP3

ENGTECH 1PR3 - OBJECT-ORIENTED PROGRAMMING

Project-based course covering computer programming. Pointers, structured data, object-oriented concepts, inheritance, polymorphism, abstract class and overloading functions.
Two lectures, one lab (two hours); second term
Prerequisite(s): ENGTECH 1CP3 and registration in the Automation Systems Engineering Technology Co-op program or the Automotive and Vehicle Engineering Technology Co-op program

ENGTECH 2EE0 - FOUR MONTH CO-OP EXPERIENCE I

Minimum of 12 weeks of full-time employment in a professional environment.
Prerequisite(s): ENGINEER 1EE0 and registration in a Four-Year Technology Program and permission of the Engineering Co-op and Career Services Office
Cannot be taken concurrently with any program capstone course.

ENGTECH 2ES3 - ENGINEERING STATISTICS

An introductory statistics course covering the following topics with engineering applications: organization and description of data, probability and distributions, confidence intervals and hypothesis testing and bivariate data analysis using regression.
Two lectures, one tutorial; first term
Prerequisite(s): ENGTECH 1MT3; and registration in the Automotive and Vehicle Engineering Technology Co-op program
Antirequisite(s): ENGTECH 3ES3, 3ST3, SFWRTECH 3ST3

ENGTECH 2ET0 - FOUR MONTH CO-OP EXPERIENCE I

Minimum of 12 weeks of full-time employment in a professional environment.
Prerequisite(s): ENGTECH 1ET0, registration in a Degree Completion Technology Co-op program, and permission of the Engineering Co-op and Career Services Office.
Cannot be taken concurrently with any program capstone course.

ENGTECH 2MA3 - MATHEMATICS III

Techniques for solving first and second order ordinary differential equations with applications; initial value and boundary value problems, systems of differential equations, partial differential equations.
Two lectures, two tutorials; first term
Prerequisite(s): ENGTECH 1MT3; and registration in the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

ENGTECH 2MS3 - MODELLING AND NUMERICAL SOLUTIONS

Number systems and errors; solutions to nonlinear equations; interpolation by polynomials; matrices and systems of linear equations; numerical integration; spline functions, differential equations; engineering applications.
Two lectures, one tutorial; second term
Prerequisite(s): ENGTECH 1CP3, ENGTECH 1MT3; and registration in the Automotive and Vehicle Engineering Technology Co-op program
Antirequisite(s): CIVTECH 3MN3, ENGTECH 3MN3

ENGTECH 2MT3 - MATHEMATICS IV

Continuous time signals and systems; convolution; Laplace transform, Fourier series and transform; Discrete time signals and systems.
Two lectures, two tutorials; second term
Prerequisite(s): ENGTECH 2MA3; and registration in the Automation Systems Engineering Technology Co-op program or the Automotive and Vehicle

Engineering Technology Co-op program

ENGTECH 3DM3 - DISCRETE MATHEMATICS

Fundamental discrete mathematics concepts relevant to IT: sets, relations, functions, graphs, propositional logic. State machines. Input/output specifications. Invariants.
Three lectures; one term
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
This course is graded on a pass/fail basis.

ENGTECH 3EE0 - FOUR MONTH CO-OP EXPERIENCE II

Minimum of 12 weeks of full-time employment in a professional environment.
First term
Prerequisite(s): ENGTECH 2EE0; registration in a Four-Year Technology Program; and permission of the Engineering Co-op and Career Services Office
Cannot be taken concurrently with any program capstone course.

ENGTECH 3ES3 - ENGINEERING STATISTICS

An introductory statistics course covering the following topics with engineering applications: organization and description of data, probability and distributions, confidence intervals and hypothesis testing and bivariate data analysis using regression.
Two lectures, one tutorial; first term
Prerequisite(s): ENGTECH 1MT3; and registration in Level III of the Automation Systems Engineering Technology Co-op program or the Biotechnology Co-op program
Antirequisite(s): ENGTECH 2ES3, 3ST3, SFWRTECH 3ST3

ENGTECH 3ET0 - FOUR MONTH CO-OP EXPERIENCE II

Minimum of 12 weeks of full-time employment in a professional environment.
Prerequisite(s): ENGTECH 2ET0, registration in a Degree Completion Technology Co-op program, and permission of the Engineering Co-op and Career Services Office.
Cannot be taken concurrently with any program capstone course.

ENGTECH 3FE3 - FINITE ELEMENT ANALYSIS

Matrix techniques; eigenvalue problems: equations of elasticity: plane stress, plane strain, 3D problems; variational methods; element types, element stiffness, mass matrices and load vector; assemblage of elements, boundary conditions.
Three lectures; first term
Prerequisite(s): AUTOTECH 2AC3, AUTOTECH 2TS3, and registration in Level III of the Automotive and Vehicle Engineering Technology Co-op program
Antirequisite(s): ENGTECH 4FA3

ENGTECH 3MA3 - MATHEMATICS V

Ordinary and partial differential equations; Laplace transforms; Fourier series; vector calculus; integral theorems, with engineering applications.
Three lectures; one term
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): SFWRTECH 3MA3

ENGTECH 3ML3 - STRENGTH OF MATERIALS

Stresses under combined loads, generalized Hooke's Law; two and three dimensional stresses, stress transformation, principal stresses, Mohr's circle; deflections by integration; energy methods, Castagliano's theorem; columns; yield criteria.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3, 3SD3, and registration in the Civil Engineering Infrastructure Technology Co-op program or the Manufacturing Engineering Technology Co-op program

ENGTECH 3MN3 - MODELLING AND NUMERICAL SOLUTIONS

Number systems and errors; solutions to nonlinear equations; interpolation by polynomials; matrices and systems of linear equations; differentiation and integration; differential equations; applications to mechanical systems.
Two lectures, one tutorial; first term
Prerequisite(s): ENGTECH 1CP3, ENGTECH 2MA3; and registration in Level IV or above of the Automation Systems Engineering Technology Co-op program
Antirequisite(s): CIVTECH 3MN3, ENGTECH 2MS3

ENGTECH 3SD3 - STATICS AND DYNAMICS

Two and three dimensional force vectors, equilibrium of a particle; moments and couples; equilibrium rigid bodies; centroids, second moment of area, moment of inertia; truss, and static analysis. Planar kinematics and planar kinetics of particles and rigid bones; work and energy, impulse, and momentum.
Two lectures, one lab; one term
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program or the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 3MD3

ENGTECH 3SP3 - STRUCTURE AND PROPERTIES OF MATERIALS

Structure of crystalline solids; imperfections in solids; mechanical properties of metals, dislocations and strengthening mechanisms, failure, phase diagrams, phase transformation in metals, processing of metal alloys, composites, structures and properties of ceramics, processing of ceramics.
Three lectures; one term
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program or the Manufacturing Engineering Technology Co-op program
Antirequisite(s): ENGTECH 3MN3

ENGTECH 3ST3 - PROBABILITY AND STATISTICS

Probability and statistics for engineering and technology. Descriptive statistics, discrete and continuous random variables and probability distributions, confidence intervals, hypothesis testing, analysis of variance, correlation and regression.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Civil Engineering Infrastructure Technology Co-op program
Antirequisite(s): ENGTECH 3ES3, 2ES3, SFWRTECH 3ST3

ENGTECH 3TD3 - THERMODYNAMICS

Introduction to thermodynamics, properties of pure substances, first and second laws of thermodynamics, entropy, vapor power cycles, refrigeration cycles, and combined power cycles.
Three lectures; one term
Prerequisite(s): Registration in the Manufacturing Engineering Technology

Co-op program or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 3TD3, MANTECH 3TF3

ENGTECH 4AI3 - ARTIFICIAL INTELLIGENCE

Theories and practice of machine intelligence with focus on statistical learning methods, artificial neural networks, naturally inspired algorithms, deep learning, big data management, and pattern recognition.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in level IV of the Biotechnology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, OR Registration in the Manufacturing Engineering Technology Co-op program or the Power and Energy Engineering Technology Co-op program OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program
Antirequisite(s): SMRTTECH 4AI3, MANTECH 4AI3, SFWRTECH 4AI3

ENGTECH 4CT3 - SYSTEMS AND CONTROL

Mathematical models of physical systems; differential equations, Laplace transforms; block diagrams, transfer functions; system transient response; stability analysis in s-, frequency-, and time-domain; Routh-Hurwitz criteria, root-locus analysis, Bode plots, Nyquist criterion, state-space representation; simple PID control systems; lead-lag compensation; digital simulations of control systems.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Power and Energy Engineering Technology Co-op program or the Manufacturing Engineering Technology Co-op program
Antirequisite(s): ENGTECH 3CT3, ENRTECH 3CT3, 4CT3

ENGTECH 4DT3 - ENGINEERING DESIGN & TECHNOLOGY

This course provides students with formal recognition of engineering design and technology skills acquired through experiential learning in technically oriented McMaster Engineering Teams. Permission of course instructor is required prior to enrolment.
One lecture (3 hours), fall term
Prerequisite(s): Registration in Level 3 or above in the Automation Systems Engineering Technology Co-op program or the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisites(s): ENGINEER 4EX3 A/B

ENGTECH 4ED3 - SENIOR ENGINEERING DESIGN PROJECT

- project involving design and synthesis that reinforces concepts gained from previous semesters. Such a project involves research, design, and assessment.

Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, CIVTECH 4SD3 or 4RC3; and registration in Level IV of the Civil Engineering Infrastructure Technology Co-op program
CIVTECH 4SD3 or 4RC3 may be taken concurrently with this course.

ENGTECH 4EE0 - FOUR MONTH CO-OP EXPERIENCE III

Minimum of 12 weeks of full-time employment in a professional environment.
Prerequisite(s): ENGTECH 3EE0; registration in a Four-Year Technology Program; and permission of the Engineering Co-op and Career Services Office
Cannot be taken concurrently with any program capstone course.

ENGTECH 4EP3 - SENIOR ENGINEERING PROJECT

- project that is based on the knowledge gained from previous semesters. Such a project involves research, design, development and implementation of a process.

Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, 4CT3, 4PD3, 4PM3, and registration in the Power and Energy Engineering Technology Co-op program
Antirequisite(s): ENRTECH 4EP3

ENGTECH 4FA3 - FINITE ELEMENT ANALYSIS

Formerly ENGTECH 3FA3. Matrix techniques, eigenvalue problems, equation of elasticity, 3D problems, variational methods, element types, element stiffness, mass matrix and load vector, assemblage of elements, boundary conditions.
Two lectures, one lab; one term
Prerequisite(s): ENGTECH 3ML3 and ENGTECH 4MA3 or CIVTECH 3MN3, and registration in the Civil Engineering Infrastructure Technology Co-op program or the Manufacturing Engineering Technology Co-op program
Antirequisite(s): ENGTECH 3FE3

ENGTECH 4FD3 - SENIOR ENGINEERING PROJECT

Project-based course using the agglomeration of previously acquired knowledge. Research, design, implement and document a software solution to a problem in a real-world application domain.
Three lectures, one term
Prerequisite(s): ENGTECH 3ET0; and, 21 units of ENGTECH and SFWRTECH at level 3; and, 18 units of SFWRTECH from level 4; and, registration in Level IV Software Engineering Technology Co-op program
Antirequisite(s): SFWRTECH 4FD3
This course is graded on a pass/fail basis.

ENGTECH 4MA3 - ADVANCED MATHEMATICS

Sequence and series, Fourier series, Matrix algebra, Formulating engineering process models, Numerical solutions techniques, Root findings, Curve fittings, Numerical integration, Numerical differentiation, Ordinary differential equations.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): CIVTECH 3MN3

ENGTECH 4TF3 - MECHANICS OF FLUIDS

Fluid statics, flow in closed conduits, dimensional analysis and similarity, energy and Bernoulli's equation, flow kinematics, hydraulic cross-sections, energy loss in piping system, fluid Machinery.
Three lectures, one lab; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): AUTOTECH 3TS3

English

Courses in English are administered by the Department of English and Cultural Studies.
Chester New Hall, Room 321, ext 24491
http://english.humanities.mcmaster.ca/

Department Notes

1. All Level II and III ENGLISH courses are open as electives to students registered in Level II or above of any undergraduate program with the exception of the following:

- ENGLISH 2TP3 - Literary and Cultural Studies: Theory and Practice
- ENGLISH 3A03 - Critical Race Studies
- ENGLISH 3AA3 - Theories of Gender and Sexuality
- ENGLISH 3CR3 - Writing Out
- ENGLISH 3RW3 - Reading and Writing in the Field: Experiential Learning in Theory and Practice

2. Courses restricted to students registered in programs in English and Cultural Studies may be available to qualified students in other programs if space permits. Students interested in such courses should request permission from the department.
3. Level IV seminars are open only to Honours students registered in Level IV of an English and Cultural Studies program. Enrolment will be limited to 20 students per seminar when possible. A list of seminars to be offered will be available prior to registration and balloting for seminars for the next academic year will take place in March.

Courses

If no prerequisite is listed, the course is open.

ENGLISH 1CS3 - STUDYING CULTURE: A CRITICAL INTRODUCTION

The course will introduce fundamental concepts and questions in the field of cultural studies, and will prepare students to use those tools in analyzing culture as a site of meaning, identities, power, and pleasure. The course aims to develop your ability to think critically about your own engagements with a broad range of manifestations of culture (e.g. popular culture, social institutions, everyday practices, digital culture, consumer culture). Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term
Antirequisite(s): CSCT 1CS3

ENGLISH 1F03 - THE WRITTEN WORLD

What does the world look like when it takes a literary form? We will read and write about one or more literary genres or forms from various times and places, and reflect on the shape of literature, its place in the world, and the place of the world in it. The course functions as an introduction to the study of literature, equipping students with conceptual, analytical and writing tools that will help them become informed readers of the many modes and manners of imaginative expression. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

ENGLISH 1G03 - MAKING AND UNMAKING LITERARY TRADITIONS

This introductory course explores literatures written in English from the perspective of literary historical periods, genres, and critical approaches. We will trace how particular literary traditions emerge in relation to developments in the cultural narratives of, for example, gender and sexuality, selfhood, nation and empire, capitalism, and the environment. We will consider how a literary text is an expression of a particular cultural moment, with all its social and material preoccupations, and yet makes meaning through a complex dialogue with past traditions. The course functions as an introduction to the study of literature, equipping students with conceptual, analytical, and writing tools that will help them become an informed reader of the many modes and manners of imaginative expression. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term
Antirequisite(s): ENGLISH 1C06 A/B

ENGLISH 1H03 - WORDS IN PLACE

Many public ceremonies in Canada now include acknowledgements of whose land we are meeting on. What does it mean to acknowledge the people and the place where we live and work? How do places come into focus when we write and speak about them? This introductory course examines oral narratives, art, poetry, film, documentary, fiction, and/or literary non-fiction that emphasize the dynamics of particular places in relation to Indigenous and colonial histories; diasporic histories of movement, displacement, emigration and immigration; natural, economic, and political geographies; as well as the particular languages -- i.e. different Englishes, Indigenous languages -- that places give rise to. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

ENGLISH 2AA3 - LITERATURE AND CULTURE IN THE UNITED STATES BEFORE 1900

This course surveys literary and cultural production in the United States up to 1900. Issues may include: settler and colonial culture, the foundations of African-American literature, Indigenous literatures, ante- and post-bellum literatures, dark romanticism, American Renaissance, spiritual narrative.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2H06 A/B

ENGLISH 2BB3 - LITERATURE AND CULTURE IN THE UNITED STATES AFTER 1900

- study of 20th and 21st-century literary and cultural production in the United States, focusing on selected movements, issues, genres or traditions. Eg. Native American Renaissance, Asian-American literature and cinema, the Beat Generation, the Harlem Renaissance, American underground commix.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2H06 A/B

ENGLISH 2BL3 - TWENTIETH- AND TWENTY-FIRST CENTURY BRITISH LITERATURE AND FILM

An introduction to the twentieth- and twenty-first-century literary texts and films from the British Isles, with attention to their historical, cultural, and socio-political contexts.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2I06 A/B

ENGLISH 2C03 - CONTEMPORARY CANADIAN FICTION

- study of the themes and structure of the contemporary Canadian novel, usually with emphasis on the relationship between Canada's cultural patterns and its literature.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Not open to students with credit or registration in ENGLISH 2G06 A/B.

ENGLISH 2CC3 - SETTLER COLONIALISM AND WRITING IN CANADA

This course looks at ways literary writing has contributed to and contested the formation of Canada as a settler colony. Examining a selection of literary works from the stories of European explorers to the present, this course traces how many works have provided the rationale for colonial domination of land

and people in Canada, while many others have voiced resistance and imagined alternatives.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2G06 A/B

ENGLISH 2CL3 - CANADIAN LITERATURE OF DISSENT AND SOCIAL JUSTICE

This course critically examines the way social justice concerns in Canadian literature, film, and music have grown out of and critiqued dominant narratives about Canadas culture, makeup, and purpose.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2G06 A/B

ENGLISH 2CR3 - SHAKESPEARE: COMEDIES, PROBLEM PLAYS, AND ROMANCES

- close study of selected plays in these genres, together with relevant literary, cultural, theatrical, and historical contexts. May include plays by other dramatists.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2L03, 3K06 A/B, THTRFLM 2CR3, 3KL6 A/B

ENGLISH 2CW3 - GENRE IN CREATIVE WRITING

This course combines features of a creative writing workshop with the challenges of working in literary genre. Lectures will introduce the genres available to writers, concentrating on verse forms and short narrative. Students will present installments of their own work in workshops.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 2HT3 - SHAKESPEARE: HISTORIES AND TRAGEDIES

- close study of selected plays in these genres, together with relevant literary, cultural, theatrical, and historical contexts. May include plays by other dramatists.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2L03, 3K06 A/B, THTRFLM 2HT3, 3KL6 A/B

ENGLISH 2KA3 - INDIGENOUS FUTURISMS AND WONDERWORKS

Through a focus on Indigenous articulated realities and futures, this course refuses colonial narratives of the 'disappearing Indian' and insists upon Indigenous presence in past, present, and future as essential for envisioning a human future. Genres of study will include fiction, graphic novels, film, non-fiction, performance, and wonderworks.
Prerequisite(s): One of INDIGST 1A03, 1AA3, 1B03, RECONCIL 1A03; or three units of Level I English; or permission of the Instructor
Cross-list(s): INDIGST 2K03
This course is administered by the Indigenous Studies program.

ENGLISH 2KK3 - STUDIES IN WOMEN WRITERS

- closely focused course on women's writing in English. The topic for the course varies, sometimes concentrating on specific issues, sometimes on an historical period or national literature. Relevant feminist theory will be a component of the course.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 2K06 A/B, CSCT 2KK3, ENGLISH 2K06 A/B, WOMENST 2K06 A/B, 2KK3

ENGLISH 2M03 - CONCEPTS OF CULTURE

An analysis of the concept of culture from the Enlightenment to the present. Theoretical readings combined with the analysis of specific cultural texts, objects, forms, and practices will allow students to trace historical and contemporary debates concerning culture.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2M03, CMST 2M03, CSCT 2M03, CSCT 2M06 A/B, ENGLISH 2M06 A/B

ENGLISH 2PC3 - POPULAR CULTURE

This course examines the study of everyday culture, its underlying assumptions, its locations, and the capacity of audiences to engage actively and critically with it. Possible areas of study may include: advertising, fandom, film, TV, social media, youth culture, celebrity, memes, comics, online apps, popular music, video.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 2QA3 - QUEER WRITING, ART, AND ACTIVISM: REIMAGINING THE WORLD

This course examines queer writing, art, and activism of the late 20th and early 21st century, with an emphasis on creative works by Black and Indigenous queer writers, artists and activists who address decolonization, abolition, and resistance.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 2SL3 - SOCIAL JUSTICE, LITERATURE AND THE RHETORIC OF SCIENCE AND TECHNOLOGY

This course approaches science and technology through the lens of literary and cultural studies by analyzing the production, communication, and representation of scientific and technological knowledge through a range of written and visual texts. Critical frameworks can include science and technology studies, medical humanities, environmental humanities, cultural studies, critical disability studies, Indigenous studies, alongside feminist, queer, and critical race theories.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 2TP3 - LITERARY AND CULTURAL STUDIES: THEORY AND PRACTICE

This course will offer a grounding in reading literary texts and culture from a range of contemporary critical approaches.
Three hours; one term
Prerequisite(s): Registration in a program in English and Cultural Studies
Antirequisite(s): ENGLISH 2A03, ENGLISH 2RW6 A/B

ENGLISH 2VC3 - TOPICS IN VISUAL CULTURE

This course examines visual texts in a select media and genres through an exploration of a variety of theoretical discourses and representational practices. Approaches can include cultural studies, film theories, and gender, queer, and critical race theories.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program. Not open to students with credit or registration in ENGLISH 2P03 or CSCT 2P03, if the topic is Modernity, Postmodernity, Visuality; with credit or registration in ENGLISH 2S03 or CSCT 2S03, if the topic is Spectacular Bodies; or with credit or registration in ENGLISH 3CC3, CSCT 3CC3, CMST 3CC3, THTRFLM 3R03, if the topic is Reading Film.
ENGLISH 2VC3 may be repeated, if on a different topic, to a total of six units.

ENGLISH 2Z03 - READING ENVIRONMENTAL HUMANITIES

- study of representations of nature in a variety of written and visual texts. Topics may include food, environmental crisis, development, humans and other animals.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 2Z03

ENGLISH 3A03 - CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts.
Three hours; one term
Prerequisite(s): Registration in Level III or above in a program in English and Cultural Studies, Global Peace and Social Justice, Justice, Political Philosophy and Law, Peace Studies, or Indigenous Studies.
Antirequisite(s): CSCT 3A03, PEACEST 3A03, WOMENST 3H03

ENGLISH 3AA3 - THEORIES OF GENDER AND SEXUALITY

This course explores a range of theories of gender and sexuality by working through readings from the intersecting fields of feminist, queer and masculinity studies.
Three hours; one term
Prerequisite(s): Registration in Level III or above in a program in English and Cultural Studies, or Justice, Political Philosophy and Law.
Antirequisite(s): CSCT 3AA3, WOMENST 3HH3

ENGLISH 3BA3 - CARIBBEAN LITERATURE

In this course we will study works by writers from the Caribbean region and its diasporas, many of which are housed in McMaster's archives. This course introduces students to some of the Caribbean region's best-known writers and explores their creative work and worlds. We will explore questions of race, gender, power, colonialism, decolonization and transnationalism, and the politics of writing place as well as the politics of representation and of memory.
Three hours; one term
Prerequisite(s): Three units of ENGLISH and registration in Level II or above of any program

ENGLISH 3CP3 - WRITING PRACTICES

This course focuses on creative writing as a practice rather than a process towards material products, exploring the relationship between habitual writing exercises and an understanding of how writing--as activity, discourse, archive--helps shape the world as we experience it.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 3CR3 - WRITING OUT

Through a series of modules on the transition from the private world of composition to the increasingly public phases of submitting ones work for publication to the processes of editing, reviewing, copy-editing, and publication, this course walks students through the steps towards getting their work into the public realm.
Three hours; one term
Prerequisite(s): Registration in the Concurrent Certificate in Creative Writing and Narrative Arts (CWNA) or permission of the Department.

ENGLISH 3CW3 - CREATING WRITING IN/FOR/WITH COMMUNITIES

This creative writing inquiry class engages students in the staged development of a creative writing project in consultation with and on behalf of a community of their choice.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

ENGLISH 3EC3 - ENLIGHTENMENT AND ITS SHADOWS

- study of British Literature and Culture of the long eighteenth-century (1660-1800), including plays, poetry, fiction, and essays. Themes include sexual politics, consumerism, globalization, the public sphere, and subjectivity.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 3G06 A/B

ENGLISH 3GF3 - TOPICS IN POPULAR GENRES

This course will provide an in-depth exploration of the conventions and consumption of one or more popular genres, such as graphic narrative, science fiction, romance, horror, crime writing, fantasy, chicklit or memoir.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3GF3
ENGLISH 3GF3 may be repeated, if on a different topic, to a total of six units.

ENGLISH 3GG3 - THEORIES OF DECOLONIZATION AND RESISTANCE

- study of theoretical and cultural works that examine the effects of empire and chart projects for decolonization. Introduces debates in Indigenous and postcolonial studies, including as they engage with theories of racial capitalism, gender and sexuality, globalization, war, environmental change.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3R06 A/B, ENGLISH 3R06 A/B, PEACEST 3E06 A/B, PEACEST 3GG3
Cross-list(s): PEACJUST 3GG3

ENGLISH 3GS3 - READING THE EMBODIED PAST: GENDER AND SEXUALITY

- study of representations of gender, sexuality, and/or their institutions and intimacies in pre-20th century literature and culture, with attention to their material, cultural, and socio-political contexts. Students will examine social issues through the study of early fiction, non-fiction, drama, and poetry.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 3NN3

ENGLISH 3NH3 - NARRATIVES OF HEALTH

This course inquires into representations of health with reference to a range of media. Critical frameworks may include critical disability studies, environmental humanities, feminist research, critical race studies, science and technology studies, narrative medicine, and Indigenous studies.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 2NH3

ENGLISH 3QQ3 - CONTEMPORARY CRITICAL THEORY

This course examines selected issues in contemporary critical theory. Areas of investigation may include: representation, power/knowledge, discourse, subjectivity and the body.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3QQ3

ENGLISH 3RW3 - READING AND WRITING IN THE FIELD: EXPERIENTIAL LEARNING IN THEORY AND PRACTICE

This course studies the theory and practice of community engagement in connection with literary and cultural studies. Students will integrate an experiential learning opportunity (normally requiring a four-hour a week volunteer placement with a departmental community partner) with academic research, discussion, and writing on relevant topics.
Seminar (two hours), and placement hours; one term
Prerequisite(s): Registration in Level III or IV of a program in English and Cultural Studies
Departmental permission required.

ENGLISH 3V03 - GLOBAL ANGLOPHONE LITERATURE AND FILM

- study of literature, film and other forms of popular culture by artists from South Asia, Africa, and the Caribbean, and their overseas diasporas. Introduces students to theories of race, gender, sexuality, indigeneity, citizenship, and the nation as these take up histories of colonialism, imperialism, and globalization.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3R06 A/B, ENGLISH 3R06 A/B, PEACEST 3E06 A/B
Cross-list(s): PEACJUST 3V03

ENGLISH 3VC3 - 'WE OTHER VICTORIANS': VICTORIAN LITERATURE AND CULTURE AND ITS AFTERLIVES

Drawing on a broad range of literary and cultural texts, this course explores the continuing legacy of Victorian Britain (1832-1901) in setting the agendas for Western modernity. Topics include the contested discourses on sexuality, poverty, evolution, technology, and imperialism.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 3M06 A/B

ENGLISH 3W03 - CONTEMPORARY NATIVE LITERATURE IN CANADA

- study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies and stereotyping.

Three hours (lectures and seminars); one term
Prerequisite(s): Six units of Level II Indigenous Studies or six units of Level II English and Cultural Studies or permission of the instructor
Antirequisite(s): CSCT 3W03, PEACEST 3W03
Cross-list(s): INDIGST 3D03, PEACJUST 3W03
This course is administered by Indigenous Studies.

ENGLISH 3WE3 - BRITISH ROMANTIC LITERATURE AND CULTURE: REVOLUTION, WAR, EMPIRE

The course explores British Literature and culture between the advent of the French Revolution (1789) and the turbulent decade following the world-shaking violence of the Revolutionary and Napoleonic Wars (1792-1815).
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 3M06 A/B

ENGLISH 4AN3 - NINETEENTH-CENTURY ADAPTATIONS

This course inquires into the ideological, political, and aesthetic motivations that inform recent adaptations in fiction and film of the British nineteenth century.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): CSCT 4AN3
Departmental permission required.

ENGLISH 4BN3 - WRITING BRITAIN NOW: CRITIQUE AND CREATIVITY AFTER BREXIT

This seminar considers contemporary writing in Britain and Northern Ireland in the wake of Brexit. How have writers, especially those from historically marginalized groups, confronted a time of deepening social division, hate, injustice, and hopelessness? Students will develop a critical understanding of the early 21st century conjuncture in the British Isles and practice carefully situating and analyzing literary and cultural works that experiment with aspects of genre, form, and/or media, as writers try to envision more just futures.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required
First offered 2025/26.

ENGLISH 4CA3 - UNDER THE GAZE OF THE NONHUMAN: CRITICAL ANIMAL STUDIES

This seminar introduces students to a range of contemporary debates about nonhuman animals, and in particular investigates our ethical and political responsibilities towards them.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies.
Departmental permission required.

ENGLISH 4CC3 - CREATIVE WRITING CAPSTONE

In this course students will design and execute a creative-writing project of approximately 20 to 25 pages. Installments will be shared with the class on a weekly basis under the supervision of mentors.
Project (two hours); one term
Prerequisite(s): ENGLISH 2CW3; 3 units of ENGLISH 3CP3, 3CR3, 3CW3, 4FW3, or 4SD3; credit or registration in an additional 3 units of ENGLISH 3CP3, 3CR3, 3CW3, 4FW3, or 4SD3; registration in the Concurrent Certificate in

Creative Writing and Narrative Arts (CWNA).

ENGLISH 4CF3 - CONTEMPORARY FICTION

- study of recent English and American fiction, with emphasis on metafiction as well as the relationship between contemporary literary theory and fiction.

Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): CSCT 4CF3
Departmental permission required.

ENGLISH 4DL3 - DIGITAL LIVES

- critical investigation of the burgeoning domain of online life writing, concentrating on 2-4 selected "automedia" modes, such as digital photography, iphoneographies, public social media accounts, online diaries, vlogs, blogs, podcasts, multi-platform projects, and/or hashtag campaigns. A main concern will be the possibilities and the limitations of online life writing modalities for "self-authoring" and social justice activism.

Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4E03 - LITERATURE, CULTURE AND CLIMATE CATASTROPHE

Drawing on environmental humanities, Anthropocene studies, anti-colonial, feminist, and critical race theories, this seminar considers how different creative genres (eg. fiction, poetry, film) imagine forms of belonging amid the dislocations of the climate catastrophe.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4ED3 - WINDRUSH WRITING/WRITING WINDRUSH: EMPIRE, RACE AND DECOLONIZATION

This course will examine work by writers of the Windrush generation (1950s and 1960s) and the stories told about Windrush migration. Topics include Empire, decolonization, British multiculturalism, commemorations and the Windrush scandal.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4FW3 - FORMS OF CREATIVE WRITING

This seminar will combine a hands-on study of form with an opportunity for students to exercise and focus their own creative energies. In any given year, the course will concentrate on either verse or fictional form.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4GN3 - GRAPHIC NARRATIVE IN CANADA

This seminar examines graphic narrative in Canada, focusing on: its divergent engagements with national narratives; Indigenous storytelling; national regimes of belonging/dispossession; and transnational relations.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): CSCT 4GN3
Departmental permission required.

ENGLISH 4IW3 - TWENTY-FIRST CENTURY INDIGENOUS WRITING AND FILM

- critical examination of recent works by Indigenous authors and filmmakers that give voice to contemporary social, cultural, and political realities in Canada.

Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Cross-list(s): INDIGST 4IW3
Departmental permission required.
This course is administered by the Department of English and Cultural Studies.

ENGLISH 4LF3 - DINÉ AND DENE LITERATURE AND FILM

This course will analyze the ways Diné (Navajo) and Dene literature and film challenge and reframe self (subjectivity) and place (dislocated, relocated, diasporic, and decolonized). Texts may include film, fiction, poetry, orality, autobiography, literary criticism, and scholarly prose.
Seminar (two hours); one term
Prerequisite(s): Six units of Level III Indigenous Studies and enrolled in Honours Indigenous Studies or registration in Level IV of an Honours program in English and Cultural Studies
Cross-list(s): INDIGST 4LF3
Departmental permission required.
This course is administered by the Department of Indigenous Studies.

ENGLISH 4ML3 - WHAT IS MILLENNIAL LITERATURE?

What gathers under the sign of "millennial"? Do millennial writers cohere into a unique generational voice? How have they redefined artistic genres like the novel? Topics may include polyvocality, neoliberalism, surveillance, pandemic, inequality, and climate change.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4QA3 - QUEERNESS IN THE ARCHIVES: LESBIAN AND GAY WRITING, ART AND ACTIVISM IN CANADA, 1969-1989

This course examines lesbian and gay writing, art and activism in Canada during the period of 1969 to 1989. The course will include a trip to the Canadian Lesbian and Gay Archives in Toronto, and students will be trained in archival research methods.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4RD3 - RENAISSANCE DRAMA, EXCLUDING SHAKESPEARE

An intensive study of transgression (economic, erotic, social and literary) in popular and elite drama by Shakespeare's contemporaries, including women writers.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4RI3 - COLONIALISM AND RESISTANCE IN REPRESENTATIONS OF INDIGENOUS WOMANHOOD

This course looks to representations of Indigenous womanhood in a range of contemporary and historical cultural productions for insights into how colonialism shapes all of our lives, in radically different ways.
Seminar (two hours); one term
Prerequisite(s): Six units of Level III Indigenous Studies and enrolled in Honours Indigenous Studies or registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): CSCT 4RI3
Cross-list(s): INDIGST 4RI3
Departmental permission required.
This course is administered by the Department of Indigenous Studies.

ENGLISH 4SD3 - SENTENCED TO DEATH

This is a course about the grammar, syntax, rhetoric, and expressive potential of language's most familiar unit of meaning; the sentence. Students' weekly creative writing exercises will provide the materials for our exploration.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4ST3 - EVEN STRANGER THINGS: THE EARLY GOTHIC

One of the more paradoxical legacies of the British Enlightenment is the Gothic, with its attraction to the ghastly
and the supernatural. This seminar will chart the emergence of Gothic writing in the eighteenth century, with
particular attention to how this literature responds to the social ills and anxieties that attend the emergence of
modern life.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4X03 - HONOURS ESSAY

Under the supervision of a member of the Department of English and Cultural Studies, students will write an essay in second term of Level IV. Interested students should contact the faculty member chairing the ENGLISH 4X03 committee early in the first term.
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Departmental permission required.

ENGLISH 4Y03 - EXPERIENTIAL PRACTICUM I

This practicum provides students with experience in experiential education under the mentorship of a faculty
member. Faculty members will advertise their available projects in the spring, or students may develop a proposal in consultation with a member of the department. Final proposals are due to the Department in May of the previous academic year.
Prerequisite(s): Registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): ENGLISH 4Y06 A/B S
Departmental permission required.

ENGLISH 4Y06 A/B S - RESEARCH PRACTICUM

This course provides students with direct experience of advanced research under the mentorship of a faculty member. Project descriptions will be posted and widely advertised in March of the previous academic year, and all level 3 Honours English and Cultural Studies students are encouraged to apply to the Department.
Prerequisite(s): Registration in Level IV of a program in English and Cultural Studies
Antirequisite(s): CSCT 4Y06 A/B, ENGLISH 4Y03, 4YY3
Departmental permission required.

ENGLISH 4YY3 - EXPERIENTIAL PRACTICUM II

This practicum provides students with additional experience in experiential education under the mentorship of a faculty member. Faculty members will advertise their available projects in the spring, or students may develop a proposal in consultation with a member of the department. Final proposals are due to the Department in May of the previous academic year.
Prerequisite(s): ENGLISH 4Y03 and registration in Level IV of an Honours program in English and Cultural Studies
Antirequisite(s): ENGLISH 4Y06 A/B S
Departmental permission required.

Environmental Science

Courses in Environmental Science are administered by the School of Earth, Environment & Society.
General Science Building, Room 206, ext. 24535
https://sees.mcmaster.ca/

School Notes

1. Students aiming to fulfill the academic requirements for professional registration of Geoscientists in Ontario should seek academic advice from the School of Earth, Environment & Society during March counselling in Level II to ensure that their program and course choices are appropriate.
2. Students are advised that not all courses will be offered in every year.
3. Some courses are offered in a hybrid or online delivery format. Students are advised to check course outlines and Mosaic for specific scheduling details.

Courses

If no prerequisite is listed, the course is open.
See also courses in *Earth Sciences* and *Environment & Society.*

ENVIRSC 1C03 - CLIMATE, WATER AND ENVIRONMENT

An introduction to the science of environmental issues and sustainability through the study of the soil, climate and water processes.
Lectures, web modules (three hours), one lab (two hours); one term
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

ENVIRSC 2B03 - SOILS AND THE ENVIRONMENT

An introduction to the physical, chemical and biological properties of soil. Application to environmental and land-use impacts.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of EARTHSC 1G03, ENVIRSC 1C03, ISCI 1A24 A/B

ENVIRSC 2C03 - SURFACE CLIMATE PROCESSES AND ENVIRONMENTAL INTERACTIONS

The surface heat and water balance of natural and human-modified landscapes. Emphasis on interactions of people and the biosphere with climate.
Two lectures, one lab (two hours); one term
Prerequisite(s): One of EARTHSC 1G03, ENVIRSC 1C03, ISCI 1A24 A/B

ENVIRSC 2Q03 - INTRODUCTION TO ENVIRONMENTAL GEOCHEMISTRY

Introductory study of the interactions of geochemistry (water-rock interaction) and biology in determining pH, oxygen status and ionic strength in water, and their implications will be explored through lecture and laboratory work.
Two lectures, one lab (three hours); one term
Prerequisite(s): ISCI 1A24; or CHEM 1A03 and one of EARTHSC 1G03, ENVIRSC 1C03; or registration in Level II or above of a program in the Faculty of Engineering.
ENVIRSC 1C03 is recommended.

ENVIRSC 2W03 - PHYSICAL HYDROLOGY

Hydrological processes including precipitation, snowmelt, hillslope runoff, streamflow and hydrological data analysis.
Two lectures, one lab (two hours); one term
Prerequisite(s): One of EARTHSC 1G03, ENVIRSC 1C03, or ISCI 1A24 A/B. ENVIRSC 1C03 or ISCI 1A24 A/B is strongly recommended.

ENVIRSC 2WW3 - WATER AND THE ENVIRONMENT

An introduction to environmental issues related to water, including the impacts of climate change, effects of water management projects, pollution, the societal dimensions of these problems, and paths to sustainability.
Three hours; one term
Prerequisite(s): Registration in Level II or above
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

ENVIRSC 3B03 - ECOSYSTEMS AND GLOBAL CHANGE

An examination of both the impacts of global change on ecosystem form and function and the restoration of ecosystems as nature-based solutions to address global change. A strong emphasis is placed on understanding how soil, water, vegetation, ecosystems and climate processes occur and interact at landscape, regional and global scales.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): One of ENVIRSC 2B03, 2C03

ENVIRSC 3IN3 - INTERNSHIP IN EARTH AND ENVIRONMENTAL SCIENCES

The integration of academic learning with an employment or a volunteer experience, providing students the opportunity to explore careers and develop linkages between classroom knowledge and professional practice. Students are responsible to arrange a suitable internship and agreement of the supervisor.
This course is evaluated on a Pass/Fail basis.
Normally, students complete 130 hours of academic work through the duration of the employment or volunteer experience.
One meeting (one hour); one term
Prerequisite(s): SCIENCE 2C00; and registration in Level III or above of an Honours B.Sc. program in the School of Earth, Environment & Society (Faculty of Science); and permission of the internship coordinator
Antirequisite(s): EARTHSC 3IN3
Note: Students participating in this course must be authorized to work in Canada (International students must provide proof of work authorization permit). Students intending to enrol in this course should submit an application to the internship coordinator two months prior to registration. Application forms are available on the School of Earth, Environment & Society (Faculty of Science) website.
ENVIRSC 3IN3 may be repeated with permission of the School of Earth, Environment & Society (Faculty of Science) if based on a different employment or volunteer experience.
Not open to students in Honours Earth & Environmental Sciences Co-op or Honours Environmental Sciences Co-op.

ENVIRSC 3ME3 - ENVIRONMENTAL FIELD CAMP

Within the context of a field project, this course introduces students to field techniques in environmental science and to the potential effects of environmental issues on human health and well-being. The field camp component occurs outside of the regular academic term, usually two weeks preceding the start of term in September. Details and applications are available in March through the School of Earth, Environment & Society. Students enrolling in this course must pay both the incidental fees as prescribed by the School of Earth, Environment & Society and the regular tuition fees. Students intending to enrol in this course must submit an application by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application by April 15 subject to fulfillment of the requirements.
One term
Prerequisite(s): One of EARTHSC 2E03, ENVIRSC 2B03, 2Q03, ENVSOCTY 2EI3, ISCI 2A18 A/B; and registration in Level III or above of an Honours program in the School of Earth, Environment & Society; and permission of the instructor. ENVIRSC 2Q03 is recommended.
Co-requisite(s): WHMIS 1A00, if not already completed, must be completed prior to the first lab.

ENVIRSC 3O03 - CONTAMINANT FATE AND TRANSPORT

Focuses on the primary mechanisms controlling the distribution, transport and fate of contaminants, particularly organic contaminants, throughout the environment with an emphasis aquatic pollution and atmosphere-aquatic interactions. Topics include partitioning processes (dissolution, volatilization, sorption), degradation and contaminant remediation processes (abiotic, biotic) and analytical techniques used to measure concentrations in environmental samples.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of CHEM 2OA3, 2P03, CHEMBIO 2OA3, 2OG3, 2P03, ENVIRSC 2Q03, ISCI 2A18 A/B, or registration in an Honours Biology or Honours Chemistry program, or a program in the Faculty of Engineering

ENVIRSC 4BB3 - FIELD TECHNIQUES IN HYDROLOGY

- primarily field-based course that examines the field methods, techniques and equipment used to study watershed hydrology and ecohydrological

function in natural, human-impacted and restored ecosystems.
One lecture (two hours), one lab (four hours); one term
Prerequisite(s): One of EARTHSC 3W03, ENVIRSC 3B03 with a minimum grade of C+. Completion of ENVIRSC 3ME3 is strongly recommended.

ENVIRSC 4C03 - ADVANCED PHYSICAL CLIMATOLOGY

This course develops energy and mass exchange processes in the near surface layer, the lower atmosphere and at the earth-atmosphere interface. Sensitivities of these processes to environmental change and feedback mechanisms are examined. Seminars and individual presentations are emphasized.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): One of ENVIRSC 2B03, 2C03, 2W03

ENVIRSC 4EA3 - ENVIRONMENTAL ASSESSMENT

Technical and policy issues involved in the production and the appraisal of environmental impact assessments.
Two lectures, one lab (two hours); one term
Prerequisite(s): ENVSOCTY 2EI3;or registration in Honours Biology, a Civil Engineering program, an Engineering and Society program, an Honours Integrated Science program or an Honours program in the School of Earth, Environment & Society
Prerequisite(s) (Effective 2026-2027): ENVSOCTY 2EI3;or registration in an Honours Biology program, a Civil Engineering program, an Engineering and Society program, an Honours Integrated Science program or an Honours program in the School of Earth, Environment & Society; and registration in Level III or above
Cross-list(s): ENVSOCTY 4EA3

ENVIRSC 4MI3 - INDEPENDENT STUDY IN EARTH AND ENVIRONMENTAL SCIENCES

An independent study under the supervision of a faculty member. Students will typically complete a major review paper or research paper on a topic of their choice, in the field of Earth and Environmental Sciences.
One meeting (one hour); one term
Prerequisite(s): Registration in Level IV of an Honours program in the School of Earth, Environment & Society (Faculty of Science); and permission of the supervising faculty member
Antirequisite(s): EARTHSC 4MI3
Not open to students with credit or registration in ISCI 4A12 A/B

ENVIRSC 4MT6 A/B - SENIOR THESIS

Students will select research topics and prepare a thesis either individually or in teams. Students intending to enroll in this course must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society (Faculty of Science) main office after March 1. Students will be informed of acceptance of their application on April 15 subject to fulfillment of the GPA requirement.
Two terms
Prerequisite(s): One of EARTHSC 3RD3, ENVSOCTY 3MA3; and registration in Level IV of an Honours program in the School of Earth, Environment & Society (Faculty of Science); and a GPA of at least 7.5; and permission of the course coordinator
Cross-list(s): EARTHSC 4MT6 A/B, ENVSOCTY 4MT6 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

ENVIRSC 4N03 - GLOBAL BIOGEOCHEMICAL CYCLES

This course focusses on global cycles of elements and energy, the role of biological processes in these cycles, and the concurrent influence of these cycles on biology and its environment. Topics will include the use of isotopic analysis to understand modern and past cycles, the interaction between global and local processes, and natural and anthropogenic effects on biogeochemical cycles.
Two lectures, one lab (three hours); one term
Prerequisite(s): One of BIOLOGY 2F03, CHEM 2P03, CHEMBIO 2P03, ENVIRSC 2Q03, ISCI 2A18 A/B. One of EARTHSC 3CC3, ENVIRSC 3O03 is strongly recommended.

ENVIRSC 4W03 - HYDROLOGIC MODELLING

Principles of numerical modelling and examination of selected hydrologic models including deterministic, conceptual and statistical models.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): One of EARTHSC 3W03, ENVIRSC 2W03; and one of ENVSOCTY 3MB3, STATS 2B03, 3J04

Environment & Society

Courses in Environment & Society are administered by the School of Earth, Environment & Society.
General Science Building, Room 206, ext. 24535
https://sees.mcmaster.ca/

School Notes

1. Students aiming to fulfill the academic requirements for professional registration of Geoscientists in Ontario should seek academic advice from the School of Earth, Environment & Society during March counselling in Level II to ensure that their program and course choices are appropriate.
2. Students are advised that not all courses will be offered in every year.
3. Some courses are offered in a hybrid or online delivery format. Students are advised to check course outlines and Mosaic for specific scheduling details.

Courses

If no prerequisite is listed, the course is open.
See also courses in *Earth Sciences* and *Environmental Science.*

ENVSOCTY 1HA3 - SOCIETY, CULTURE AND ENVIRONMENT

An introduction to human (societal) environment interactions, mostly through a human geographic perspective. Topics include: the spatial significance of culture and cultural difference; cities as forms of cultural settlements; the rise of urban societies; the meanings of cultural landscapes; geographical perspectives on local and global politics; humans' changing relationship with the environment; and contemporary environmental issues.
Three hours; one term
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

ENVSOCTY 1HB3 - POPULATION, CITIES AND DEVELOPMENT

An introduction to the study of relationships between people and their environments. The natural, built, social and economic environments are examined through human geography, urban studies, population and development studies, and environmental studies. Topics include: the meaning, and changing significance, of globalization; the causes and consequences of uneven economic and social development; the nature of changes in world population via demographic change and migration; the nature and consequences of global urbanization; and urban planning.

Three hours; one term
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

ENVSOCTY 2EI3 - ENVIRONMENT & SOCIETY: CHALLENGES AND SOLUTIONS

- discussion of perspectives and approaches to local, regional, national, and global environmental problems.

Three hours; one term
Prerequisite(s): Registration in Level II or above. One of BIOLOGY 1M03, EARTHSC 1G03, ENVIRSC 1C03, 1G03, ENVSOCTY 1HA3, 1HB3,ISCI 1A24 A/B is recommended.
This course may be offered in-person or online.
Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

ENVSOCTY 2EK3 - TRADITIONAL INDIGENOUS ECOLOGICAL KNOWLEDGE

This course is a study of the ecological teachings of Indigenous peoples and of their relationships with the natural environment in historical and contemporary times.
Three hours (lectures and seminars); one term
Cross-list(s): ANTHROP 2DA3, INDIGST 2D03
This course is administered by the Indigenous Studies Program.

ENVSOCTY 2GI3 - GEOGRAPHIC INFORMATION SYSTEMS

Introduction to the principles and techniques underlying the use of geographic information systems (GIS) for capturing and visualizing spatially referenced information. Databases, models and cartographic principles are also introduced emphasizing the production of effective thematic maps using GIS software.
Two lectures, one lab (two hours); one term
Prerequisite(s): Registration in Level II or above

ENVSOCTY 2HI3 - HEALTH AND PLACE

Introduction to health geography. Contemporary trends and patterns of global mortality and morbidity are explored using examples from different parts of the world. A range of perspectives are used to compliment a geographical viewpoint, including: medical, cultural, ecological, social and demographic.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3
Cross-list(s): HLTHAGE 2HI3

ENVSOCTY 2LE3 - GEOGRAPHY OF CAPITALISM

An introduction to the spatial organization of the capitalist economy. Students will critically examine economic activities at different scales using case studies such as global commodity chains, urban and regional economies, and the home as a site of economic power. Emphasis is placed on understanding the fundamentals of capitalism, its production of uneven development, and post-capitalist visions for our economies.
Two lectures; one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3

ENVSOCTY 2OC3 - REGIONAL GEOGRAPHY OF CANADA

An introduction to the human and physical geography of Canada from a regional perspective. Emphasis is placed on the similarities and differences among Canada's regions. Topics include historical and contemporary perspectives on economic, social, and cultural geographies as well as environmental issues.
On-line web modules, discussions and testing; one term
Prerequisite(s): Registration in Level II or above. Completion of ENVSOCTY 1HA3 or 1HB3 is recommended.
Antirequisite(s): ENVSOCTY 2RC3

ENVSOCTY 2RC3 - REGIONAL GEOGRAPHY OF CANADA

An introduction to the human and physical geography of Canada from a regional perspective. Emphasis is placed on the similarities and differences between Canada's regions. Topics include historical and contemporary perspectives on economic, social, and cultural geographies as well as environmental issues.
Three lectures; one term
Prerequisite(s): Registration in Level II or above. Completion of ENVSOCTY 1HA3 or 1HB3 is recommended.
Antirequisite(s): ENVSOCTY 2OC3

ENVSOCTY 2RU3 - REGIONAL GEOGRAPHY OF THE UNITED STATES

An introduction to the human and physical geography of the United States of America from a regional perspective. Emphasis is placed on the human and physical elements that make each region unique. Topics include economic, social, political and cultural geographies, as well as environmental issues and problems.
Three lectures, fully online; one term
Prerequisite(s): Registration in Level II or above. Completion of ENVSOCTY 1HA3 or 1HB3 is recommended.

ENVSOCTY 2RW3 - WORLD REGIONAL GEOGRAPHY

An introduction to regional geography and global issues. The study of the human and physical geographic patterns of the world. Emphasis is placed equally on what makes places and regions different or unique, and the key global issues that relate to one or more regions. Topics include urbanization, economic change, cultural difference, geopolitics, and environmental issues.
Three lectures, fully online; one term
Prerequisite(s): Registration in Level II or above. Completion of ENVSOCTY 1HA3 or ENVSOCTY 1HB3 is recommended.

ENVSOCTY 2TF3 - FOOD, POWER AND PLACE

Who really controls the food system? Are food banks helping or hurting the fight against hunger? Why are grocery stores organized the way they are? How do families negotiate gender roles in the kitchen? This course takes a critical approach to these and other questions about our food system. We consider how our relationship to food is mediated by the state, private business, and charity. We explore global strategies to create more just, equitable and sustainable food systems.
Two lectures (two hours and one hour); one term
Prerequisite(s): Registration in Level II or above

ENVSOCTY 2TS3 - SOCIETY AND SPACE

This course introduces key concepts and perspectives in social geography. Emphasis is placed on the importance of key binaries that structure the spatial organization of social life (e.g., urban/rural, public/private, and space/place).
Three lectures; one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3; and registration in Level II or above

ENVSOCTY 2UI3 - THE URBAN EXPERIENCE

Key concepts and perspectives in the study of urbanization, urban systems and city life. Emphasis is placed on North American urban experience.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3

ENVSOCTY 3EC3 - ENVIRONMENTAL CATASTROPHES

- discussion of environmental catastrophes such as large-scale releases of environmental contaminants, their context and their effects on human populations. Examples include the BP oil spill in the Gulf of Mexico and the Chernobyl nuclear catastrophe. Human and systemic errors will be explored historically, politically and economically.

Two lectures, one tutorial (one hour); one term
Prerequisite(s): ENVSOCTY 2EI3

ENVSOCTY 3EE3 - ENERGY AND SOCIETY

An introduction to conventional and alternative sources of energy as they are used in Canadian and global contexts. The social, political and economic costs and benefits of different sources of energy will be highlighted.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 2EI3, ISCI 2A18 A/B

ENVSOCTY 3EG3 - POLITICS OF A DYING PLANET

An examination of the politics that is steering humanity to the brink of catastrophic climate change and planetary mass extinction. It investigates the politics that generates, and is generated by, a dying planet. Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above
Cross-list(s): POLSCI 3GC3
Not open to students with credit in POLSCI 3B03 if the topic was Global Climate Change.
This course is administered by the Department of Political Science.

ENVSOCTY 3EN3 - NORTHERN ENVIRONMENTS AND SOCIETIES

Exploration of the environmental, social, cultural, economic, and political opportunities and challenges that shape the Canadian North. Particular emphasis is placed on diversity and change.
Two lectures (two hours and one hour); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2EK3, INDIGST 2D03
Cross-list(s): INDIGST 3EN3

ENVSOCTY 3ER3 - SUSTAINABILITY AND THE ECONOMY

This course explores the triple bottom line: the intersection of economic, ecological and social costs and benefits. Examples are drawn from sectors such as climate change, fisheries, forestry and water.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): ENVSOCTY 2EI3

ENVSOCTY 3GI3 - ADVANCED RASTER GIS

Advanced treatment of geographic information systems (GIS) focusing on raster data models and techniques. Real-world problem solving emphasizes site selection and environmental applications. Topics include multicriteria evaluation, terrain mapping and analysis, 3D visualization, spatial interpolation and watershed analysis.
Two lectures, one lab (two hours); one term
Prerequisite(s): A minimum grade of C- in ENVSOCTY 2GI3

ENVSOCTY 3GV3 - ADVANCED VECTOR GIS

Advanced treatment of GIS focusing on vector data models and techniques. Real-world problem solving emphasizes health, business, public sector and transportation applications. Topics include geodatabase design, geocoding, networks and network applications, location-allocation modeling and GIS tool development using ModelBuilder.
Two lectures, one lab (two hours); one term
Prerequisite(s): A minimum grade of C- in ENVSOCTY 2GI3

ENVSOCTY 3HP3 - POPULATION, HEALTH AND AGING

Differential growth of human populations and their changing age and sex structures with an emphasis on birth, death, and immigration processes. The connections between population structures and processes and various aspects of environments and societies, including aging and health, are emphasized.
One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3
Cross-list(s): HLTHAGE 3HP3

ENVSOCTY 3LT3 - TRANSPORT GEOGRAPHY AND PLANNING

Transport plays an important role in many of today's most pressing challenges including climate mitigation, social inequities, death and injury, and health. An exploration of the significant, and often overlooked, role transport has in our daily lives.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3 and registration in Level III or above

ENVSOCTY 3MA3 - RESEARCH METHODS

An introduction to research methods in human geography. Emphasis is placed on the application of various methods to understanding human spatial behaviour.
Two lectures, one tutorial (two hours); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3; and registration in Level II or above of a program in the School of Earth, Environment & Society (Faculty of Science)
Antirequisite(s): CMST 2B03, GERONTOL 2C03, HEALTHST 2B03, HLTHAGE 2A06, 3Z06, SOCIOL 2Z03

ENVSOCTY 3MB3 - DATA ANALYSIS

An introduction to data processing, data visualisation, inference and modelling with application in geography, earth science and environmental science. Two lectures, one lab (two hours); one term
Prerequisite(s): One of EARTHSC 1G03, ENVIRSC 1C03, ENVSOCTY 1HA3, 1HB3, ISCI 1A24 A/B
Antirequisite(s): STATS 2B03

ENVSOCTY 3MF3 - URBAN FIELD CAMP

An experiential and problem-based introduction to field techniques used in human geography, urban studies and planning, with a focus on how people experience and transform the built, social and natural environments of cities. Most of this course occurs outside the regular academic term, usually in one of the two weeks prior to the start of term in September. Details and applications are available in March. Students enrolling in this course must pay both the incidental fees as prescribed by the School of Earth, Environment & Society as well as the regular tuition fees. Students intending to enrol in this course must submit an application by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment &

Society main office after March 1. Students will be informed of acceptance of their application by April 15 subject to fulfillment of the requirements.
One term
Prerequisite(s): Registration in Level III or above of an Honours program in the School of Earth, Environment & Society; and permission of the instructor

ENVSOCTY 3MI3 - INTERNSHIP IN ENVIRONMENT AND SOCIETY

The integration of academic learning with an employment experience, providing students the opportunity to explore careers and develop linkages between classroom knowledge and professional practice. Students are responsible to arrange a suitable internship and agreement of the supervisor. This course is evaluated on a Pass/Fail basis. Normally, students complete 130 hours of academic work through the duration of the employment or volunteer experience.
Prerequisite(s): SOCSCI 2EL0; and registration in Level III or above of an Honours B.A. program in the School of Earth, Environment & Society; and permission of the internship coordinator
Note: *Students participating in this course must be authorized to work in Canada (International students must provide proof of work authorization permit).*
Students intending to enrol in this course should submit an application to the internship coordinator two months prior to registration. Application forms are available from the School of Earth, Environment & Society main office.

ENVSOCTY 3RA3 - HUMAN GEOGRAPHIES OF AFRICA

The course adopts an interdisciplinary approach to introduce students to issues related to the African continent. Through case studies drawn from different regions of Africa, we will challenge our misconceptions about Africa, address critical questions about the challenges facing the continent and seek new knowledge of Africa and its peoples.
Three lectures; one term
Prerequisite(s): Registration in Level II or above

ENVSOCTY 3RW3 - REGIONAL GEOGRAPHY OF A SELECTED WORLD REGION

The study of the human and physical geography of a selected region of the world. Topics typically include economic, social, cultural, demographic, and political geographies, as well as physical geographic and environmental issues.
Three lectures; one term
Prerequisite(s): Registration in Level II or above. One of ENVSOCTY 2OC3, 2RC3, 2RU3, 2RW3 is recommended.
ENVSOCTY 3RW3 may be repeated, if on a different topic, with permission of the School of Earth, Environment & Society.

ENVSOCTY 3SR3 - REMOTE SENSING

An introduction to images, sensors and techniques used to gather and process data on the Earth and other planets. Students will also learn about the principles of interaction of energy with the atmosphere and Earth materials such as vegetation, soil, water, rock, and urban structures.
Two lectures, one lab (two hours); one term
Prerequisite(s): A minimum grade of C- in ENVSOCTY 2GI3

ENVSOCTY 3TG3 - GEOGRAPHIES OF GLOBALIZATION

An introduction to a geographical understanding of globalization. This understanding is illustrated through an examination of the social, cultural, political, and economic aspects of globalization. Case studies such as womens labour, global care chains, and the ready-made garment industry are used to illustrate the significance and deeply political nature of globalization.
Three hours; one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3; and registration in Level II or above

ENVSOCTY 3UP3 - URBAN PLANNING

An introduction to urban planning, including the theory and practice of community plan-making in Canada.
One seminar (three hours); one term
Prerequisite(s): ENVSOCTY 2UI3

ENVSOCTY 3UR3 - URBAN SOCIAL GEOGRAPHY

The social geography of North American cities, with an emphasis on urban housing. Topics include, housing and housing markets; experiences and meanings of home; homelessness; and housing policy.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): ENVSOCTY 2UI3

ENVSOCTY 3UW3 - CITIES OF THE DEVELOPING WORLD

The nature and consequences of urbanization in the developing world, and the character of cities therein. Emphasis is placed on identifying similarities and differences between cities of the developing and the more developed worlds.
One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): ENVSOCTY 2UI3

ENVSOCTY 4EA3 - ENVIRONMENTAL ASSESSMENT

Technical and policy issues involved in the production and the appraisal of environmental impact assessments.
One lecture (two hours), one tutorial (two hours); one term
Prerequisite(s): ENVSOCTY 2EI3; or registration in Honours Biology, a Civil Engineering program, an Engineering and Society program, an Honours Integrated Science program or an Honours program in the School of Earth, Environment & Society (Faculty of Science)
Prerequisite(s) (Effective 2026-2027): ENVSOCTY 2EI3;or registration in an Honours Biology program, a Civil Engineering program, an Engineering and Society program, an Honours Integrated Science program or an Honours program in the School of Earth, Environment & Society (Faculty of Science); and registration in Level III or above
Cross-list(s): ENVIRSC 4EA3

ENVSOCTY 4ET3 - ENVIRONMENTAL ETHICS AND POLICY

An exploration of issues in environmental ethics, regulation and economics, with a focus on the analysis of conflict, collaboration and coordination.
One seminar (three hours); one term
Prerequisite(s): ENVSOCTY 2EI3; and registration in Level III or above of an Honours program in the School of Earth, Environment & Society

ENVSOCTY 4GA3 - APPLIED SPATIAL STATISTICS

Spatial data analysis and statistics, including descriptive and inferential spatial statistics. Class is offered in a flipped classroom format to support experiential learning that draws on examples from geography, earth sciences, and the environment. Emphasis on the use of R open-source software. Labs complement classes with extensive use of statistical and GIS software.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): One of ENVSOCTY 3MB3, STATS 2B03; and ENVSOCTY 2GI3

ENVSOCTY 4GS3 - GIS PROGRAMMING

Advanced treatment of GIS focusing on the creation of scripts to enhance productivity by automating time-consuming and repetitive tasks. Through in-class discussions, demonstrations, and regular hands-on exercises, students are introduced to Python scripting in ArcGIS.
One lab (three hours); one term
Prerequisite(s): A minimum grade of B in one of ENVSOCTY 3GI3, 3GV3

ENVSOCTY 4GT3 - WEB GIS

Advanced treatment of geographic information systems (GIS) focusing on creating interactive, data-driven maps using modern web technologies. Emphasizing hands-on learning, the course will cover topics including data integration, user interface design, and best practices for effective map storytelling, equipping students to communicate complex spatial information effectively.
One lab (three hours); one term
Prerequisite(s): A minimum grade of B in one of ENVSOCTY 3GI3, 3GV3

ENVSOCTY 4HC3 - PUBLIC AND COMMUNITY HEALTH

An examination of how geography informs the practice of public and community health, from GIS applications through to changes in home-based care for elderly dependents.
One lecture (three hours); one term
Prerequisite(s): One of ENVSOCTY 2HI3, 3HP3, HLTHAGE 2HI3, 3HP3

ENVSOCTY 4HD3 - DISABILITY, SOCIETY AND ENVIRONMENT

Competing theories on the social and spatial marginalization of persons with disabilities; contemporary and historical case studies are used to illustrate the social, political and cultural determinants of disability.
One seminar (three hours); one term
Prerequisite(s): One of ENVSOCTY 2HI3, 2TS3, HLTHAGE 2HI3

ENVSOCTY 4HH3 - ENVIRONMENT AND HEALTH

An exploration of environmental health research. Emphasis is placed on the distribution and effects of environmental toxins and disease-causing micro-organisms. Topics include cancer clusters, food safety, and water-borne diseases.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2HI3, HLTHAGE 2HI3; and registration in Level IV or above
Cross-list(s): HLTHAGE 4M03

ENVSOCTY 4HP3 - MIGRATION AND GLOBAL DEVELOPMENT

This course introduces students to key concepts in global migration and its implications on development in both migrant sending and receiving states. It explores the various patterns of global migration such as refugee movements, climate migration, South-South migration, the 'brain drain' of skilled professionals, and link them to the fundamental theories of development, including transnational theory, diasporas and policy relationships between countries. The course will also assess the integration of migrants in major migrant destination regions. Finally, the course will provide students with an opportunity to critically examine the relationship between migration and development in a particular national context of their choice.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): Registration in Level III or above

ENVSOCTY 4LE3 - GEOGRAPHIES OF THE NORTH AMERICAN POLITICAL ECONOMY

- critical analysis of North America's economic geography with an emphasis on uneven development, growth regions, and the social and cultural embeddedness of economic activity.

One seminar (three hours); one term
Prerequisite(s): One of ENVSOCTY 2LE3 or WORKLABR 2G03 (or LABRST 2G03); and registration in Level III or above

ENVSOCTY 4LP3 - TRANSPORT POLICY

An introduction to policy analysis and issues from the perspective of transportation. Conceptual and methodological foundations are enhanced with local, regional, national, and global case studies in transportation. Course is offered in seminar format and requires students to work in small groups.
One seminar (three hours); one term
Prerequisite(s): ENVSOCTY 3LT3; or permission of the instructor

ENVSOCTY 4LW3 - WORK AND THE ENVIRONMENT

Who bears the cost of environmental degradation? How does our current economic system shape possibilities for environmental justice? Is there such a thing as working-class environmentalism? And how do issues of environmental justice get taken up by trade unions? Struggles for environmental justice include everything from fighting against climate change and fighting for access to clean drinking water, to battles over health and safety in the workplace. In this course we will examine how social relations under capitalism shape our interactions with nature and create patterns of work and inequality. We will also explore the varied ways workers and workers organizations have responded to issues of environmental injustice.
One seminar (three hours); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2LE3; or permission of the Director of the School of Labour Studies
Cross-list(s): WORKLABR 4F03
This course is administered by the School of Labour Studies.

ENVSOCTY 4MF3 - SENIOR URBAN FIELD CAMP

Field study of a North American city focusing on social and/or environmental issues. Topics may vary from year to year, and the timing of the course will depend on the offerings. Students enrolling in this course must pay the incidental fees, as prescribed by the School of Earth, Environment & Society, and the regular tuition fees. Students intending to enrol in this course must submit an application by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application by April 15 subject to fulfillment of the requirements.
Prerequisite(s): ENVSOCTY 2UI3; and ENVSOCTY 3MF3; and registration in Level III or above of an Honours program in the School of Earth, Environment & Society; and permission of the instructor

ENVSOCTY 4MS3 - INDEPENDENT STUDY

An independent study under the supervision of a faculty member. Students will typically complete one or more major review or research papers on a topic of their choice.
One meeting (one hour); one term
Prerequisite(s): Registration in Level IV of an Honours program in the School of Earth, Environment & Society; and permission of the supervising faculty member
Not open to students with credit or registration in ISCI 4A12 A/B.
ENVSOCTY 4MS3 may be repeated, if on a different topic, with permission of

the School of Earth, Environment & Society (Faculty of Science).

ENVSOCTY 4MT6 A/B - SENIOR THESIS

Students will select research topics and prepare a thesis either individually or in teams. Students intending to enrol in this course must submit an application to the course coordinator by April 1 of the academic year prior to registration. Application forms are available from the School of Earth, Environment & Society main office after March 1. Students will be informed of acceptance of their application on April 15 subject to fulfillment of the GPA requirement.
Two terms
Prerequisite(s): One of EARTHSC 3RD3, ENVSOCTY 3MA3; and registration in Level IV of an Honours program in the School of Earth, Environment & Society; and a GPA of at least 7.5; and permission of the course coordinator
Cross-list(s): EARTHSC 4MT6 A/B, ENVIRSC 4MT6 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

ENVSOCTY 4SR3 - ADVANCED REMOTE SENSING

This course focuses on computer-based methods for extraction of information from remotely sensed data using digital image processing techniques. Techniques addressed include image pre-processing and calibration, image enhancement, spectral data transformation, thematic information extraction, classification, digital change detection, LiDAR, RADAR and hyperspectral remote sensing.
One lecture (two hours), one lab (two hours); one term
Prerequisite(s): ENVSOCTY 3SR3

ENVSOCTY 4UD3 - SPECIAL TOPICS IN URBAN PLANNING

An advanced examination of key challenges in contemporary urban planning. The course emphasizes how planners work to resolve complex and difficult urban issues, while balancing competing social, environmental, political and economic interests.
One seminar (three hours); one term
Prerequisite(s): ENVSOCTY 3UP3

ENVSOCTY 4UF3 - THE GEOGRAPHY OF GENDER

An advanced treatment of key themes and issues in the geography of gender. Emphasis is placed on intersectionality and the ways in which society and space are gendered and on pressing gender-based issues. Topics include urban nightlife, bodybuilding and exercise, crafting, shopping malls, and bathrooms.
Lectures and discussion (three hours); one term
Prerequisite(s): One of ENVSOCTY 1HA3, ENVSOCTY 1HB3; and registration in Level III or above

ENVSOCTY 4US3 - SUSTAINABLE CITIES

An exploration of social, environmental, and economic dimensions of urban sustainability agendas. Emphasis is placed on key debates and controversies surrounding sustainable urbanism, and the role that planners, politicians, municipal actors and citizens play in enacting or resisting visions of sustainable cities.
Lectures and discussion (three hours); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2LE3, 2UI3
Prerequisite(s) (Effective 2026-2027): One of ENVSOCTY 2EI3, 2LE3, 2UI3; and registration in Level III or above

EXPLORE (Interdisciplinary Experiences)

EXPLORE (Interdisciplinary Experiences) courses are administered by the School of Interdisciplinary Science (SIS).
A.N. Bourns Science Building, Room C501, ext. 21181
Email: sis@mcmaster/ca
https://sis.science.mcmaster.ca/undergraduate/sis-open-science-courses/

EXPLORE 3IE3 - INTERDISCIPLINARY EXPERIENCES

Interdisciplinary experiential learning opportunities selected from an assortment of modules. Content and schedules vary annually. Details may be found on the School of Interdisciplinary Science (SIS) website (https://www.science.mcmaster.ca/sis/) or by contacting the School of Interdisciplinary Science (SIS). Some EXPLORE courses may require an application prior to enrollment. Refer to the SIS website for more details.
One term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ISCI 3IE3, ARTSSCI 3IE3
EXPLORE 3IE3 may be repeated, if on a different topic.
This course is evaluated on a Pass/Fail basis.
Some modules may require a fee to cover costs of travel and accommodation.
This course is administered by the School of Interdisciplinary Science (SIS).

EXPLORE 3IS0 - INTERDISCIPLINARY SCIENCE FIELD WORK

Administrative requirement for field work corresponding with EXPLORE 3IS3.
Prerequisite(s): Registration in Level II or above of an Honours Program in the Faculty of Science or Arts & Science program; and permission of the instructor
Antirequisite(s): ISCI 3IS0, SCIENCE 3IS0
This course is evaluated on a Complete/Not Complete basis.
Students must register in EXPLORE 3IS3 in the same or subsequent session as EXPLORE 3IS0.
EXPLORE 3IS0 may be repeated, if on a different topic.
This course is administered by the School of Interdisciplinary Science (SIS).

EXPLORE 3IS3 - INTERDISCIPLINARY SCIENCE FIELD CAMP

An interdisciplinary field camp experience to introduce students to field investigations, equipment and methodologies used by a range of professionals including ecologists, Earth and environmental scientists. Most of this course occurs outside the regular academic term, usually within the two weeks following the end of term in April or within the two weeks preceding the start of term in September; details and applications are available on the School of Interdisciplinary Science (SIS) website.
Students enrolling in this course must pay both the incidental fees as prescribed by the School of Interdisciplinary Science (SIS) and the regular tuition fees. Students intending to enrol in this course must submit an application by November 15 of the academic year prior to registration. Application forms are available on the School of Interdisciplinary Sciences (SIS) website.
Prerequisite(s): Registration in Level II or above of an Honours Program in the Faculty of Science or Arts & Science program; and permission of the instructor
Co-requisite(s): Credit or registration in EXPLORE 3IS0
Antirequisite(s): ISCI 3IS3, SCIENCE 3IS3
EXPLORE 3IS3 may be repeated, if on a different topic.
Enrolment is limited.
This course is administered by the School of Interdisciplinary Science (SIS).

Farsi

Courses in Farsi are administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/

FARSI 1Z03 - INTRODUCTORY FARSI I

Students will become familiar with Farsi alphabet and will start learning to read and write using Farsi characters and to communicate about everyday topics through dialogues, pronunciation and vocabulary exercises, grammar quizzes and role-plays.
Three hours; one term
Not open to students who are literate in Farsi.

FARSI 1ZZ3 - INTRODUCTORY FARSI II

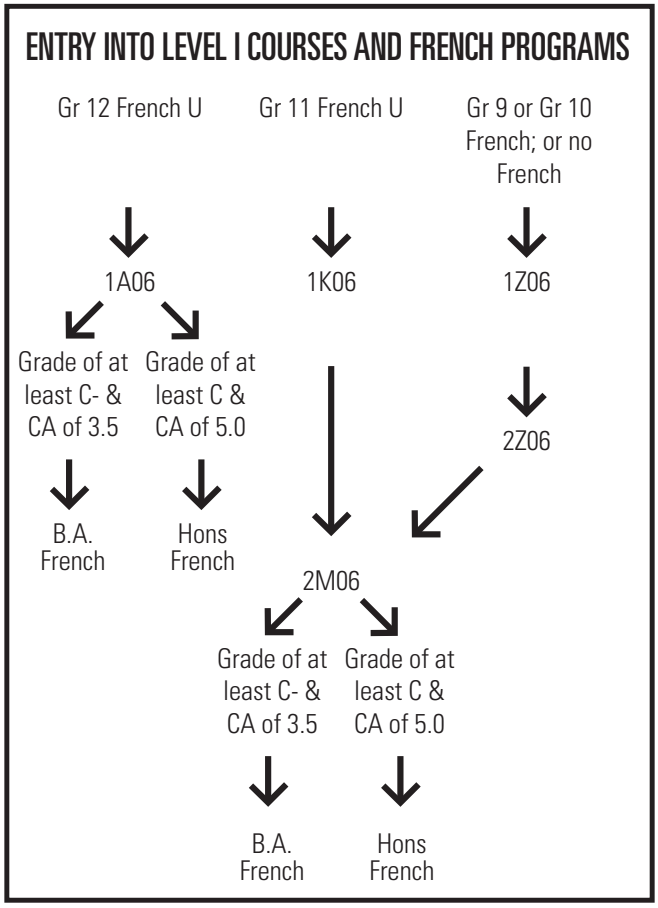
Students will expand their ability to communicate through dialogues, pronunciation and vocabulary exercises, grammar quizzes and role-plays, becoming proficient with Farsi alphabet, will communicate in Farsi using a growing set of expressions, and gain elementary understanding of Persian history and culture.
Three hours; one term
Prerequisite(s): FARSI 1Z03
Not open to students who are literate in Farsi.

French

Courses in French are administered by the Department of French.
Togo Salmon Hall, Room 532, ext. 24470
http://french.humanities.mcmaster.ca/

Department Notes

1. To encourage an environment conducive to learning, students should choose course corresponding to their level of French.
2. The ultimate placement of students in appropriate courses remains at the discretion of the Department of French; students who are enrolled in an inappropriate course (be it automatically, due to oversight, intentionally or unintentionally during registration) may be reassigned according to a review of their level.
3. Students who have taken Grade 12 French U or the equivalent within the last three years should register in FRENCH 1AA3 followed by FRENCH 1AB3. Those who took Grade 12 French U or the equivalent more than 3 years ago should speak to a departmental counsellor if they feel their French skills may be below the level required for entry into FRENCH 1AB3 (CEFRL A2).
4. FRENCH 2ZA3 and 2ZB3 are is intended for students who have completed Grade 10 and 11 French U respectively. By taking these courses, students may enter FRENCH 2AA3 followed by FRENCH 2AB3 which is the prerequisite for upper-level French courses.
5. FRENCH 1ZA3 is intended for absolute beginners and FRENCH 1ZB3 for those who have studied no further than Grade 9 French. The normal sequel to these courses is FRENCH 2ZA3 and FRENCH 2ZB3, followed by FRENCH 2AA3 and FRENCH 2AB3 which are the prerequisites for upper-level French courses.
6. Language courses taught in the Department of French adhere to the *Common European Framework of Reference for Languages,* which focuses on oral and written comprehension and production through task-based learning.
7. A CEFRL-based placement test (*Common European Framework of Reference for Languages* proficiency levels) is available online. It may assist students who feel that their competencies in French are at a higher level than assigned. Students who wish to write the Placement Test must be already registered in a French language course. For more information, please contact FrenchPT@mcmaster.ca.
8. DELF (diplôme d'études en langue française: for beginners and intermediate-level learners) and DALF (diplôme approfondi de langue française: for advanced learners) are six separate diplomas issued by the French Ministry for National Education to certify the French language skills. These diplomas are valid for life. DELF and DALF certificates are developed by France Éducation international (FEI) and reflect the six levels of the Common European Framework of Reference for Languages (CEFRL).



Courses

If no prerequisite is listed, the course is open.

FRENCH 1AA3 - INTRODUCTION TO FRENCH STUDIES: INTERMEDIATE I

Oral and written production and comprehension (level B1 of the CEFRL), and introduction to literary analysis. Equivalent to FRENCH 2AA3.
Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): Grade 12 French U (core, immersion, or français). Students with CEFRL A2 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 1A06 A/B, FRENCH 2M06 A/B Not open to students with credit or enrolment in FRENCH 1AB3, FRENCH 2AA3 or FRENCH 2AB3.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 1AB3 - INTRODUCTION TO FRENCH STUDIES: INTERMEDIATE II

Oral and written production and comprehension (level B1 of the CEFRL), and introduction to literary analysis. Equivalent to FRENCH 2AB3.
Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): FRENCH 1AA3. Students with CEFRL A2-B1 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 1A06 A/B, FRENCH 2M06 A/B
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 1CT3 - FOUNDATIONS OF TRANSLATION (TAUGHT IN ENGLISH AND FRENCH)

This Level I translation course offered in a bilingual environment (the students will compare French and English grammar, syntax, vocabulary and semantics) is a different way of learning structures and mechanisms of French language. It is also a foundation for Level II, III and IV translation courses.
Three hours; one term.
Prerequisite(s): Grade 9 French U. Students with CEFRL A1-A2 range competencies must contact the Department of French for enrollment.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 1ZA3 - INTENSIVE FRENCH BEGINNER I

An intensive course for developing oral and written production and comprehension (level A1 of the CEFRL). The normal sequel to this course is FRENCH 1ZB3. This course cannot be applied toward a Minor in French.
Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): This course is designed for students with no background in French.
Antirequisite(s): FRENCH 1Z06 A/B
Not open to students with credit or registration in Grade 9, 10, 11, 12 French U, FRENCH 1A06 A/B, FRENCH 1AA3, FRENCH 1AB3, FRENCH 1ZB3, FRENCH 2Z06 A/B, FRENCH 2ZA3, FRENCH 2ZB3, Francophones, or Immersion students.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 1ZB3 - INTENSIVE FRENCH BEGINNER II

An intensive course for developing oral and written production and comprehension (level A1 of the CEFRL). The normal sequel to this course is FRENCH 2ZA3. This course cannot be applied toward a Minor in French.
Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): FRENCH 1ZA3. Students with Grade 9 French or CEFRL A1.1 range of competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 1Z06 A/B
Not open to students with credit or registration in Grade 10, 11, 12 French U, FRENCH 1A06 A/B, FRENCH 1AA3, FRENCH 1AB3, FRENCH 2M06 A/B, FRENCH 2Z06 A/B, FRENCH 2ZA3, FRENCH 2ZB3, Francophones, or Immersion students.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 2AA3 - INTRODUCTION TO FRENCH STUDIES: INTERMEDIATE I

Oral and written production and comprehension (level B1 of the CEFRL), and introduction to literary analysis. Equivalent to FRENCH 1AA3.
Four hours (three hours lecture, one hour tutorial); one terms
Prerequisite(s): FRENCH 2Z06 A/B or FRENCH 2ZB3. Students with CERFL A2 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 1AA3, FRENCH 1A06 A/B, FRENCH 2M06 A/B
Not open to students with credit or registration in FRENCH 1AB3, FRENCH 2AB3, or FRENCH 2B03.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 2AB3 - INTRODUCTION TO FRENCH STUDIES. INTERMEDIATE II

Oral and written production and comprehension (level B1 of the CEFRL), and introduction to literary analysis. Equivalent to FRENCH 1AB3.
Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): FRENCH 2AA3
Antirequisite(s): FRENCH 1AB3, FRENCH 1A06 A/B, FRENCH 2M06 A/B
Not open to students with credit or registration in FRENCH 2B03 .
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 2AC3 - INTRODUCTION TO FRANCOPHONE LITERATURES AND CULTURES

An overview of the francophone literatures and cultures outside of Europe and Canada (Africa, Caribbean and Asia) in both their specificity and their interconnectedness.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3

FRENCH 2B03 - FRENCH LANGUAGE PRACTICE I: UPPER INTERMEDIATE

Oral and written production and comprehension (level B2 of the CEFRL).
Four hours (including three hours of lecture and one hour of tutorial); one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3
Antirequisite(s): FRENCH 4R06

FRENCH 2BB3 - FRENCH LANGUAGE PRACTICE II: UPPER INTERMEDIATE

Continuation of FRENCH 2B03. Oral and written production and comprehension (level B2 of the CEFRL).
Four hours (including three hours of lecture and one hour of tutorial); one term.
Prerequisite(s): FRENCH 2B03
Antirequisite(s): FRENCH 4R06

FRENCH 2CC3 - WOMEN'S WRITING

Examination of key themes of French and francophone women's writing.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3

FRENCH 2CT3 - ELEMENTARY TRANSLATION FROM FRENCH TO ENGLISH

An introduction to translation and comparative stylistics. The translation of texts from French to English will also serve as an exercise in applied grammar.
hree hours; one term
Prerequisite(s): FRENCH 2B03. Students with CEFRL B1-B1.1 range

competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 3GG3

FRENCH 2E03 - SURVEY OF QUEBEC LITERATURE AND CULTURE

Selected novels, plays and poems representative of the main currents of Quebec literature and culture.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3

FRENCH 2F03 - SURVEY OF FRENCH AND FRANCOPHONE LITERATURE

Examination of a representative sampling of texts from various periods and genres.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3

FRENCH 2I03 - PROFESSIONAL FRENCH I

An introduction to Professional French through study of terminology from several fields, placed in context. Will focus on case studies and current media. May include medical, legal or journalistic French, among other areas.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3, or permission of the Department

FRENCH 2L03 - INTRODUCTION TO LITERARY ANALYSIS

Introduction to various techniques and approaches in literary analysis, with practical application to Francophone texts from different eras and literary genres.
Three hours; one term
Prerequisite(s): One of FRENCH 1A06 A/B, FRENCH 1AB3, FRENCH 2M06 A/B, or FRENCH 2AB3

FRENCH 2OR3 - CONVERSATIONAL FRENCH ELEMENTARY

This conversational French course will be of particular interest to students who discontinued their study in French earlier on in high school and would like to resume practicing their conversational skills starting with simple topics and progressively building vocabulary.
Three hours; one term
Prerequisite(s): Students with Grade 9, 10 French U or CEFRL A1.1 / A2 range competencies must contact the Department of French for enrollment.

FRENCH 2Q03 - MONTREAL, A CITY OF MANY FACES (TAUGHT IN ENGLISH)

The course on Montreal, the biggest francophone city in Canada attracting many young people will allow to discover many faces of the city through a look at its different cultures, communities, and neighbourhoods. Discussions will focus on featured artists, activists or athletes, as well as on specific artefacts, meaningful objects, landmarks or events associated with Montreal.
Three hours; one term
First offered in 2026/27.

FRENCH 2XX3 - FRENCH MOVIE STARS AND ENTERTAINERS (TAUGHT IN ENGLISH)

This course will investigate the "Star" persona of well-known French movie stars and entertainers, examining their public images and reputations among audiences in France and abroad. This course will examine films of famous stars from 1950 1980 (such as Brigitte Bardot, Jean-Paul Belmondo, Alain Delon, Catherine Deneuve) as well as those films of a younger generation of performers (such as Ade Haenel, Marion Cotillard, Omar Sy, and Audrey Tautou).
Three hours; one term

FRENCH 2ZA3 - INTENSIVE FRENCH ELEMENTARY I

- sequel to FRENCH 1ZB3. Oral and written production and comprehension (level A2 of the CEFRL). The normal sequel to this course is FRENCH 2ZB3. This course cannot be applied toward a Minor in French.

Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): FRENCH 1ZB3 or FRENCH 1Z06 A/B. Students with Grade 10 French U or CEFRL A1-A1.1 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 2Z06 A/B
Not open to students with credit or registration in Grade 11 or 12 French U, FRENCH 1A06 A/B, FRENCH 1AA3, FRENCH 1AB3, FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, or FRENCH 2ZB3.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 2ZB3 - INTENSIVE FRENCH ELEMENTARY II

- sequel to FRENCH 2ZA3. Oral and written production and comprehension (level A2 of the CEFRL). The normal sequel to this course is FRENCH 2AA3. This course cannot be applied toward a Minor in French.

Four hours (three hours lecture, one hour tutorial); one term
Prerequisite(s): FRENCH 2ZA3. Students with Grade 11 French or CEFRL A2 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 2Z06 A/B
Not open to students with credit or registration in FRENCH 1A06 A/B, FRENCH 1AA3, FRENCH 1AB3, FRENCH 2M06 A/B, FRENCH 2AA3, FRENCH 2AB3.
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 3AA3 - THE MODERN FRENCH-CANADIAN NOVEL

- study of representative novels by contemporary authors with emphasis upon the relationship between representation and meaning. A discussion of how the novel breaks away from the past, to focus on a present and future of self-affirmation open to individual freedom, diversity and difference.

Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 3AC3 - FRANCOPHONE WRITERS

- choice of important figures of the Francophone world outside of Europe and Canada. The course examines questions raised by Francophone writers. It will emphasize the application of conceptual methodologies drawn from textual and discourse analysis, cultural and postcolonial studies.

Three hours; one term

Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 3C03 - FRENCH LANGUAGE PRACTICE III: ADVANCED

Oral and written production and comprehension (level C1 of the CEFRL).
Four hours (including three hours of lecture and one hour of tutorial); one term
Prerequisite(s): FRENCH 2BB3
Antirequisite(s): FRENCH 4R06

FRENCH 3CT3 - ELEMENTARY TRANSLATION FROM ENGLISH TO FRENCH

An introduction to translation and comparative stylistics. The translation of texts from English to French will also serve as an exercise in applied grammar.
Three hours; one term
Prerequisite(s): FRENCH 2B03. Students with CEFRL B2 range should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 2G03
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 3EE3 - RECENT FRENCH LITERATURE

Major trends and texts of French literature from the 1970s to the present.
Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 3FF3 - FRANCOPHONE CINEMAS

In this course students will view and analyze Francophone films from around the world. Connections will also be drawn with corresponding literary works.
Two hours (plus one film screening every other week); one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 3HH3 - FRANCOPHONE VOICES IN CANADA

- survey of Francophone Canadian literature produced outside of Quebec (most notably in Ontario and the Maritimes) as well as North American Indigenous literature written in French.

Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 3II3 - PROFESSIONAL FRENCH II

Follow-up to FRENCH 2I03. Will include study of terminology from different fields, placed in context.
Three hours; one term
Prerequisite(s): FRENCH 2I03

FRENCH 3KK3 - REVOLUTIONARY LITERATURE BEFORE THE REVOLUTION: VOLTAIRE, ROUSSEAU AND BEAUMARCHAIS

Texts representing the main aspects of Enlightenment thought and literature from Candide to the Revolution.
Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 3P03 - HISTORY AND PHILOSOPHY OF EDUCATION

An overview of education from ancient Greece to modernity: philosophical grounds, institutions, knowledge dissemination methods, and role of language teaching.
Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 3PP6 A/B - TEACHING FRENCH AS A SECOND LANGUAGE: FROM THEORY TO PRACTICE

An experiential learning course for students who are interested in pursuing a teaching career. It will combine observation, reflection, theory and practical experimentation on teaching French as a second language, with placements organized through the Hamilton-Wentworth and Halton School Boards. Approximately 60 hours on site at a school and 50 hours of presentation-based seminars.
Lecture (two hours) and Placement; two terms
Prerequisite(s): Registration in Level III or above of any program and permission of the department. Students are expected to have CEFRL B2 range competencies or completed DELF B2 examination and must contact the Department of French for enrollment.
Antirequisite(s): FRENCH 4P06 A/B
Students intending to enroll in this limited enrolment course must submit an application to the Department of French by June of the preceding year. Application forms are available from the departmental office. As part of this application students must demonstrate a strong proficiency in both oral and written French. The Department reserves the right to ask candidates to take a French language placement test.

FRENCH 3Q03 - SEVENTEENTH-CENTURY FRENCH LITERATURE

- consideration of selected themes as they appear in the works of major French writers of the 17th century.

Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3
Antirequisite(s): FRENCH 3QQ3

FRENCH 3W03 - TWENTIETH-CENTURY FRENCH LITERATURE

Key movements and texts of 20th century literature, to the 1960s.
Three hours; one term
Prerequisite(s): Six units of French above Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3

FRENCH 4CC3 - THEORETICAL REFLECTIONS ON INTERDISCIPLINARITY

This course explores the formation of academic disciplines and the emergence of interdisciplinary thought in Western science and humanities. Aspects of theoretical reflection on interdisciplinarity by post-structuralist thinkers will

also be discussed.
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 4CT3 - INTERMEDIATE TRANSLATION FROM ENGLISH TO FRENCH

- follow-up to FRENCH 3CT3, elementary translation and from English to French. The emphasis will be on the translation into French of complex sentence structures, as well as texts of general interest.

Three hours; one term
Prerequisite(s): FRENCH 3CT3. Students with CEFRL B2 range competencies should contact the Department of French for placement in the course most appropriate to their abilities.
Antirequisite(s): FRENCH 3CC3
The Department reserves the right to place students in the course most appropriate to their abilities.

FRENCH 4DD3 - ANIMALS IN FRENCH AND FRANCOPHONE LITERATURES

Thematic study of the various roles animals play in French and francophone texts.
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 4I03 - FRENCH POETRY FROM THE RENAISSANCE TO THE PRESENT

An introduction to major thematic, historical and linguistic concerns of French poetry from the Renaissance to the present (e.g. Poets and Humour, Love Poetry, Women Poets, Poes maudits).
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 4LL3 - TOPICS IN FRANCOPHONE LITERATURES

Topics may include: important issues in Francophone literatures outside of Europe and Canada, such as women and literature, margins in literature, representation of the self and the other; questions of genres in Francophone literatures; Francophone cinema; literature and history, culture, etc.
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.
FRENCH 4LL3 may be repeated, if on a different topic, to a total of six units.

FRENCH 4MM3 - SEX, VIOLENCE AND ELEGANCE: THE 18TH-CENTURY NOVEL

- study of the genesis and themes of representative 18th-century novels.

Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.

FRENCH 4T03 - INDEPENDENT STUDY

The student will prepare under the supervision of a faculty member a research paper involving independent research in an area of study in which the student has already demonstrated a high level of basic knowledge. It is the student's responsibility to complete a proposal and secure the agreement of an instructor prior to registration.
Prerequisite(s): Registration in Level IV of an Honours program in French and permission of the Department

FRENCH 4U03 - TOPICS IN LITERATURE AND CULTURE OF QUEBEC AND FRANCOPHONE CANADA

Topics may include: Paraliteratures: from nineteenth century tales and legends to contemporary science-fiction; Quebec women authors; Quebec cinema; the representation of France and America; the representation of otherness; Montreal in Quebec literature and culture.
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3. FRENCH 4U03 may be repeated, if on a different topic, to a total of six units.

FRENCH 4Y03 - TOPICS IN 20TH-CENTURY FRENCH LITERATURE

Previous topics include: Women's Writing, The Essay, Gay and Lesbian Novel in France. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite(s): 12 units of French beyond Level I, excluding FRENCH 2AA3, FRENCH 2AB3, FRENCH 2M06 A/B, FRENCH 2Q03, FRENCH 2XX3, FRENCH 2Z06 A/B, FRENCH 2ZA3, and FRENCH 2ZB3.
FRENCH 4Y03 may be repeated, if on a different topic, to a total of six units.

Social Work

Courses in Social Work are administered by the School of Social Work.
Kenneth Taylor Hall, Room 319, ext. 23795
http://www.socialwork.mcmaster.ca

School Notes

1. SOCWORK 1AA3 and 1BB3 are available to all students.
2. The following courses are available to students in a Labour Studies program or for elective credit for students enrolled in Level III or above of a non-Social Work program. SOCWORK 1AA3 and 1BB3 are prerequisites. Space for such students is limited and places are assigned on a first come basis. Not all courses will be offered every year.
   - SOCWORK 3B03
   - SOCWORK 3C03 Social Aspects of Health and Illness
   - SOCWORK 3I03 Social Work and Indigenous Peoples
   - SOCWORK 3O03 Social Work and Sexualities
   - SOCWORK 3S03 Social Work, Disability and Dis/Ableism
   - SOCWORK 3T03 Poverty and Homelessness
   - SOCWORK 4C03 Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
   - SOCWORK 4G03 Selected Topics
   - SOCWORK 4I03
   - SOCWORK 4J03 Social Change: Social Movements and Advocacy
   - SOCWORK 4QQ3 Indigenizing Social Work Practice Approaches
   - SOCWORK 4R03 Feminist Approaches to Social Work and Social Justice
   - SOCWORK 4TI3 Trauma Informed Practice
   - SOCWORK 4U03 Immigration, Settlement and Social Work
   - SOCWORK 4W03 Child Welfare

- SOCWORK 4Y03 Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW

Courses

All courses are open only to Social Work students unless otherwise specified. (See *Notes 1 and 2* above.)

SOCWORK 2BB3 - ANTI-OPPRESSIVE SOCIAL WORK

The course provides a grounding in theories and knowledge that underpin anti-oppression, and explores the ways these get taken up in the work that social workers do.
Lectures, discussion, exercises; one term
Prerequisite(s): Enrollment in a Social Work program
Antirequisite(s): SOCWORK 2B06

SOCWORK 2CC3 - INTRODUCTION TO COMMUNITY PRACTICE

Understanding and analysis of social work practice within a community context that emphasizes the capacity of communities to initiate community action and social change.
Lectures, discussion, exercises; one term
Prerequisite(s): Enrolment in a Social Work program
Antirequisite(s): SOCWORK 4O03

SOCWORK 3D06 A/B S - GENERAL SOCIAL WORK I

- seminar for critical examination of conceptual and practice issues emerging from the application of contemporary social work knowledge, skills and values in field practice.

Seminars, workshops; two terms; Option of equivalent summer block in combination with SOCWORK 3DD6 A/B (summer). Priority for summer block given to B.S.W. students.
Prerequisite(s): SOCWORK 2A06 A/B, SOCWORK 2BB3, and SOCWORK 2CC3; and permission of the School of Social Work
Co-requisite(s): SOCWORK 3DD6 A/B S
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOCWORK 3DD6 A/B S.

SOCWORK 3E03 - INDIVIDUAL PRACTICE ACROSS THE LIFESPAN

Examination of theories of social work practice with individuals at various life stages. Exploration of how social location and social context affects individual development and subsequent social work intervention.
Lectures, Discussion, Exercises ; one term
Prerequisite(s): Enrolment in a Social Work program
Antirequisite(s): SOCWORK 3A03, 3N03, 3R03, 4N03

SOCWORK 3I03 - SOCIAL WORK AND INDIGENOUS PEOPLES

Examination of structural and cultural variables underlying the complex relationships between Indigenous communities and mainstream society, with particular attention to how they are played out in social work practice.
Lectures, discussion, exercises; one term
Cross-list(s): INDIGST 3II3
This course is administered by the School of Social Work.
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03.
Antirequisite(s): SOCWORK 4I03
Not open to students with credit in SOCWORK 4G03 if the topic was Social Work and Indigenous Peoples.

SOCWORK 3ID3 - SPECIAL TOPICS IN INDIGENOUS SOCIAL WORK RESEARCH AND PRACTICE

Critical examination of current topics indigenous Social Work Research and Practice. Topics will vary from year to year and the School should be consulted for details for any particular year. 3 hours, lectures, exercises and discussion.
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03.
Cross-List: INDIGST 3ID3
This course is administered by the School of Social Work.

SOCWORK 3S03 - SOCIAL WORK, DISABILITY AND DIS/ABLEISM

- critical engagement with Social Work and Disability Studies' understandings of 'disability' and 'dis/ableism' to explore how they might intersect to inform social work practice.

Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or SOCWORK 1BB3 and registration in Level III or above of any program.
Not open to students with credit in SOCWORK 4G03 if the topic was Social Work and Disability: Intersections and Exchanges.

SOCWORK 3T03 - POVERTY AND HOMELESSNESS

This course will critically examine social work practices and policies in response to poverty and homelessness including causes, lived experiences, service provision, alternate policy options and activist responses.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program.
Cross-list(s): LABRST 3T03
Not open to students with credit in SOCWORK 4G03 if the topic was Poverty and Homelessness.

SOCWORK 4D06 A/B S - GENERAL SOCIAL WORK II

The course aims to help students to integrate their academic and theoretical work with practice experience as they prepare for graduation into professional practice.
Seminar; Two terms; Option of equivalent block placement in combination with SOCWORK 4DD6 A/B S
Prerequisite(s): SOCWORK 3D06 A/B S, SOCWORK 3DD6 A/B S, and permission of the School of Social Work.
Co-requisite(s): SOCWORK 4DD6 A/B S
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOCWORK 4DD6 A/B S.
It is strongly recommended that students complete SOCWORK 3E03 before enrolling in SOCWORK 4D06 A/B S and SOCWORK 4DD6 A/B S.

SOCWORK 4DD6 A/B S - FIELD PRACTICUM II

Field experience to refine practice skills. Students spend the equivalent of two days per week in social agencies, or with other organizations, in supervised practice.
This course is evaluated on a Pass/Fail basis.
Option of equivalent block placement in conjunction with SOCWORK 4D06 A/B

S.
Prerequisite(s): SOCWORK 3D06 A/B S, SOCWORK 3DD6 A/B S, and permission of the School of Social Work.
Co-requisite(s): SOCWORK 4D06 A/B S
This course is evaluated on a pass/fail basis. Credit in this course is dependent on receiving a Pass and a minimum grade of C+ in SOCWORK 4D06 A/B S. It is strongly recommended that students complete SOCWORK 3E03 before enrolling in SOCWORK 4D06 A/B S and SOCWORK 4DD6 A/B S.

SOCWORK 4QQ3 - INDIGENIZING SOCIAL WORK PRACTICE APPROACHES

This course examines the social worker's role and responsibility in working with diverse Indigenous peoples such as First Nation, Metis and Inuit living on reserve and in urban areas. The concept and process of ethical tensions indigenizing social work practice approaches will be connected to indigenous philosophy and epistemology with the approach of understanding and building relationships and reconciliation between indigenous and non-indigenous peoples, as well practices within the social work profession.
Lectures, discussion, exercises; one term
Not open to students with credit in SOCWORK 4G03 if the topic was Indigenizing Social Work Practice Approaches.
Students are strongly encouraged to take SOCWORK 3I03 before taking SOCWORK 4QQ3.
Cross-list(s): INDIGST 4QQ3
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03.
Antirequisite(s): SOCWORK 3Q03

SOCWORK 4R03 - FEMINIST APPROACHES TO SOCIAL WORK AND SOCIAL JUSTICE

This course explores feminist frameworks and applies them to social work and social justice practices. Students will consider historical and present day feminist social work practice discourses, feminist critiques of social work practice, and critiques of feminist social work practice. This course will also explore themes of intersectionality, oppression, power, resistance, and activism.
Lectures, Discussion, Exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or SOCWORK 1BB3 and registration in Level III or above of any program
Antirequisite(s): SOCWORK 4E03, SOCWORK 4T03

SOCWORK 4SA3 - CRITICAL CHILD WELFARE: FROM THEORY TO PRACTICE

An advanced course on the development of knowledge, skills, and attitudes needed for child welfare work. Attention to the social/political factors that shape the way practice is imagined and delivered.
Seminars, discussions, group work, case simulation, exercises; one term
Prerequisite(s): SOCWORK 2A06 A/B, 2BB3 and 4W03 (all with a minimum grade of C+), and permission of the instructor and the School of Social Work.

SOCWORK 4TR3 - DEYOHAHAGE: GIHĘ' GOWAHNEH/TWO ROW ON THE GRAND: CULTURAL RESURGENCE, RESPECT & RECONCILIATION

This land/water-based interdisciplinary and experiential course will join the Two Row on the Grand participants in a community-based and organized 10-day canoe paddle. The course will explore Indigenous and decolonizing theoretical knowledge, skills, and practices that are guided by the original peace treaty Deyohahage:gihę'gowahneh - Two Row Wampum between the Haudenosaunee and settler nations/communities working to live together in ways that are framed by the ethics of peace, friendship, and respect. The course will provide students with opportunities to understand the reality of Indigenous cultural knowledge and perspectives (ontology), the value or goodness of daily actions (axiology), and the way of knowledge or how we come to know by means of the natural environment and knowledge keepers (epistemology). Students will participate in learning and understanding cultural resurgence and reconciliation by paddling the river, enjoying meals, camping, cultural/educational teachings, storytelling, sharing circles, and forming friendships. Students will also consider environmental justice which is related to Earth centered approaches to relationships and accountability between people and people and the natural world.
Prerequisite(s): Registration in a Social Work or Indigenous Studies program and permission of the instructor.
Cross-List: INDIGST 4TR3

Gender Studies

The following courses in Gender Studies are administered by Gender and Social Justice (Chester New Hall Room 321, ext. 27734, https://gsj.humanities.mcmaster.ca/)
Courses
If no prerequisite is listed, the course is open.

GENDRST 1A03 - GENDER, RACE, CULTURE, POWER

An interdisciplinary introduction to Gender Studies and Critical Race Theory focusing on how gender and race shape and are shaped by culture (including popular culture), systems of power and institutional ideologies.
Two lectures, one tutorial (three hours); one term
Antirequisite(s): WOMENST 1A03

GENDRST 1AA3 - GENDER, FEMINISM AND SOCIAL JUSTICE

An interdisciplinary and intersectional introduction to feminism as a tool for critical analysis and as a shaping force deployed (or challenged) by activists in diverse movements to make and sustain social change.
Two lectures, one tutorial (three hours); one term
Antirequisite(s): WOMENST 1AA3

GENDRST 2AA3 - FEMINIST THOUGHT

History of feminist theorizing, including liberal, radical, socialist, multiracial, poststructural, Black, postcolonial, third wave, intersectional, queer and global feminist approaches.
Two lectures, one tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ENGLISH 2AA3, WOMENST 2AA3

GENDRST 2BB3 - IMAGES OF THE DIVINE FEMININE

An examination of some of the ways the divine has been portrayed as feminine in diverse cultures.
Two lectures, one tutorial; one term
Cross-list(s): SCAR 2BB3
Antirequisite(s): RELIGST 2BB3, WOMENST 2BB3
This course is administered by the Department of Religious Studies.

GENDRST 3BB3 - GENDER AND VISUAL CULTURE

Students will explore ideas about representation, spectatorship and production in relation to issues of social difference, such as gender, race and class. Emphasis is on visuality in forms such as film, video, television, advertising, et cetera.
Two hour lecture and discussion, plus one weekly film screening; one term
Cross-list(s): THTRFLM 3P03
Prerequisite(s): Registration in Level III or above
Antirequisite(s): CMST 3BB3, WOMENST 3BB3
Not open to students with credit or registration in WOMENST 3B03, if the topic was Images of Women: Reading Art, Media and Popular Culture.

GENDRST 3BW3 - GENDER IN ANCIENT EASTERN MEDITERRANEAN

This course analyzes gender roles in Biblical literature and other texts of Ancient Near East and Mediterranean regions. By examining how gender is depicted in different genres of literature and material artifacts, we will learn about ancient authors' understanding of gender identities.
Two lectures, one tutorial; one term
Cross-list(s): SCAR 3BW3
Antirequisite(s): RELIGST 2B03, WOMENST 2B03, WOMENST 3BW3
This course is administered by the Department of Religious Studies.

GENDRST 3FF3 - GENDER AND RELIGION

An examination of gender in one or more religious traditions.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): SCAR 3FF3
Antirequisite(s): RELIGST 2SS3, 3FF3, WOMENST 3FF3
This course is administered by the Department of Religious Studies.

GENDRST 3RR3 - 'CRIPPING' PERFORMANCE: DEAF, MAD AND DISABLED PERFORMANCE IN CANADA

This course will explore the history and culture of disabled, Mad and Deaf theatre and performance. Delving in Canada's rich 45 year history of disabled, Deaf and Mad theatre, the course will consider intersectionality, access and interdependence as core tenets of this milieu. This course is rooted in understandings of disability justice and will touch on the intermingling of disabled activism with performance and the current push for changes in the Canadian theatre landscape for Deaf, Mad and disabled creators.
Three hours; one term
Prerequisite(s): Registration in level II or above of any program
Cross-list(s): THTRFLM 3RR3, IARTS 3RR3
This course is administered by School of the Arts.

General Technology

Courses in General Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca

GENTECH 1BZ3 - FOUNDATIONS OF BUSINESS

Students are given an introduction to the functional areas within businesses and an overview of the local and global business environments. The fundamentals of micro-economics and macro-economics are introduced, as well as sustainability in the environment of business.
Two lectures; one tutorial (one hour); second term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 1CS3, 1CZ3

GENTECH 1PC3 - PROFESSIONAL COMMUNICATIONS

Students will develop their written and oral communications skills with an emphasis on styles appropriate for a technology-based workplace including technical report writing. They will also develop their teamwork, problem solving, and research skills.
Two lectures; one tutorial (two hours): first term
Prerequisite(s): Registration in the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 1CS3, 1CZ3, 3TC3, 4TC3, SFGNTECH 4TC3

GENTECH 2EE3 - ENGINEERING ECONOMICS

Costing methods of engineering designs and processes; minimum attractive rate of return, return sensitivities, time value of money, internal rates of return, pay-back period, amortization of equipment and capital cost allowance structures.
Three lectures; second term
Prerequisite(s): Registration in Level II of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 3EE3, SFGNTECH 3EE3

GENTECH 2HR3 - HUMAN RESOURCE FUNDAMENTALS

This course provides and overview and introduction to the human resource functions that support an organizations goals and objectives. Topics include: Designing and analyzing jobs; recruitment and selection; onboarding and training; career development; and performance management.
Three lectures: second term
Prerequisite(s): Registration in Level II of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 1HR3, GENTECH 2PW3

GENTECH 2MP3 - MANAGEMENT PRINCIPLES

The course examines fundamental management principles of planning, organizing, leading, and controlling in technology organizations. Emphasis is placed on understanding and application of human resource management practices to engage people in attaining organizational goals.
Three lectures: first term
Prerequisite(s): Registration in Level II of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 1HR3, 1OB3, 3MP3, 3OB3, 4T03, SFGNTECH 3MP3

GENTECH 3DM3 - CREATIVITY, INNOVATION AND TECHNOLOGY

This course is a blend of hands-on and theoretical treatment on the subject of creating new technological product and service value in our society. Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program

Antirequisite(s): SFGNTECH 3DM3

GENTECH 3EE3 - ENGINEERING ECONOMICS

Costing methods for engineering designs and processes; minimum attractive rate of return, return sensitivities, time value of money, internal rates of return, payback period, amortization of equipment and capital cost allowance structures.
Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 1EE3, 2EE3, SFGNTECH 3EE3

GENTECH 3FF3 - FINANCIAL SYSTEMS

The course focuses on departmental budget methodologies, understanding and interpretation of various financial statement components in terms of their relevance to managerial decision making.
Three lectures; first term
Prerequisite(s): Registration in Level II or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 1FS3, 1FT3, 3FS3, SFGNTECH 3FS3

GENTECH 3FS3 - FINANCIAL SYSTEMS

The course focuses on departmental budget methodologies, understanding and interpretation of various financial statement components in terms of their relevance to managerial decision making. Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 1FS3, 1FT3, 3FF3, SFGNTECH 3FS3

GENTECH 3LS3 - QUALITY CONTROL AND ASSURANCE METHODS

Statistical tools, tests, design and analysis of planned experiments, Taguchi methods, control charts for variables and attributes, capability analysis, acceptance sampling, elements of reliability, quality assurance, and ISO 9000 certification.
Three lectures; first term.
Prerequisite(s): ENGTECH 2ES3 or ENGTECH 3ES3; and registration in Level II or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 3T03, 4SS3, MANTECH 3LS3

GENTECH 3MB3 - FUNDAMENTALS OF MARKETING

This course introduces the 4Ps of marketing: product, price, promotion, and place with a Business-to-Business focus. Global and high technology markets and their unique challenges will be presented. Students will learn to make marketing decisions within a strategic framework.
Three lectures; first term
Prerequisite(s): Registration in Level III or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 4MK3, 4MB3, 4TS3, SFGNTECH 4MK3

GENTECH 3MP3 - MANAGEMENT PRINCIPLES

The course examines fundamental management principles of planning, organizing, leading and controlling in technology organizations. Emphasis is placed on understanding and application of human resource management practices to engage people in attaining organizational goals.
Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, Manufacturing the Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 2MP3, 3OB3, SFGNTECH 3MP3

GENTECH 3MT3 - PROJECT MANAGEMENT

Introduction to best practice in the management of technical projects including the use of planning, software and the management of people.
Three lectures; first term
Prerequisite(s): GENTECH 2MP3 and registration in Level II or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 3PM3, 4PM3, SFGNTECH 4PM3

GENTECH 4EM3 - LEGAL AND REGULATORY ISSUES

This course is an introduction to the legal, ethical, and regulatory frameworks that professional engineers and related professions must observe in the Province of Ontario. Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in one of the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): SFGNTECH 4EM3

GENTECH 4EN3 - ENTREPRENEURIAL THINKING AND INNOVATION

This course introduces students to the interrelationship of entrepreneurial thinking and innovation at both the industry and firm level.
Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): GENTECH 3EE3 and registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 2EN3, 2ET3, 3ET3, 3EN3, 4EN3, 4EP3, 4ET3, SFGNTECH 4EN3

GENTECH 4EP3 - ENTREPRENEURIAL THINKING AND INNOVATION

This course introduces students to the interrelationship of entrepreneurial thinking and innovation at both the industry and firm level.
Three hours, virtual blended delivery; second term
Prerequisite(s): GENTECH 2MP3, 3FF3 and registration in Level II or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 2EN3, 2ET3, 3EN3, 4EN3, 3ET3, SFGNTECH 4EN3

GENTECH 4FT3 - STRATEGIC MANAGEMENT

Formerly GENTECH 3FT3
This capstone course examines the total view of the organization and how it relates and interacts with various factors in its environment to gain long-term

sustainable advantage.
Three hours virtual blended delivery; first term
Prerequisite(s): GENTECH 1FT3 or 3FF3, 3ET3 or 4EP3, ENGTECH 4EE0 and registration in Level III or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): GENTECH 3FT3, 3SF3, 4SF3, SFGNTECH 4SF3

GENTECH 4LM3 - LEAN THINKING AND PRACTICES

The course focuses on lean thinking and approaches to enable the deployment and adaption of tools aimed at minimizing waste, removing non-value added activities, and pursuing incremental improvements across organizations.
Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 4LT3, SFGNTECH 4LM3

GENTECH 4MK3 - FUNDAMENTALS OF MARKETING

This course introduces the 4Ps of marketing: product, price, promotion, and place with a Business-to-Business focus. Global and high technology markets and their unique challenges will be presented. Students will learn to make marketing decisions within a strategic framework.
Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 3MB3, 4MB3, 4TS3, SFGNTECH 4MK3

GENTECH 4OM3 - OPERATIONS MANAGEMENT

Formerly GENTECH 4SC3
This course addresses the management of operations at the strategic, tactical and operations levels. Emphasizing decisions required to successfully design, create and deliver goods and services in a globalized marketplace.
Three lectures; second term
Prerequisite(s): GENTECH 3LS3 and registration in Level III or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program

GENTECH 4PM3 - PROJECT MANAGEMENT

Introduction to best practice in the management of technical projects including the use of planning, software and the management of people. Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 3MT3, 3PM3, SFGNTECH 4PM3

GENTECH 4SE3 - TECHNOLOGY ETHICS AND SUSTAINABILITY

The course explores the social implications and environmental impacts of technologies and the ethical challenges they impose on technology professionals. Critical thinking skills and professional responsibility are examined using real-ethical dilemmas to help students develop a professional ethical identity that can be carried forward into their career.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): CIVTECH 4EI3, SFGNTECH 4SE3, GENTECH 4TE3

GENTECH 4SF3 - STRATEGIC MANAGEMENT

This course examines the 'total' view of the organization and how it relates and interacts with various factors in its environment to game long-term sustainable advantage.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): GENTECH 3FS3 and registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 3FT3, 3SF3, 4FT3, SFGNTECH 4SF3

GENTECH 4ST3 - CONTEMPORARY ISSUES IN MANAGEMENT

Students are offered a selection of three to four emerging issues of the day as those issues relate to current and emerging technology and management technology practices. These topics could include supply chain management, ERP, knowledge management, 6 sigma methods, etc.
Three lectures; one term; may be offered in an in-person or virtual format
Prerequisite(s): Registration in the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): SFGNTECH 4ST3

GENTECH 4TC3 - TECHNICAL COMMUNICATIONS

This course introduces students to the best practices for essential written, spoken, and graphic communications used in technology workplaces. Emphasis is placed on how to conduct research, analyze information, and design communication materials that are succinct and customized to the readers' needs.
Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in one of the Civil Engineering Infrastructure Technology Co-op program, the Manufacturing Engineering Technology Co-op program, or the Power and Energy Engineering Technology Co-op program
Antirequisite(s): GENTECH 3TC3, SFGNTECH 4TC3

GENTECH 4TE3 - TECHNOLOGY ETHICS AND SUSTAINABILITY

The course explores the social implications and environmental impacts of technologies and the ethical challenges they impose on technology professionals. Critical thinking skills and professional responsibility are examined using real-ethical dilemmas to help students develop a professional ethical identity that can be carried forward into their career.
Three lectures; first term
Prerequisite(s): ENGTECH 4EE0, and registration in Level III or above of the Automation Systems Engineering Technology Co-op program, the Automotive and Vehicle Engineering Technology Co-op program, or the Biotechnology Co-op program
Antirequisite(s): CIVTECH 4EI3, SFGNTECH 4SE3, GENTECH 4SE3

German

Courses in German are administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/

Notes

1. Students should note that the Department has classified its German language courses under the following categories:
   - **Introductory Level Language Course:** GERMAN 1Z06 A/B S
   - **Intermediate Level Language Courses:** GERMAN 1B03, 1BB3, 2Z03, 2ZZ3
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
3. Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.
4. The following are courses open as electives to students registered in Level II or above of any undergraduate program.
   - GERMAN 2FT3 - The Fairy Tale (Taught in English)
   - GERMAN 2GA3 - Berlin/Vienna: The Cultural Life of these Cities (Taught in English)
   - GERMAN 2KK3 - Postmodern Alienation and Anxieties - Kafka for the Twenty-First Century (Taught in English)
   - GERMAN 2N03 - The Holocaust in Film and Fiction (Taught in English)
   - GERMAN 2P03 - Modern Germany Through Film: Golden 20s - Avant Garde - Transnational Cinema (Taught in English)
   - GERMAN 2Q03 - Horror Film: Vampires, Monsters, and Mad Scientists (Taught in English)
   - GERMAN 3H03 - The New Europe: A New Germany (Taught in English)

Courses

If no prerequisite is listed, the course is open.

GERMAN 1B03 - INTERMEDIATE GERMAN I

- course designed to expand German linguistic skills through practice in reading, writing, listening and speaking, promoting intercultural learning and international awareness.

Three hours; one term
Prerequisite(s): Grade 12 U or M equivalent
Antirequisite(s): GERMAN 2Z03, 2ZZ3
Not open to students with credit or registration in GERMAN 1BB3. The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1BB3 - INTERMEDIATE GERMAN II

Through integrated and interactive practice in reading, writing, listening and speaking, this course is intended to serve as a foundation for the advanced study of German language and culture. The sequels to this course are GERMAN 3Z03 and 3ZZ3.
Three hours; one term
Prerequisite(s): GERMAN 1B03
Antirequisite(s): GERMAN 2ZZ3

GERMAN 1Z06 A/B S - BEGINNER'S INTENSIVE GERMAN

This course enables students to communicate effectively and accurately in German. Using multimedia resources, students acquire the basics of German grammar and develop language skills in order to master everyday situations. The sequel to this course is GERMAN 2Z03.
Three hours; two terms
Antirequisite(s): Grade 12 U or M equivalent, GERMAN 1ZZ3
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2FT3 - THE FAIRY TALE (TAUGHT IN ENGLISH)

An examination of fairy tales from a variety of cultures and historical periods with particular emphasis on German tradition and the work of the Grimm Brothers. Students will also explore theories of the folktale and their implications for our understanding of other literary genres.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ENGLISH 3F03

GERMAN 2GA3 - BERLIN/VIENNA: THE CULTURAL LIFE OF THESE CITIES (TAUGHT IN ENGLISH)

Through literature, film, and music we will trace the history and culture of Berlin and Vienna, from the end of the 19th century to the present. We will discuss Freud and psychoanalysis in Vienna, the Golden Twenties in Berlin, the Third Reich, the post War period, and contemporary multiculturalism.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program.

GERMAN 2KK3 - POSTMODERN ALIENATION AND ANXIETIES - KAFKA FOR THE TWENTY-FIRST CENTURY (TAUGHT IN ENGLISH)

This course is forward-looking to disasters of the 20th and 21st centuries, to Kafkaesque, postmodern anxieties and alienation, links between terror and technology, arbitrary legal systems and abuses of power in literature, film, and popular culture.
Three hours; one term
Prerequisite(s): Registration in Level II or above
Offered on rotation.

GERMAN 2N03 - THE HOLOCAUST IN FILM AND FICTION (TAUGHT IN ENGLISH)

Focusing on the moral, philosophical, and cultural legacy of the Holocaust through the artistic imagination, we will explore the roots of European antisemitism, the Final Solution, politicization, universalization, trivialization, aestheticization, commercialization, Holokitsch.
Two hour lecture, two hour tutorial; one term
Prerequisite(s): Registration in Level II or above
Offered on rotation.

GERMAN 2P03 - MODERN GERMANY THROUGH FILM: GOLDEN 20S - AVANT GARDE - TRANSNATIONAL CINEMA (TAUGHT IN ENGLISH)

This course explores German culture through films which reflect and shape different German national identities before, during, and after WWII, including the Cold War, East & West Germany, unification, racism, Islamophobia, and the recent refugee crisis.
Two hour lecture, two hours for film screening; one term

GERMAN 2Q03 - HORROR FILM: VAMPIRES, MONSTERS, AND MAD SCIENTISTS (TAUGHT IN ENGLISH)

This course will explore the aesthetics of gore and violence in both classic gothic & expressionist film noir and contemporary horror films from around the world, using methods drawn from film theory and cultural studies.
Four hours (Two hours for screening, two hours for lecture); one term
Prerequisite(s): Registration in Level II or above of any program

GERMAN 2Z03 - INTERMEDIATE GERMAN I

The course is designed to further expand German linguistic skills through integrated and interactive practice in reading, writing, listening and speaking. The sequel to this course is GERMAN 2ZZ3.
Three hours; one term

Prerequisite(s): GERMAN 1Z06 A/B S
Antirequisite(s): GERMAN 1B03
Not open to students with credit or registration in GERMAN 2ZZ3. The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2ZZ3 - INTERMEDIATE GERMAN II

Through integrated and interactive practice in reading, writing, listening and speaking, this course is intended to serve as a foundation for the advanced study of German language, literature and culture. The course is enhanced by the use of WebCT and multimedia technology.
Three hours; one term
Prerequisite(s): GERMAN 2Z03
Antirequisite(s): GERMAN 1BB3
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3H03 - THE NEW EUROPE: A NEW GERMANY (TAUGHT IN ENGLISH)

In the heart of the 'New Europe' lies a 'New Germany,' united after almost a half-century of division. German literature and film provide an insight into this fascinating multicultural world.
Three hours; one term
Prerequisite(s): Registration in Level II or above

GERMAN 4II3 A/B S - INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.
Prerequisite(s): 12 units of German above Level I and permission of the Department

Global Peace and Social Justice

Courses in Global Peace and Social Justice (PEACJUST) are administered by Global Peace and Social Justice (Faculty of Humanities).
Chester New Hall, Room 619, ext. 24416
http://peacestudies.humanities.mcmaster.ca/
Courses

PEACJUST 1A03 - PEACE, JUSTICE, HUMAN RIGHTS

From Black Lives Matter to #MeToo, migration crises and climate change news, this course examines values and ideologies in local and global struggles for peace, justice and human rights. Concepts: peace, conflict, war, injustice, violence, nonviolence, oppression, are introduced. Historical and contemporary case studies.
Lectures and tutorial (three hours); one term
Antirequisite(s): IBH 1BD3, PEACEST 1A03

PEACJUST 1VM3 - PASS THE MIC: CONVERSATIONS ON JUSTICE

Exploration of diverse topics related to peace, justice and resistance through interactive guest lectures from esteemed thinkers and leaders from McMaster and the wider community. Community-based learning is integrated by attending public events. The course is anchored by conversations on how we are positioned by/how we can position ourselves in relation to past and present social issues.
Lecture, tutorial and event attendance (three hours); one term

PEACJUST 2C03 - PEACE, JUSTICE, AND POPULAR CULTURE

This course investigates how and why popular culture and media normalize or challenge inequities, injustice, and ecological destruction in historical and contemporary contexts.
Lectures and tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): PEACEST 2C03

PEACJUST 2CS3 - DECOLONIZATION AND ACTIVISM: CREATING SOCIAL CHANGE

From sit-ins to street theatre, reconciliation, peacebuilding and media campaigns, diverse modes of struggle against injustice abound. Using interdisciplinary anti-oppression approaches, this course examines strategies used around the world to foster social change.
Lectures and tutorials (three hours); one term
Prerequisite(s): Registration in level II or above of any program

PEACJUST 2G03 - BEYOND BORDERS: RACE, GENDER & COLONIALITY IN MIGRATION

This course will consider the ways in which race, gender, coloniality, and other forms of inequalities frame globalization. We will examine these issues from both a historical and contemporary standpoint. Students will learn to think critically about power relations, social hierarchies, dominant narratives and how these all play out on a global scale to reproduce inequalities that are shaped by legacies of colonialism and racism and their new iterations.
Lectures and tutorials (three hours); one term
Prerequisite(s): Registration in Level II or above

PEACJUST 2GW3 - A HISTORY OF GLOBAL WAR

- survey of the course and development of the two global wars of the twentieth century covering the period from 1914 to 1945. The emphasis is on the military, economic, and political events that characterised the conflicts.

Lectures (three hours); one term
Cross-list(s): HISTORY 2GW3
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2S03, 2Y03, PEACEST 2GW3
This course is administered by the Department of History.

PEACJUST 2HC3 - THE HISTORY OF CHILDHOOD (IN) JUSTICE IN CANADA

This course examines how diverse childhoods have been shaped by injustice and movements for justice from the late 19th century to today in Canada. The course considers the concept of childhood and childrens lived experiences through a socio-historical lens.
Two hour lecture, one hour tutorial; one term
Cross-list(s): HISTORY 2HC3
Prerequisite(s): Registration in Level II or above
This course is administered by the Department of History.

PEACJUST 2LS3 - LANGUAGE AND SOCIETY

An introduction to sociolinguistics covering such topics as linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.
Three hours; one term
Cross-list(s): LINGUIST 2S03

Prerequisite(s): Registration in Level II or above
Antirequisite(s): CMST 3G03, LINGUIST 3X03, PEACEST 2LS3
This course is administered by the Department of Linguistics and Languages.

PEACJUST 2M03 - BEING, BELONGING, AND MIGRATION: IN PURSUIT OF RIGHTS AND JUSTICE

This interdisciplinary course will examine the threads that connect migration, identity, and social justice in a global context. Topics will include global migration trends, immigration policies, precarious migrants, settlement experiences, xenophobia and racialization, transnational communities, and intergenerational diasporic identities. Utilizing case studies, literature, media, and engaging discussions, students will develop a nuanced understanding of the intersections between privilege, power, and marginalization within contemporary immigrant, refugee, and diaspora communities in Canada and around the world.
Three hour lecture; one term.
Prerequisite(s): Registration in Level II or above

PEACJUST 2XX3 - SOCIAL & STRUCTURAL DETERMINANTS OF HEALTH

Social inequities often make it difficult for individuals, families, groups and communities to attain or maintain health. This class is designed to critically analyze the social and structural determinants that create health disparities. The social determinants of health include social identities that influence health outcomes, such as race, socio-economic status, culture, gender identity, sexual orientation, age, disability, and citizenship status. The structural determinants of health is a concept that considers how these social identities shape policies within our social structures that impact our social and economic well-being and health. Students will explore their own attitudes, beliefs and experiences around these determinants of health and acquire the knowledge and skills to influence and intervene on decisions, actions and policies that drive transformative health systems in Canada and globally.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

PEACJUST 3B03 - PEACE-BUILDING AND HEALTH INITIATIVES

An examination of the multiple links between health and peace, concentrating on social determinants; conflict reduction; food, sanitation and water supplies; and violence prevention; in crisis and non-crisis situations.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): PEACEST 3B03

PEACJUST 3C03 - RESEARCHING GLOBAL PEACE AND SOCIAL JUSTICE

Approaches, theories, and methods to conducting research and translating, sharing, and mobilizing knowledge to diverse audiences to address the intersections of global peace and social justice. Students will develop an appreciation for the key epistemological, philosophical, and ethical considerations that need to be made in conducting research at the intersection of peace and social justice, and hone their skills in generating research questions, conducting secondary research, analyzing and applying research methodologies, and identifying conceptual frameworks and theories that will help frame research findings.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program; at least three units in PEACEST or PEACJUST; and an additional three units of PEACEST, PEACJUST or GENDRST; or permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 3C03

PEACJUST 3CY3 - CHILDREN, YOUTH & MEDIA

This course explores the relationship between children, youth, and media, including central debates, theories, and research. Core concerns involve media literacy; cultural, educational, and social policy; media analysis; identity, reception; social media and new technologies; and youth media production.
Three hours; one term
Cross-list(s): CMST 3CY3
Prerequisite(s): Registration in Level III or above of any program in Communication Studies, Multimedia, Media Arts, Peace Studies or Global Peace and Social Justice
Antirequisite(s): CMST 2EE3
This course is administered by the Department of Communication Studies and Multimedia.

PEACJUST 3D03 - GLOBALIZATION AND PEACE

Investigation of complex systems approaches to understanding how social-cultural-ecological change influences globalization and peace.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): PEACEST 3D03

PEACJUST 3GG3 - THEORIES OF DECOLONIZATION AND RESISTANCE

- study of theoretical and cultural works that examine the effects of empire and chart projects for decolonization. Introduces debates in Indigenous and postcolonial studies, including as they engage with theories of racial capitalism, gender and sexuality, globalization, war, environmental change.

Three hours; one term
Cross-list(s): ENGLISH 3GG3
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3R06 A/B, ENGLISH 3R06 A/B, PEACEST 3E06 A/B, PEACEST 3GG3
This course is administered by the Department of English and Cultural Studies.

PEACJUST 3P03 - PRACTICUM: PRACTICAL PEACE BUILDING

Exploration of service, entrepreneurship, and other modes of engagement with practical peace building through workplace experience.
Student-initiated voluntary placement for one day per week under supervised practice; one term
Prerequisite(s): Registration in Level III or above of a program in Peace Studies or Global Peace and Social Justice; or permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 3P03
This course is evaluated on a Pass/Fail basis.

PEACJUST 3RR3 - RACE, RELIGION AND MEDIA

This course examines historical constructions of different races and religions in the media, primarily film, television and the press, and asks how these constructions may manifest themselves in contemporary forms of media and in current events. Students will learn to deconstruct visual and written depictions across a variety of media.
Cross-list(s): CMST 3RR3
Three hours; one term

Prerequisite(s): CMST 1A03, MMEDIA 1A03, MEDIAART 1A03, PEACJUST 1A03 or PEACJUST 1VM3; and registration in Level III or above
This course is administered by the Department of Communication Studies and Multimedia.

PEACJUST 3V03 - GLOBAL ANGLOPHONE LITERATURE AND FILM

- study of literature, film and other forms of popular culture by artists from South Asia, Africa, and the Caribbean, and their overseas diasporas. Introduces students to theories of race, gender, sexuality, indigeneity, citizenship, and the nation as these take up histories of colonialism, imperialism, and globalization.

Three hours; one term
Cross-list(s): ENGLISH 3V03
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CSCT 3R06 A/B, ENGLISH 3R06 A/B, PEACEST 3E06 A/B
This course is administered by the Department of English and Cultural Studies.

PEACJUST 3W03 - CONTEMPORARY NATIVE LITERATURE IN CANADA

- study of significant works by Native writers who give voice to their experience in Canada. Issues examined include appropriation of voice, native identity, women in indigenous societies, and stereotyping.

Three hours (lectures and seminars); one term
Cross-list(s): ENGLISH 3W03, INDIGST 3D03
Prerequisite(s): Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor
Antirequisite(s): CSCT 3W03, PEACEST 3W03
This course is administered by Indigenous Studies.

PEACJUST 3XX3 - HUMAN RIGHTS IN HISTORY

- thematic examination of the global historical evolution of the notion of human rights from antiquity up to the Universal Declaration of Human Rights in the 20th century.

Three hours (lectures and discussion); one term
Cross-list(s): HISTORY 3XX3
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 3XX3
May be offered in person or online.
This course is administered by the Department of History.

PEACJUST 3Y03 - SPECIAL TOPICS IN PEACE AND JUSTICE

Consult the Global Peace and Social Justice Office for the topic to be offered.
Lecture and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): PEACEST 3Y03
PEACJUST 3Y03/PEACEST 3Y03 may be repeated, if on a different topic, to a total of six units.

PEACJUST 4B03 - INDEPENDENT RESEARCH

Students develop and execute their own research projects, in regular consultation with a faculty supervisor, and produce and orally defend a substantial paper. May include a practicum component.
Prerequisite(s): Registration in Level III or above of the Combined Honours in Peace Studies or Global Peace and Social Justice Program with a Grade Point Average of at least 8.5, and permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 4B03

PEACJUST 4FC3 - COMMUNITY ENGAGED EXPERIENTIAL LEARNING

Community-engaged experiential learning: examining theory and practice in situ through action learning and/or action research. Students and project-partners will explore problem-based learning opportunities.
Prerequisite(s): Registration in Level III or above of any program and permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 4FC3

PEACJUST 4G03 - PEACE THROUGH HEALTH: PRAXIS

Exploring global perspectives of peace through health, addressing social determinants of health, gender and environment, and examining individual and institutional leadership, using problem-based and experiential learning.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or above of a program in Peace Studies or Global Peace and Social Justice; or permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 4G03

PEACJUST 4GG3 - NATION AND GENOCIDE IN THE MODERN WORLD

- thematic study of genocide and mass murder in the twentieth century from a human rights perspective. The first part of the course covers the theoretical and legal aspects of genocide studies. The second part explores specific case studies of colonial massacres, the Holocaust, and the Cambodian and Rwandan genocides.

Cross-list(s): HISTORY 4G03
Prerequisite(s): Registration in Level III or IV of any Honours program in History, Peace Studies or Global Peace and Social Justice
Antirequisite(s): PEACEST 4GG3
Departmental permission required.
This course is administered by the Department of History.

PEACJUST 4GH3 - SOCIAL JUSTICE PERSPECTIVES ON GENDER AND HEALTH

Drawing on intersectional feminist, anti-racist, and anti-colonial feminist theories, this course examines gender as it intersects with race, culture, sexual orientation, citizenship status, socio-economic status, age, and (dis)ability shapes health outcomes and experiences accessing health services.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or above of a program in Peace Studies or Global Peace and Social Justice; or permission of the Global Peace and Social Justice program *Departmental permission required.*

PEACJUST 4L03 - PEACE, ENVIRONMENT AND HEALTH

Using an intersectional lens, this course examines the link between peace, environment, health and the social factors that shape experiences of pollution, contamination, and climate change inequities globally.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or above of a program in Peace Studies or Global Peace and Social Justice; or permission of the Global Peace and Social Justice program
Antirequisite(s): PEACEST 4L03

PEACJUST 4RR3 - TRUTH AND RECONCILIATION AFTER ATROCITY

This course explores truth commissions and other truth-seeking mechanisms established globally to address historical atrocities and contemporary human

rights abuses.
Seminar (two hours): one term
Cross-list(s): HISTORY 4RR3
Prerequisite(s): Registration in Level III or IV of any Honours program in History, Peace Studies or Global Peace and Social Justice
Antirequisite(s): PEACEST 4RR3
Departmental permission required.
This course is administered by the Department of History.

PEACJUST 4ST3 - SPECIAL TOPICS SEMINAR

- specialized approach to selected topics of current relevance to peace research, for example, social justice, restorative justice, truth and reconciliation, climate change, gender, refugee, and migration.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or above of a program in Peace Studies or Global Peace and Social Justice; or permission of the Global Peace and Social Justice program.
Antirequisite(s): PEACEST 4ST3
This course may be repeated, if on a different topic, to a total of 6 units.

Globalization Studies

GLOBALZN 1A03 - GLOBAL CITIZENSHIP

This course provides an interdisciplinary introduction to globalization through a critical engagement with the idea of global citizenship in the contemporary context. The economic, cultural, political, ecological and various other dimensions of globalization will be examined from conceptual perspectives and through a variety of current events and cases.
Three hours (lectures and tutorials); one term

GLOBALZN 2GL0 - GET READY, GET GLOBALLY ENGAGED

The goal of this course is to prepare McMaster students for studying or working abroad, by examining the social and historical contexts, traditions, practices, customs, and risks that may differ from those with which they are familiar. It is the intention of this course to provide a breadth of background that is useful to students in whatever type of international setting they may be studying (e.g., traditional university courses, work with NGOs, voluntary placements, research sites) and be used to develop resources specific to their own location
Three hours; one term Online asynchronous

GLOBALZN 3A03 - THINK GLOBALLY, ACT LOCALLY: GLOBALIZATION, SOCIAL JUSTICE, AND HUMAN RIGHTS

This course examines competing theories, issues, and debates relating to the promotion of social justice and human rights in a Globally interconnected world. Course concepts are animated through opportunities for experiential learning with local communities and networks.
Three hours (lectures); one term
Cross-list(s): ANTHROP 3HH3

Greek

Courses in Greek are administered by the Department of Greek and Roman Studies.
Togo Salmon Hall, Room 706, ext. 24311
http://greekandromanstudies.humanities.mcmaster.ca/
No language other than English is required for Greek courses.
Notes

1. Students should note that the Department has classified its Greek language courses under the following categories:

Introductory Level Language Courses: GREEK 1Z03, 1ZZ3
Intermediate Level Language Courses: GREEK 2A03, 2AA3

2. The following courses are available as electives to qualified students in any program: Greek Language and Literature: GREEK 1Z03, 1ZZ3, 2A03, 2AA3, 3AA3, 3B03 [Inactive], 3BB3, 3C03 [Inactive]
3. Students with Grade 12 Greek U should normally register in GREEK 2A03, but with special permission, may register in either GREEK 1Z03 or 1ZZ3.

Courses
If no prerequisite is listed, the course is open.

GREEK 1Z03 - BEGINNER'S INTENSIVE ANCIENT GREEK I

- rapid introduction to the basic grammar of Ancient Greek.

Four hours (lectures and tutorials); one term
Not open to graduates of Grade 12 Greek U, who must have special permission to register in the course

GREEK 1ZZ3 - BEGINNER'S INTENSIVE ANCIENT GREEK II

This course continues the study of the grammar of Ancient Greek begun in GREEK 1Z03.
Four hours (lectures and tutorials); one term
Prerequisite(s): GREEK 1Z03. Students with Grade 12 Greek U must obtain special permission to register in the course.
This course, with a grade of at least C is accepted as a prerequisite for admission to any Honours program in Greek and Roman Studies, or, with a grade of at least C-, for admission to the B.A. program in Greek and Roman Studies.

GREEK 2A03 - INTERMEDIATE GREEK I

This course continues the study of Greek grammar begun in GREEK 1Z03 and 1ZZ3 and introduces students to the reading of simple passages from Greek authors.
Three lectures; one term
Prerequisite(s): One of Grade 12 Greek U; or GREEK 1ZZ3 with a grade of at least C-. Students using this course as a Humanities I requirement will register for GREEK 2A03 and 2AA3

GREEK 2AA3 - INTERMEDIATE GREEK II

- study of selected passages from Greek authors designed to develop further the student's proficiency in reading Greek. The course may also include grammatical exercises.

Three lectures; one term
Prerequisite(s): GREEK 2A03

GREEK 3AA3 - GREEK PROSE

Selected readings in one or more Greek prose authors.
Three lectures; one term
Prerequisite(s): GREEK 2A03, 2AA3
GREEK 3AA3 may be repeated, if on a different author/work, to a total of six units.

GREEK 3BB3 - TOPICS IN GREEK LITERATURE

Consult the Department for the topic to be offered.
Three lectures; one term
Prerequisite(s): GREEK 2A03, 2AA3
GREEK 3BB3 may be repeated, if on a different topic, to a total of six units.

GREEK 3E03 - TOPICS IN GREEK POETRY

Consult the department for the topic to be offered.
Three lectures; one term
Prerequisite(s): Six units of Level II Greek
GREEK 3E03 may be repeated, if on a different topic, to a total of six units.

GREEK 4T03 - INDEPENDENT STUDY IN GREEK

Selected readings from Greek authors supervised by a member of the Department.
Tutorials; one term
Prerequisite(s): Six units of Level III Greek and registration in Level III or IV of any Honours program in Classics or Greek and Roman Studies and permission of the Department
GREEK 4T03 may be repeated, if on a different topic, to a total of six units.

Greek and Roman Studies

Courses in GKROMST are administered by the Department of Greek and Roman Studies.
Togo Salmon Hall, Room 706, ext. 24311
http://greekandromanstudies.humanities.mcmaster.ca/
No language other than English is required for courses listed under GKROMST.

Department Note

The following courses are available as electives to qualified students in any program:

a. **Greek and Roman Archaeology and Art History**
   - GKROMST 1A03 - Introduction to Greek and Roman Archaeology
   - GKROMST 2B03 - Greek Art
   - GKROMST 2BB3 - Constructing the Ancient World
   - GKROMST 2C03 - Roman Art
   - GKROMST 2CC3 - Archaeology of the Roman Empire
   - GKROMST 3N03 - Connectivity in the Ancient Mediterranean
   - GKROMST 3Q03 - Greek Sanctuaries
   - GKROMST 3S03 - Pompeii, Herculaneum, and Ostia

b. **Greek and Roman History and Society**
   - GKROMST 1M03 - History of Greece and Rome
   - GKROMST 2K03 - The Society of Greece and Rome
   - GKROMST 2HA3 - Athens and Sparta: Democracy, Oligarchy, and War
   - GKROMST 2HB3 - From Alexander to Cleopatra: Cosmopolis and Empire
   - GKROMST 2HC3 - Caesar and the Rise of Autocracy
   - GKROMST 2HD3 - Nero, Decadence, and the End of a Dynasty
   - GKROMST 3HH3 - Roman Slavery

c. **Greek and Roman Literature in Translation**
   - GKROMST 1B03 - An Introduction to Ancient Myth and Literature
   - GKROMST 2D03 - Greek and Roman Mythology
   - GKROMST 2E03 - The Ancient World in Film
   - GKROMST 2YY3 - Greek Tragedy
   - GKROMST 3EE3 - The Greek Historians
   - GKROMST 3ER3 - Epics of Rome
   - GKROMST 3M03 - Greek Intellectual Revolution
   - GKROMST 3YY3 - Ovid

d. **Greek and Latin Languages**
   - GREEK 1Z03 - Beginner's Intensive Ancient Greek I
   - GREEK 1ZZ3 - Beginner's Intensive Ancient Greek II
   - LATIN 1Z03 - Beginner's Intensive Latin I
   - LATIN 1ZZ3 - Beginner's Intensive Latin II

Courses

If no prerequisite is listed, the course is open.
See also courses in *Greek* and *Latin*.

GKROMST 1A03 - INTRODUCTION TO GREEK AND ROMAN ARCHAEOLOGY

- study of the history and methodology of Greek and Roman archaeology illustrated with materials from excavated sites.

Three lectures; one term
Antirequisite(s): CLASSICS 1A03

GKROMST 1B03 - AN INTRODUCTION TO ANCIENT MYTH AND LITERATURE

- study of Greek and Roman mythology and literature. Texts such as Homer, Virgil and Greek tragedies will be read in translation.

Two lectures, one tutorial; one term
Antirequisite(s): CLASSICS 1B03

GKROMST 1M03 - HISTORY OF GREECE AND ROME

The history of Greece and Rome from the bronze age to the fall of Rome based on literary, documentary and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list(s): HISTORY 1M03
Antirequisite(s): CLASSICS 1M03

GKROMST 2B03 - GREEK ART

The architecture, sculpture and painting of the Greek and Hellenistic world.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): ARTHIST 2B03
Antirequisite(s): CLASSICS 2B03, ARTHIST 2B03
Offered on rotation.

GKROMST 2BB3 - CONSTRUCTING THE ANCIENT WORLD

This course will examine the architecture of the ancient world. Using examples ranging from Egyptian pyramids to Greek urbanization to Roman aqueducts, we will interrogate the development of architectural styles, forms of monumentality, and the relationship between power and the built environment.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2BB3
Offered on rotation.

GKROMST 2C03 - ROMAN ART

The architecture, sculpture, and painting of the Roman world.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): ARTHIST 2C03
Antirequisite(s): CLASSICS 2C03
Offered on rotation.

GKROMST 2CC3 - ARCHAEOLOGY OF THE ROMAN EMPIRE

This course explores the material culture of the Roman empire, from great monuments like Hadrian's Wall to the smallest artefacts of glass and pottery, and reveals what this can tell us about the culture and society of the empire's diverse inhabitants.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2CC3
Offered on rotation.

GKROMST 2D03 - GREEK AND ROMAN MYTHOLOGY

- study of the myths of Greek and Roman gods and heroes, their explanation according to theories on the nature of myths, and their use by Greek and Roman authors, particularly Homer and Virgil.

Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2D03
Offered on rotation.

GKROMST 2E03 - THE ANCIENT WORLD IN FILM

The emphasis is on myth (Amazons, Hercules) and history (slave revolts, banquets, decadent emperors), studied via Greek and Latin accounts (in translation) and cinematic versions (e.g. Electra, Medea, Mighty Aphrodite, Apocalypse Now, Spartacus, I Claudius).
Two lectures, plus one weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CMST 2Y03, THTRFLM 2G03, CLASSICS 2E03
Offered on rotation.

GKROMST 2HA3 - ATHENS AND SPARTA: DEMOCRACY, OLIGARCHY, AND WAR

The Classical period of Ancient Greece will be examined from the perspective of its two great rival states, Athens and Sparta, with attention to their rival political and social systems, contrasting cultures, and the generation-long war they fought.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2LA3, CLASSICS 2HA3
Alternates with GKROMST 2HB3

GKROMST 2HB3 - FROM ALEXANDER TO CLEOPATRA: COSMOPOLIS AND EMPIRE

The Hellenistic period of Ancient Greece, examining Alexander's conquests; Seleucid Asia, Antigonid Macedon, Ptolemaic Egypt; dynastic and imperial power struggles; cosmopolitanism and colonialism; Greek and indigenous cultures; science and philosophy; and the triumph of Rome.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2HB3
Alternates with GKROMST 2HA3

GKROMST 2HC3 - CAESAR AND THE RISE OF AUTOCRACY

This course will consider the growth of Roman power in the Mediterranean, the stresses that this put on Roman institutions, and how the crises that brought an end to the Republic led to the dictatorship of Gaius Julius Caesar and set the stage for autocratic regimes to come.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2HC3
Alternates with GKROMST 2HD3

GKROMST 2HD3 - NERO, DECADENCE, AND THE END OF A DYNASTY

The last of the Julio-Claudian emperors, Nero, became notorious for his capriciousness and extravagance. How much of this was myth and how much reality? This course will consider the evolution of the Roman system under the Julio-Claudians and place Nero in his political, economic, and ideological contexts.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CLASSICS 2HD3
Alternates with GKROMST 2HC3

GKROMST 2K03 - THE SOCIETY OF GREECE AND ROME

An examination of selected aspects of the social life of Greece and Rome. Attention will be given to subjects such as work and leisure, war and the warrior, slavery, marriage and family, and the role of women.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): HISTORY 2K03, CLASSICS 2K03
Offered on rotation.

GKROMST 2LW3 - ANCIENT LAW

An overview of the law and legal systems of the ancient world, from Mesopotamia, ancient Israel, Greece, and Rome. Themes may include notions of justice, legal status, family law, property law, delict, injury and crime.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): HISTORY 2LW3, CLASSICS 2LW3
Offered in alternate years.

GKROMST 2MT3 - ANCIENT ROOTS OF MEDICAL TERMINOLOGY

This course presents Greek and Latin roots out of which is built the vocabulary of contemporary medicine and reveals the predictable patterns by which these roots combine. Students will learn to define new compounds and phrases by analysis of their parts.
Three lectures; one term
Antirequisite(s): CLASSICS 2MT3

GKROMST 2YY3 - GREEK TRAGEDY

Selected plays of the Greek tragic playwrights will be read in translation and considered in their literary, historical or social contexts.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): THTRFLM 2Y03, CLASSICS 2YY3
Offered in alternate years.

GKROMST 3EE3 - THE GREEK HISTORIANS

The study in translation of Herodotus, Thucydides, and other Greek historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.
Three lectures; one term
Prerequisite(s): One of CLASSICS 1M03, 2K03, 2LA3, 2HA3, GKROMST 1M03, 2HA3, 2K03, or registration in Level III or above of any program
Antirequisite(s): HISTORY 3EE3, CLASSICS 3EE3
Offered in alternate years.

GKROMST 3ER3 - EPICS OF ROME

This course will examine the great epic poems of Vergil, Ovid and Statius, studying them in the political and cultural context of contemporary Rome and against the background of the tradition of epic poetry.
Three hours; one term
Prerequisite(s): Three units from CLASSICS 1B03, 2D03, 2E03, 2Y03, 2YY3, GKROMST 1B03, 2D03, 2E03, 2YY3; and registration in Level II or above of any program
Antirequisite(s): CLASSICS 3ER3
Offered in alternate years.

GKROMST 3HH3 - ROMAN SLAVERY

An examination of Roman slavery using a variety of sources (historical and juridical texts, funerary inscriptions, archaeological evidence) in order to determine its place in Roman social structure and its importance to the ancient economy and culture.
Three lectures; one term
Prerequisite(s): One of CLASSICS 1M03, 2K03, 2LC3, 2LD3, GKROMST 1M03, 2K03; and registration in Level II or above of any program
Antirequisite(s): HISTORY 3HH3, CLASSICS 3HH3
Offered in alternate years.

GKROMST 3M03 - GREEK INTELLECTUAL REVOLUTION

- study of the birth of rationalistic and naturalistic thought in Greece, placing this intellectual revolution in its social, political and cultural context.

Three lectures; one term
Prerequisite(s): Three units of CLASSICS, GKROMST, HISTORY, or PHILOSOPHY; and registration in Level II or above of any program
Antirequisite(s): HISTORY 3M03, CLASSICS 3M03
Offered in alternate years.

GKROMST 3MT3 - ADVANCED ANCIENT ROOTS OF MEDICAL TERMINOLOGY

This course continues and develops the methods and materials introduced in CLASSICS GKROMST 2MT3, presenting advanced and specialized medical terms and an introduction to the major Latin corpus of anatomical phrases known as the Terminologia Anatomica.
Three hours; one term
Prerequisite(s): CLASSICS 2MT3, GKROMST 2MT3
Antirequisite(s): CLASSICS 3MT3

GKROMST 3N03 - CONNECTIVITY IN THE ANCIENT MEDITERRANEAN

This course explores interconnectedness across the ancient Mediterranean and Western Asia through contact with the Greek world and will interrogate issues such as colonialism, acculturation, and cultural hybridity in these contexts.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Offered in alternate years.
Antirequisite(s): CLASSICS 3N03

GKROMST 3Q03 - GREEK SANCTUARIES

Ancient Greek sanctuaries and their social and political context. Topics will include architecture and art, as well as activities such as sacrifice, athletic games, healing, and oracular consultation.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): ARTHIST 3QQ3
Alternates with GKROMST 3S03 (ARTHIST 3SS3)
Antirequisite(s): CLASSICS 3Q03

GKROMST 3S03 - POMPEII, HERCULANEUM, AND OSTIA

The archaeology of three cities in Italy (Pompeii, Herculaneum, Ostia) will be examined, with a focus on urbanism, public space, and domestic architecture and decoration.
Three lectures; one term
Prerequisite(s): One of CLASSICS 1A03, 2B03, 2BB3, 2C03, 2CC3, 2LC3, or 2LD3, GKROMST 1A03, 2B03, 2BB3, 2C03, 2CC3 and registration in Level II or above of any program.
Cross-list(s): ARTHIST 3SS3
Antirequisite(s): CLASSICS 3S03
Alternates with GKROMST 3Q03 (ARTHIST 3QQ3).

GKROMST 3X03 - ROMAN RELIGION

- study of the role of religion in Roman public and private life using literary, documentary and archaeological evidence.

Three lectures; one term
Prerequisite(s): Registration in Level II or above any program
Antirequisite(s): HISTORY 3X03, CLASSICS 3X03
Offered in alternate years.

GKROMST 3YY3 - OVID

Representative texts of the Latin poet Ovid will be read in translation, especially his erotic poetry and mythical stories. There will be literary analysis and later adaptations in literature and film will be considered.
Three hours; one term
Prerequisite(s): Three units from CLASSICS 1B03, 2D03, 2E03, 2Y03, 2YY3, GKROMST 1B03, 2D03, 2E03, 2Y03, 2YY3; and registration in Level II or above of any program.
Antirequisite(s): CLASSICS 3YY3
Offered in alternate years.

GKROMST 4E03 - SEMINAR IN ANCIENT CULTURE

Consult the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite(s): Six units from Level III CLASSICS or GKROMST or above or registration in Level III or above of an Honours program in Classics or Greek and Roman Studies
CLASSICS or GKROMST 4E03 may be repeated, if on a different topic, to a total of six units.
Antirequisite(s): CLASSICS 4E03

GKROMST 4F03 - SEMINAR IN ANCIENT HISTORY

Consult the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite(s): Nine units from CLASSICS or GKROMST 2HA3, 2HB3, 2HC3, 2HD3, 2K03, 2LA3, 2LB3, 2LC3, 2LD3, 3HH3, 3M03, 3X03 or registration in Level III or above of an Honours program in Classics, Greek and Roman Studies or History
Antirequisite(s): HISTORY 4FA3, CLASSICS 4F03
GKROMST 4F03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

GKROMST 4FP3 - FIELD PRACTICUM IN GREEK AND ROMAN ARCHAEOLOGY

Students will learn the techniques of archaeology in the field (survey, excavation, finds processing) by participating in an excavation at a classical site in the Mediterranean area. Offered during the spring/summer session only.
Prerequisite(s): Six units of CLASSICS or GKROMST 2BB3, 2C03, 2CC3, 3B03, 3Q03, 3S03; and permission of the Department
Antirequisite(s): CLASSICS 4FP3

GKROMST 4H03 - DEATH AND COMMEMORATION IN THE ROMAN WORLD

An examination of attitudes to death and commemoration at ancient Rome incorporating written sources and material culture.

Seminar (two hours); one term
Prerequisite(s): Nine units of CLASSICS or GKROMST including at least three units at Level III or above or registration in Level III or above of an Honours program in Classics or Greek and Roman Studies
Antirequisite(s): CLASSICS 4H03

GKROMST 4L03 - ATHENIAN DEMOCRACY

- study of the institutional, social and cultural dynamics of popular self-government in Athens, exploring how Athenian democracy compares and contrasts with democracy today.

Seminar (two hours); one term
Prerequisite(s): Nine units from CLASSICS or GKROMST 2HA3, 2HB3, 2HC3, 2HD3, 2LA3, 2LB3, 2LC3, 2LD3, 3HH3, 3M03, 3X03, GKROMST 3HH3, 3M03, 3X03 or registration in Level III or above of an Honours program in Classics, Greek and Roman Studies or History.
Antirequisite(s): HISTORY 4LL3, CLASSICS 4L03

GKROMST 4MR3 - THE MYTH AND REALITY OF TROY

- consideration of the role that the Trojans played in the history, art, and literature of the Greeks and Romans.

Seminar (two hours); one term
Prerequisite(s): Nine units of CLASSICS or GKROMST including three units from CLASSICS or GKROMST 2YY3, 2D03, 3EE3, 3YY3, or 3Z03 or registration in Level III or above of an Honours program in Classics or Greek and Roman Studies
Antirequisite(s): CLASSICS 4MR3
Not open to students with credit in CLASSICS 4E03 or GKROMST 4E03, SEMINAR IN ANCIENT CULTURE, if the topic was The Myth and Reality of Troy.

GKROMST 4T03 A/B S - INDEPENDENT STUDY

Reading and research in Greek and Roman Studies, supervised by a department member and culminating in a major paper to be evaluated by the supervisor, with confirmation by a second reader. See Department for more detailed guidelines.
Tutorials; two terms
Prerequisite(s): Registration in Level IV of any Honours program in Classics or Greek and Roman Studies with a Grade Point Average of at least 9.5, and permission of the Department.

Health, Aging and Society

Courses in Health, Aging and Society are administered by the Department of Health, Aging and Society.
Kenneth Taylor Hall, Room 226, ext. 27227
https://healthagingandsociety.mcmaster.ca
Notes

1. Not all Health, Aging and Society courses may be offered every year. Students are advised to consult the Master Timetable published by the Office of the Registrar or contact the Department of Health, Aging and Society after May 1 to determine which courses will be offered in the following academic year.

HLTHAGE 1AA3 - INTRODUCTION TO HEALTH AND SOCIETY

An introduction to the key themes and questions concerning health and health care from within social sciences perspectives.
Three hours (lectures and tutorials); one term
Antirequisite(s): HLTHAGE 1ZZ3, HTHSCI 1RR3, HTHSCI 2RR3
Not open to students in a Nursing or Midwifery program.
Not open to Level I Honours Health and Society.

HLTHAGE 1BB3 - INTRODUCTION TO AGING AND SOCIETY

Examines issues in aging from a multidisciplinary perspective including such topics as: myths and stereotypes of aging, social ties in later life and the aging of the Canadian population. Provides a deeper understanding of aging and the changing body, mind and self, as well as the meaning and experiences, challenges and opportunities of aging and later life.
Three hours (lectures, tutorials and experiential components); one term

HLTHAGE 1CC3 - INTRODUCTION TO MENTAL HEALTH AND ILLNESS

An introduction to well-being and the basic types of mental disorders from social, psychological, behavioral, and medical perspectives.
Lectures and tutorials/discussion (three hours); one term

HLTHAGE 1ZZ3 - INQUIRY: INTRODUCTION TO HEALTH AND SOCIETY

This inquiry course is designed to develop skills basic to an introduction to the key themes and questions concerning health and health care from within social sciences perspectives.
Three hours (lectures and tutorials); one term
Prerequisite(s): Registration in Level I of Honours Health and Society
Antirequisite(s): HLTHAGE 1AA3

HLTHAGE 2A03 - RESEARCH METHODS IN HEALTH AND IN AGING I

This course introduces students to the qualitative and quantitative research methods used in the social sciences. Students will develop skills to read, understand and evaluate the quality of research papers employing both methods.
Three hours (lectures and discussion/tutorials); one term
Prerequisite(s): Registration in any Health, Aging and Society program
Antirequisite(s): CMST 2A03; ENVSOCTY 3MA3; GEOG 3MA3; HLTHAGE 2A06, 3Z06; SOCSCI 2K03, SOCIOL 2Z03, SOCPSY 2K03, SOCSCI 2T03

HLTHAGE 2AN3 - FOOD AND NUTRITION IN SOCIETY

Sociocultural and biological perspectives on nutrition at community and population levels. Prehistoric, historic, and contemporary food and human nutrition, emphasizing links with the environment.
Two hours (lecture), one hour (tutorial); one term
Prerequisite(s): Registration in Level II or above in any program or permission of the instructor. ANTHROP 1AA3 is recommended.
Cross-list(s): ANTHROP 2AN3
This course is administered by the Department of Anthropology.
This course is required of all students wishing to receive an Interdisciplinary Minor in Food, Nutrition and Environmental Health.

HLTHAGE 2B03 - SOCIAL IDENTITY, HEALTH AND ILLNESS

- critical exploration of the role of class, race, gender, ability and age in patterns of health and illness.

Three hours (lectures and discussion/tutorials); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 2BB3 - PERSPECTIVES IN HEALTH, AGING AND SOCIETY

Explores social aspects of health and aging at both the individual and societal levels using a variety of approaches such as life course perspective, political economy, social constructionism, self identity, and a feminist perspective of

aging.
Three hours (lectures and discussions/tutorials); one term
Prerequisite(s): One of HLTHAGE 1AA3, 1ZZ3, 1BB3 or 1CC3 and registration in Level II or above

HLTHAGE 2C03 - HEALTH ECONOMICS AND ITS APPLICATION TO HEALTH POLICY

Economic analyses of health and health care, with a special emphasis on policy issues in the Canadian health care system.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ECON 2CC3
Not open to students registered in an Economics program or with credit or registration in ECON 2Z03 or 3Z03.
This course is administered by the Department of Economics.

HLTHAGE 2D03 - CONTINUUM OF CARE

The course will critically examine the continuum of care options for older adults needing support and services in later life. Some of the topics addressed include quality of life and quality of care issues, challenges involved in care integration across the continuum, environmental design, human diversity and long term care needs, formal and informal support, as well as policy and funding issues.
Lectures, and discussion (three hours); one term
Prerequisite(s): One of HLTHAGE 1AA3, 1ZZ3, 1BB3 or 1CC3 and registration in Level II or above
Antirequisite(s): HLTHAGE 4E03

HLTHAGE 2F03 - AGING AND HEALTH CARE SYSTEMS

This course examines the available international evidence on the impact of aging on health and long-term care expenditures and organization, as well as the choices various societies are making around issues of aging, health, and long-term care, and the equity issues such choices raise.
Lectures and discussion/tutorials (three hours); one term
Prerequisite(s): One of HLTHAGE 1AA3, 1ZZ3, 1BB3 or 1CC3 and registration in Level II or above

HLTHAGE 2GG3 - MENTAL HEALTH AND SOCIETY

An examination of mental health and illness from different social, cultural and historical perspectives, including consideration of changing notions of diagnosis, treatment and prevention.
Three hours (lectures and tutorials); one term
Prerequisite(s): Registration in level II or above

HLTHAGE 2HI3 - HEALTH & PLACE

Introduction to health geography. Contemporary trends and patterns of global mortality and morbidity are explored using examples from different parts of the world. A range of perspectives are used to compliment a geographical viewpoint, including: medical, cultural, ecological, social and demographic.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3
Cross-list(s): ENVSOCTY 2HI3
This course is administered by the School of Earth, Environment & Society.

HLTHAGE 2J03 - SELECTED TOPICS IN AGING AND SOCIETY

This course will provide an exploration of selected topics in aging. Topics may vary from year to year.
Three hours (lectures, discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 2K03 - SELECTED TOPICS IN HEALTH AND SOCIETY

This course will provide an exploration of selected topics in Health Studies. Topics may vary from year to year.
- hours; one term

Prerequisite(s): Registration in Level II or above.

HLTHAGE 2L03 - DRUGS, SEX AND ALCOHOL: SOCIETY AND ITS ADDICTIONS

This course analyzes the place of addictions in modern society. Taking an interdisciplinary perspective, it examines both the social factors that help shape addictive behaviours, as well as those that construct our notions of addiction and dependency.
Three hours (lectures and tutorials); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 2M03 - AGING IN MODERN (AND POST-MODERN) FAMILIES

This course examines how aging and gender combine to affect a range of relationships across different types of family. The relationships considered include relations with one's partner, marital transitions, the relationship between adult children and their parents, sibling ties, grandparent/grandchild relationships, and fictive kin.
Three hours (lecture, discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 2N03 - TREATMENT WITHIN THE WORLD OF MENTAL ILLNESS: DESPERATION AND DEBATE

This course analyzes the treatment of mental health problems. Taking an interdisciplinary perspective, it examines the ideas and ideologies that guide responses to mental illness, as well as the interaction between the social world and psychiatric treatment.
Three hours (lecture, discussion); one term
Prerequisite(s): Registration in Level II or above.

HLTHAGE 2P03 - SEX AND WELLBEING

This course explores how individual and contextual factors affect our sex lives and well-being using various theoretical perspectives, particularly emphasizing quantitative research and psychological theories.
Three hours (lecture, discussion); one term
Prerequisite: Registration in Level II or above.

HLTHAGE 3AA3 - STATE, CIVIL SOCIETY AND HEALTH

This course explores how states, citizens, and civil society act and interact in the definition and pursuit of health.
Three hours (lectures and discussion); one term
Prerequisite(s): One of HLTHAGE 1AA3, 1ZZ3, 1BB3, or 1CC3 and registration in Level II or above

HLTHAGE 3AB3 - THE ANIMAL-HUMAN BOND AND WELLBEING

This course explores key topics and concepts at the intersection of animals and health. One Health is used as a guiding concept to explore topics such as the public health risks posed to humans by animals; the intersection between health care for human and animals; and the animal interventions and assisted

activities that are currently popular for advancing human health.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3B03 - ADVANCED RESEARCH METHODS

This course provides hands-on learning where students develop skills in planning and conducting research: research question identification, tool development and pilot testing, data analysis, and reporting for both quantitative and qualitative approaches.
Three hours (lectures and discussion); one term
Prerequisite(s): HLTHAGE 2A03, and registration in Level III or above of a Health, Aging and Society program
Antirequisite(s): HLTHAGE 2A06, 3A03, 3G03, 3Z06, SOCIOL 3O03
Cross-list(s): SOCPSY 3L03

HLTHAGE 3BB3 - FIELD EXPERIENCE

Directed observation of 40 hours in an approved field setting and a weekly seminar focusing on integration of theoretical knowledge and field experience. Approximately four hours field observation per week, and two hours weekly seminar; one term
Prerequisite(s): Registration in Level III or above of any Health, Aging and Society program
Antirequisite(s): HLTHAGE 3EE3

HLTHAGE 3D03 - PERSPECTIVES ON DISABILITY, CHRONIC ILLNESS AND AGING

Designed to provide a critical examination of the interdisciplinary aspects of disability, chronic illness and aging and to gain deeper insights into the complex nature of living with a disability and/or chronic illness. Issues and challenges related to definitions, concepts, models, research, policy, program and practice implications will be discussed.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3DD3 - WORKERS' HEALTH AND WELL-BEING IN A CHANGING WORLD

Pandemics, extreme heat, artificial intelligence - how do these impact workers' health and well-being? Have laws and policies kept pace with shifts in hazards facing workers? Have workplace policies and practices evolved with regards to issues like sexual harassment and mental health? Why are some risks and health problems under-recognized, and how have social and economic inequities shaped those dynamics? Through these questions and others, the course will connect lived experience of illness and injury to systemic failures at the workplace and policy levels, and within the larger global economic system. It will also examine rights, resources, and strategies, both individual and collective, that support workers' health and well-being.
Lectures and discussion; one term
Prerequisite(s): Registration in Level III or above of a Health, Aging and Society or Work and Labour Studies program or permission of the Director.
Antirequisite(s): LABRST 3D03
Cross-list(s): WORKLABR 3D03
This course is administered by School of Labour Studies.

HLTHAGE 3E03 - ETHICAL ISSUES IN HEALTH AND AGING

Ethical issues of current relevance to debates in aging, health and health care. Topics will vary from year to year.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of any program
Antirequisite(s): HTHSCI 3L03

HLTHAGE 3EE3 - THE PRACTICE OF EVERYDAY LIFE: OBSERVATIONS AND INQUIRY

This course explores how health and wellbeing are practiced by people 'out there' in their everyday lives across public spaces. Based on a range of theoretical and methodological approaches, students will undertake naturalistic field observations and reflections in the community which form the basis of the course assignments.
Approximately four hours field observation per week and two hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of a program in Health, Aging and Society
Antirequisite(s): HLTHAGE 3BB3

HLTHAGE 3G03 - COMMUNITY BASED RESEARCH

This course will introduce students to the theories and practice of community based research. Community based research is committed to social change and strives to enhance the synergy between researchers and the community. Students will have the opportunity to apply their theoretical learning by actual engagement with community based organizations in research.
Three hours (lectures and discussion); one term
Prerequisite(s): HLTHAGE 2A03 and registration in Level III or above of a program in Health, Aging and Society
Antirequisite(s): HLTHAGE 2A06, 3A03, 3B03, 3Z06, SOCIOL 3O03

HLTHAGE 3HP3 - POPULATION, HEALTH AND AGING

Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging, are emphasized.
Three lectures; one term
Prerequisite(s): One of ENVSOCTY 1HA3, 1HB3
Cross-list(s): ENVSOCTY 3HP3
This course is administered by the School of Earth, Environment & Society.

HLTHAGE 3I03 - INDEPENDENT STUDY IN HEALTH, AGING AND SOCIETY

The student will select a topic relevant to Health, Aging and Society for an in-depth investigation under the supervision of a faculty member and write an independent research paper.
One term
Prerequisite(s): HLTHAGE 2A03, registration in Level III or above of any Health, Aging and Society program and permission of the Department Chair

HLTHAGE 3K03 - SOCIAL DETERMINANTS OF POPULATION HEALTH IN CANADA

This course introduces students to the social determinants of population health framework. It is used to analyse a number of social and economic determinants of health, including housing, neighbourhoods and early child development within the Canadian context.
Three hours (lectures and discussion); one term
Prerequisite(s): One of HLTHAGE 1AA3, 1ZZ3, 1BB3, or 1CC3 and registration in Level II or above

HLTHAGE 3L03 - EMBODIED AGING

This course explores the centrality of the body in social gerontological knowledge, policies and practices related to aging, and the experiences of

late life. Examples of the topics addressed include the classification of the old body, bodily change and impairment, technological advancements for the body/prosthetic devices, and the relationship between the body/identity/self over the life course.
Three hours (lectures and discussion); one term
Prerequisite(s): HLTHAGE 1BB3 and registration in Level II or above

HLTHAGE 3M03 - APPROACHES TO MENTAL HEALTH AND RESILIENCE

Resiliency is a key concept in the field of social sciences and mental health. This course explores approaches to resilience among a range of populations and social contexts. Students will examine topics such as academic resilience, community resilience, and resilience in cultural context as they relate to the broad determinants of mental health.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3N03 - AGING AND MENTAL HEALTH

This course will examine the mental health of older adults from a variety of perspectives. Key topics include changes in cognitive functioning, dementia, assessment protocols, treatment methods, and older adults' sources of resilience.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3Q03 - SELECTED TOPICS IN HEALTH AND AGING

Topics may vary from year to year.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
HLTHAGE 3Q03 may be repeated, if on a different topic, to a total of six units.

HLTHAGE 3R03 - HEALTH INEQUALITIES

This course will introduce students to the key concepts, theories and measures of health inequalities. Using common examples of health inequalities within Canada and internationally such as gender, race, social class, we will critically analyse mechanisms through which health inequalities arise, are sustained and can be addressed within societies.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3T03 - HEALTH AND INCARCERATION

This course examines the health and well-being of incarcerated individuals, including youth in conflict with the law and the incarcerated elderly. Topics include health, safety and security; access to and quality of health care, palliative and end-of-life care; stigma and incarceration; the health and safety of correctional services human resource staff; media portrayals of the incarcerated; and, health impacts of incarceration on families of the incarcerated.
Three hours (lecture, discussion); one term
Prerequisite(s): Registration in Level II or above

HLTHAGE 3YY3 - INDIGENOUS COMMUNITY HEALTH AND WELLBEING

- critical examination of the determinants of health in Aboriginal communities, processes of community revitalization, and recent government policy initiatives.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration on Level II or above
Cross-list(s): ANTHROP 3Y03; INDIGST 3Y03
This course is administered by the Department of Anthropology.

HLTHAGE 4AB3 - LIVING WELL WITH DEMENTIA: SOCIAL AND PHYSICAL ENVIRONMENTS

This course will introduce students to key aspects of dementia studies from a number of disciplinary perspectives. Specifically, it will provide opportunities to critically consider the role of physical and social environments for the lives and wellbeing of those diagnosed with dementia.
Three hours (lecture, workshop, discussion); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program.

HLTHAGE 4B03 - DEATH AND DYING IN LATER LIFE

This course addresses quality of life at the end of life. Examines issues related to death, dying and bereavement from interdisciplinary perspectives by highlighting cultural, ethical, and spiritual aspects, as well as end of life care.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4BB3 - AGING AND TECHNOLOGY

This seminar course is designed to critically explore the ways in which age and aging are increasingly intertwined with the development, deployment, and use of technologies.
Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4BC3 - CIVIC ENGAGEMENT AND APPLIED RESEARCH

This course gives students an opportunity to participate in applied research in a civic engagement context. Working with community organizations, students will assist in advancing community responsive research on a range of substantive topics related to health, mental health and aging.
Three hours (lectures, discussion); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4C03 - REPRESENTATIONS OF HEALTH AND ILLNESS ACROSS THE LIFECOURSE

An exploration of representations of health and illness across the life course. The focus may vary from year to year, but will examine how health and illness and aging have been represented in popular culture and in the arts. Consideration is also given to the intersection between art and social science research.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4CH3 - GLOBAL HEALTH CRISES

This seminar course introduces to students the conditions, experiences, and effects of global health crises, as well as the dynamics and politics of societal and public health responses to those crises.
Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Honours Health, Aging and Society program; or permission of the Department

HLTHAGE 4D03 - HEALTH, CULTURE AND DIVERSITY

Examination of contemporary issues in health and illness from cross cultural and international perspectives.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4F03 - SELECTED ISSUES IN HEALTH AND SOCIETY

An advanced exploration of the social aspects of health. Topics may vary from year to year.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4G03 - GLOBAL HEALTH

This course introduces students to priority problems in health in a global context. Examines health problems faced by people globally but especially in low income countries and the determinants and strategies to address these problems.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4H03 - HISTORY AND CULTURE OF AGING

This course explores the diverse trends in aging, leading to a greater understanding of aging in past and present societies. We will explore how aging has been regarded, dealt with and represented throughout history and between cultures, including the recent developments in the 'cultures of aging' that surround the lifestyle choices and consumption habits of older people.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4I03 - AGING AND HEALTH

Addresses the biological, psychological and socio-political factors influencing the health of elderly persons from a broad national and international perspective.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4J03 - NARRATIVES OF ILLNESS

This seminar explores the role that narratives of illness play in describing, shaping and interrogating the experiences of those who are 'unwell'.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4L03 - SOCIAL POLICY AND AGING

An advanced exploration of social aspects of aging including gender and health, family relationships and retirement.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4M03 - ENVIRONMENT AND HEALTH

An exploration of environmental health issues research. Emphasis is placed on the distribution and effects of environmental toxins and disease-causing micro-organisms. Topics include cancer clusters, food safety, and water-borne diseases.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): One of ENVSOCTY 2EI3, 2HI3, HLTHAGE 2HI3; and registration in Level IV or above
Cross-list(s): ENVSOCTY 4HH3
This course is administered by the School of Earth, Environment & Society.

HLTHAGE 4N03 - AGING AND WELLBEING

This course explores the diverse meanings of health and wellness to older adults and analyzes the different mechanisms through which health and well-being can be maximized such as providing for physical, emotional, economic and political needs of older people.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4O03 - SOUNDSCAPES OF WELLBEING IN POPULAR MUSIC

This course examines the dynamics between music, health and wellbeing, considering the use of music by health sectors, and the places of music in cultural life.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4P03 - LEISURE AND RECREATION IN LATER LIFE

This course focuses upon characteristics of the aging population and the theoretical aspects of aging as related to recreation, leisure and lifestyle.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4Q03 - REPRESENTATIONS OF MENTAL ILLNESS

An examination of first-hand accounts and self-representations of mental illness through literature, film, music and art.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4R03 - BEYOND THE SOCIAL: DETERMINANTS OF INDIGENOUS PEOPLES HEALTH

This course examines the different ways in which health determinants coincide to impact the health status of Indigenous Peoples.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society, Honours Indigenous Studies, or Honours Social Psychology program

HLTHAGE 4S03 - URBAN HEALTH INEQUALITIES AND THE HOUSING CRISIS

Examines patterns, process and policies related to how the structure of cities produce health inequalities and connections to the affordable housing crisis, with a focus on the northern hemisphere.
Three hours (seminar); one term

Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4T03 - GENDER, SEX AND HEALTH

This course will focus on how gender contributes to the differential structuring of the health and health care experiences of men, women and gender minorities.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4U03 - PROFESSIONS AND OCCUPATIONS IN HEALTH AND AGING

This course introduces students to critical theories and empirical studies on health and aging professions and occupations. Such groups include physicians, nurses, social workers and other occupational alliances whose career focus is on health and/or aging.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program

HLTHAGE 4W03 - SELECTED ISSUES IN AGING AND SOCIETY

An advanced exploration of the social aspects of Aging. Topics may vary from year to year.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society or Honours Social Psychology program

HLTHAGE 4Z06 A/B - HEALTH, AGING AND SOCIETY THESIS

This course provides an opportunity for students to integrate knowledge, practice, and research in a project related to their area of interest. Students may work with individual faculty members or community-based supervisors.
Two terms
Prerequisite(s): Registration in Level IV of any Honours Health, Aging and Society program; and six units of research methods HLTHAGE 2A03 and HLTHAGE 3B03 or 3G03; (or equivalent); and SOCSCI 2J03 or another approved statistics course and permission of the Department.
Enrolment in this course is limited (see Departmental Notes *above).*

Health Sciences

Faculty Note

This course listing is divided into two parts:

1. Honours Health Sciences Program, Child Health Specialization.
2. Health Sciences courses normally available only to students registered in Engineering (Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering), Midwifery, or Nursing (A), (B), (E) or (F) Streams, as applicable.

Honours Health Sciences Program - B.H.Sc. (Hons)

Courses in Health Sciences are administered by the Honours Health Sciences Program.
Michael G. DeGroote Centre for Learning and Discovery, Room 3308, ext. 22815
https://bhsc.healthsci.mcmaster.ca/

HTHSCI 1A00 - COMPETENCIES IN ANIMAL CARE AND RESEARCH: ORIENTATION

This course outlines the Regulations and Guidelines for the use of animals in biomedical research, the McMaster University process for conducting animal research, as well as personnel, basic animal care, (including containment techniques), services offered, and training. There is an on-line lecture and quiz, as well as a site-specific tour and in-class lecture. A pass/fail will be assigned based on completion of an on-line quiz, with a minimum grade of 70%, and completion of the site specific tour and in-class lecture.
On-line lecture, quiz and in-class tour/lecture (three and a half hours); one tour/lecture
Antirequisite(s): HTHSCI 700

HTHSCI 1B00 - COMPETENCIES IN ANIMAL CARE AND RESEARCH: METHODOLOGIES

This course provides housing options and the importance of using proper research techniques for biocontainment/bioexclusion. It offers basic animal handling skills, as well as injection techniques. It allows students the opportunity to gain confidence handling animals. There is an on-line lecture and quiz, as well as an in-class wet-lab. A pass/fail is assigned based on completion of the quiz, with a minimum grade of 70%, and demonstration of competency in the in-class wet-lab by accurate completion of assigned tasks.
On-line lecture, quiz and in-class wet-lab (three and a half hours); one wetlab
Antirequisite(s): HTHSCI 701
May be repeated to a maximum of two times if on a different topic. Topic: Mouse or Rat

HTHSCI 1C00 - COMPETENCIES IN ANIMAL CARE AND RESEARCH: COMPLETION OF ETHICAL RESEARCH

This course outlines the McMaster University process for conducting animal research, and the process for understanding both the humane and experimental endpoints of a research study. Emphasis is placed on the 3 R's: replace, reduce and refine. There is an on-line lecture and quiz, as well as a physical lecture. A pass/fail is assigned based on completion of the quiz, with a minimum grade of 70%, and attendance to the formal in-class lecture.
On-line and in-class lecture (three hours); on lecture
Prerequisite(s): HTHSCI 1A00, 1B00; or HEALTHSCI 700, 701
Antirequisite(s): HTHSCI 702

HTHSCI 1C03 - SOCIAL JUSTICE AND HEALTHCARE I

This course lays a foundation in the concepts of social justice and healthcare. The course purposefully centres the perspectives of marginalized and racialized people and supports respectful dialogue and a critical examination of the determinants of health to cultivate awareness of societal inequities and to create societal change. Key concepts examined include intersectionality, power, privilege, ways of knowing and how they impact us as individuals and care providers.
One seminar (3 hours); first term.
Prerequisite(s): Registration in the Midwifery Education Program (B.H.Sc.)

HTHSCI 1CC3 - SOCIAL JUSTICE AND HEALTHCARE II

This course is a continuation of HTHSCI 1C03. The course aims to lay a foundation in the concepts of social justice and healthcare. The course purposefully centres the perspectives of marginalized and racialized people and supports respectful dialogue and a critical examination of the determinants of health to cultivate awareness of societal inequities and to create societal change. Key concepts examined include application of social justice theories, dissection of 'normal parenting', and Art of Seeing program.

One seminar (3 hours); second term.
Prerequisite(s): HTHSCI 1C03 and Registration in the Midwifery Education Program (B.H.Sc.)

HTHSCI 1D03 - HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to principal organ systems including the integumentary, musculoskeletal, nervous, and endocrine systems. This course covers foundational concepts of human structure and function, through lectures, tutorials, and laboratory assignments.
Lectures (two hours), labs/tutorials (two hours)
Prerequisite(s): Registration in the Midwifery Education program
Co-requisite(s): BIOSAFE 1BS0 if not already completed
Antirequisite(s): BIOLOGY 3U03, BIOLOGY 3UU3, HTHSCI 2F03, HTHSCI 2FF3, KINESIOL 1A03, 1A06, KINESIOL 1AA3, KINESIOL 1Y03, KINESIOL 1YY3

HTHSCI 1DD3 - HUMAN ANATOMY AND PHYSIOLOGY II

- continuation of HTHSCI 1D03, this course introduces principal organ systems including the cardiovascular, immune, respiratory, gastrointesetinal, and genitourinary systems. This course covers foundational concepts of human structure and function, through lectures, tutorials, and laboratory assignments.

Lectures (two hours), labs/tutorials (two hours)
Prerequisite(s): Registration in the Midwifery Education program
Co-requisite(s): BIOSAFE 1BS0 if not already completed
Antirequisite(s): BIOLOGY 3U03, BIOLOGY 3UU3, HTHSCI 2F03, HTHSCI 2FF3, KINESIOL 1A03, 1A06, KINESIOL 1AA3, KINESIOL 1Y03, KINESIOL 1YY3

HTHSCI 1DT3 - DISCOVER IMMUNOLOGY TODAY

This course is intended to inspire curiosity in questions generated by concepts in immunology that drive current research directions. Students will explore a spectrum of topics in immunology with research faculty.
Two hours; one term
Prerequisite(s): Registration in Level 1 Honours Health Sciences or Level 1 Science or Level 1 Arts & Science.

HTHSCI 1E06 A/B - INQUIRY I: INTRODUCTION

This course will initiate the development of a skill set required for life-long learning, in the context of the study of one or two health care issues. A problem based course applying principles of scientific inquiry to selected health issues.
Three hours; two terms
Prerequisite(s): Registration in the Honours Health Sciences program
Antirequisite(s): HTHSCI 1E03, 1EE3, HTHSCI 2D06 A/B, INQUIRY 1SC3
Note: Students entering the Honours Health Sciences program after completion of Level I in another program may be required to complete HTHSCI 2D06 A/B at the discretion of the Assistant Dean of the program.

HTHSCI 1G02 - INTERDISCIPLINARY QUESTIONS IN HEALTH

Recognizing that health is not simply a biological phenomenon, this course examines health issues from multiple perspectives, emphasizes the links between them, and builds a conceptual tool-box for problem solving across the domains of population and public health, biomedical and clinical issues, social and cultural aspects of health, and health systems and policy.
Two lectures, one tutorial
Prerequisite(s): Registration in Level I of the Honours Health Sciences Program or Level II as a Honours Health Sciences Program transfer student.

HTHSCI 1I06 A/B - CELLULAR AND MOLECULAR BIOLOGY

Students will explore the molecular basis of cellular communication (gene expression, cellular signaling) underlying disease processes. A hybrid approach blending didactic and inquiry-based approaches will be used.
Two sessions per week (three hours each); two terms
Prerequisite(s): Grade 12 U Biology and registration in Health Sciences I
Co-requisite(s): WHMIS 1A00. Students registering in HTHSCI 1I06 A/B must also register in WHMIS 1A00 when completing their registration.
Antirequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), IBEHS 1EP6 A/B

HTHSCI 1M03 - FOUNDATIONS OF DATA SCIENCE

This courses focuses on promotion of data literacy skills and the introduction of fundamental data science concepts, practices, and tools. These include computation, data analytics, data ethics, data visualization, machine learning, and statistics.
Two lectures, one computer lab (1 hours); one term

HTHSCI 1ML3 - INTRODUCTION TO MEDICAL LABORATORY SCIENCES

This course provides an introduction to the key disciplines in medical laboratory sciences including microbiology, pathology, clinical chemistry, genetics, hematology and coagulation, and transfusion medicine. Students will explore these disciplines, examine the ways that these laboratory sciences support health care, and be exposed to a range of career possibilities in these fields.
Two lectures, one tutorial; one term
Prerequisite(s): Credit or registration in one of BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), HTHSCI 1I06 A/B, KINESIOL 1A03 or ISCI 1A24 A/B.

HTHSCI 1RR2 - INTRODUCTION TO THE SOCIAL DETERMINANTS OF HEALTH

This course provides an introduction to a number of macrohealth issues including determinants of health and political, economic and social factors that influence the organization of health care systems. This course introduces the biological, behavioural, social, economic and environmental factors that determine the health of populations. Major components to the course include: assessing health and socioeconomic status, understanding the structure and organization of the Canadian health care system, public policy, and several factors that affect health; such as, gender, income, work, & social exclusion.
Lecture (two hours); one term
Prerequisite(s): Registration in the B.Sc.N. Basic (A) Stream; or registration in the B.Sc.N. Accelerated (F) Stream; or registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream

HTHSCI 1ST3 - SELECTED TOPICS IN HEALTH SCIENCES

An introductory approach to a selected topic in the health sciences. Topics will vary from year to year depending on student interests and faculty availability.

- hours; one term

Prerequisite(s): Announced at time of offering; see the Honours Health Sciences Program website for more information.

HTHSCI 1X01 A/B S - PRAXIS PATHWAYS 1

This is part 1 of the longitudinal Praxis Pathways Curriculum, in which students begin to actively develop capacities for: collaboration in community; group process; leadership; lifelong learning; perspective-taking; reflection and reflexivity; and self-care and wellness. The development of information literacy and critical analysis skills supports and informs these goals.
Two hours; two terms

Prerequisite(s): Registration in Level I of the Honours Health Sciences Program or Level II as a Honours Health Sciences Program transfer student.

HTHSCI 2AE3 - ARTISTIC EXPLORATIONS OF COMMUNITY ISSUES

Students will research and explore topics relevant to the Honours Health Sciences, Integrated Rehabilitation & Humanities, and Arts & Science communities through engaging with and investigating arts-based research methodologies. Three hours; one term
Prerequisite(s): Registration in Level II or above in the Honours Health Sciences Program, Integrated Rehabilitation & Humanities Program, or Arts & Science Program, or permission of instructor.

HTHSCI 2C03 A/B S - RESEARCH APPRAISAL AND UTILIZATION IN EVIDENCE INFORMED DECISION MAKING

Introduction to quantitative and qualitative designs with a focus on critical appraisal of evidence and application to nursing practice and healthcare. Lecture/tutorial (three hours); one term
Prerequisite(s): Registration in the B.Sc.N. Accelerated (F) Stream; or minimum grade of C- in HTHSCI 2S03 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream; or permission of the instructor

HTHSCI 2CH3 A/B - CHS LEARNING MODULES

Modules will provide a foundation of knowledge in multiple areas of child health and development. Topics will include the physical, cognitive, social, emotional and behavioural perspectives of child development.
Two hours; two terms
Prerequisite(s): Registration in Level II of the Honours Health Sciences Child Health Specialization

HTHSCI 2CH6 A/B - CHS INQUIRY FUNDAMENTALS

The inquiry-based model will be used to facilitate student's learning within the dynamic context of child health and development. The integration of knowledge, research and experiential opportunities will be discussed during weekly classes. The learning environment will also include dialogues with experts, tutorials and field placements. Four hours; two terms
Prerequisite(s): Registration in Level II of the Honours Health Sciences Child Health Specialization

HTHSCI 2D06 A/B - INQUIRY II: INTRODUCTION AND BIOCHEMISTRY

This course will use an inquiry-based approach. First semester will initiate the development of a skill set required for life-long learning by studying healthcare issues. Second semester will introduce key concepts in Biochemistry and Molecular Biology to understand genetic, infectious and metabolic diseases. Three hours; two terms
Prerequisite(s): Permission of the Assistant Dean, Honours Health Sciences program
Antirequisite(s): HTHSCI 1E06 A/B, HTHSCI 2E03
Note: This course is restricted to Level II Honours Health Sciences transfer students only.

HTHSCI 2DS3 - GLOBAL HEALTH AND THE COMPLEXITIES OF DISEASE

This course will introduce students to the disease states that define the burden of morbidity and mortality in a global setting. Students will examine the relationships that define the static and dynamic patterns of health and illness by drawing on diverse fields of academic thought and research, including the biological, geographical, anthropological and political sciences.
Three hour lecture, one tutorial; one term
Prerequisite(s): Registration in Level 2 and above in any Honours program.

HTHSCI 2E03 - INQUIRY II: BIOCHEMISTRY

This course will use an inquiry based format to introduce key concepts in biochemistry, molecular biology and biomedical sciences to understand illnesses such as infectious diseases, metabolic disorders, genetic diseases and cancer.
One term
Prerequisite(s): HTHSCI 1I06 A/B or IBEHS 1EP6 A/B

HTHSCI 2F03 - HUMAN PHYSIOLOGY AND ANATOMY I

An introduction to the principal organ systems including the endocrine, skin, CNS and locomotion.
Two lectures, one lab; one term
Prerequisite(s): Registration in Level II of the Honours Health Sciences Program or registration in Level II of the Integrated Biomedical Engineering and Health Sciences (IBEHS) Program or Level III of the Materials and Biomedical Engineering program or Level II in the Integrated Rehabilitation & Humanities Program
Antirequisite(s): HTHSCI 1D06 A/B, 1H03, HTHSCI 1H06 A/B, HTHSCI 2FA3, HTHSCI 2L03, KINESIOL 1A03, KINESIOL 1AA3, KINESIOL 1Y03, KINESIOL 1YY3, KINESIOL 2Y03, KINESIOL 2YY3
Cross-list(s): HTHSCI 2L03, 2FF3, 2LL3

HTHSCI 2FA3 - FOUNDATIONS FOR INQUIRY IN ANATOMY & PHYSIOLOGY

This course will provide an orientation into the major anatomical and physiological systems and their relationship to normal function and homeostasis. Investigations into these systems will be through lectures, labs, and tutorials. Students will then undertake an inquiry-based approach to delve deeply into questions of particular interest.
Two lectures, one tutorial, one lab; one term
Prerequisite(s): Registration in Level II or above in the Honours Health Sciences Program
Antirequisite(s): HTHSCI 1D06 A/B, 1H03, HTHSCI 1H06 A/B, HTHSCI 2F03, HTHSCI 2FF3, HTHSCI 2L03, KINESIOL 1A03, KINESIOL 1AA3, 1X06, KINESIOL 1Y03, KINESIOL 1YY3, KINESIOL 2Y03, KINESIOL 2YY3, MEDPHYS 4XX3, SCIENCE 4XX3

HTHSCI 2FB3 - INQUIRY IN ANATOMY & PHYSIOLOGY

Building from the foundations of HTHSCI 2FA3, students will use an inquiry-based approach to further enhance their understanding of human anatomy and physiology by delving deeply into questions of particular interest through research, discussions, reflections, student outreach, and labs.
Prerequisite(s): HTHSCI 2FA3
Antirequisite(s): HTHSCI 1D06 A/B, 1H03, HTHSCI 1H06 A/B, HTHSCI 2F03, HTHSCI 2FF3, HTHSCI 2L03, HTHSCI 3F03, KINESIOL 1A03, KINESIOL 1AA3, 1X06, KINESIOL 1Y03, KINESIOL 1YY3, KINESIOL 2Y03, KINESIOL 2YY3

HTHSCI 2FF3 - HUMAN PHYSIOLOGY AND ANATOMY II

- continuation of HTHSCI 2F03 with an examination of the Immune, Cardiovascular, Respiratory, Gastrointestinal and Uro-Genital Systems.

Two lectures, one lab; one term
Prerequisite(s): HTHSCI 2F03
Antirequisite(s): HTHSCI 1D06 A/B, HTHSCI 1H06 A/B, 1HH3, HTHSCI 2FA3, HTHSCI 2LL3, KINESIOL 1A03, KINESIOL 1AA3, KINESIOL 1Y03, KINESIOL

1YY3, KINESIOL 2Y03, KINESIOL 2YY3
Cross-list(s): HTHSCI 2F03, 2L03, 2LL3

HTHSCI 2G03 - STATISTICS & EPIDEMIOLOGY 1

An introduction to measure of health, the design and analysis of epidemiological studies, the statistical approaches used to analyze data and interpret measures of association, and understanding confounding and bias.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II of the Honours Health Sciences Program, or registration in Level II of the Honours Health Sciences Child Health Specialization; or registration in Level II or above of the Integrated Biomedical Engineering and Health Sciences Program; BioPharm Program, or Biochemistry Program
Antirequisite(s): LIFESCI 3G03

HTHSCI 2GG3 - STATISTICS & EPIDEMIOLOGY 2

Building on HTHSCI 2G03, this course will introduce more advanced concepts and methods in biostatistics, while examining crucial issues in the design and analysis of epidemiologic studies, and exploring specialized topics.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 2G03
Antirequisite(s): COMMERCE 2QA3, HTHSCI 2A03, NURSING 2R03, STATS 1CC3, 2B03 and IBEHS 4C03

HTHSCI 2H03 - INTRODUCTORY PHARMACOLOGY

An examination of the administration, distribution, action, metabolism and elimination of drugs generally and as related to specific systems.
Lecture (two hours), tutorial (one hour); one term
Prerequisite(s): Minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, 1LL3 and registration in the B.Sc.N. Basic (A) Stream; Post Diploma R.P.N.(E) Stream, or Accelerated (F) Stream; or permission of the instructor
Antirequisite(s): HTHSCI 2C06

HTHSCI 2HH3 - INTRODUCTORY MICROBIOLOGY

An examination of the interactions of microbes in the human body including action, responses, treatment and prevention.
Lecture/lab (two hours), tutorial (one hour); one term
Prerequisite(s): Minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, 1LL3 and registration in the B.Sc.N. Basic (A) Stream; or registration in the B.Sc.N. Accelerated (F) Stream; or permission of the instructor
Antirequisite(s): HTHSCI 2C06

HTHSCI 2K03 - INQUIRY II: CELL BIOLOGY

An inquiry based examination of the relationship between cell structure and function. Students will be required to apply key concepts of cell biology to facilitate their understanding of timely problems in biomedicine.
Tutorials (three hours); one term
Prerequisite(s): One of HTHSCI 1I06 A/B, HTHSCI 2D06 A/B or IBEHS 1EP6 A/B; or registration in Level II or above of the Chemical Engineering and Bioengineering Program or Electrical and Biomedical Engineering.
Antirequisite(s): BIOLOGY 2B03, ISCI 2A18 A/B

HTHSCI 2L03 - ANATOMY AND PHYSIOLOGY I: COMMUNICATION

An examination of structure-function relationships in the human body systems that communicate with each other or the environment. The systems covered include: endocrine, central nervous system, hearing, taste, smell, vision, autonomic nervous system, skin, peripheral nervous system, and locomotion (musculo-skeletal).
Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term
Prerequisite(s): Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering (B.Eng.)
Antirequisite(s): BIOLOGY 1J03, HTHSCI 1D06 A/B 1H03, 1H06 A/B, 2F03, KINESIOL 1A03, 1A06, 1AA3, 1X06, 1Y03, 1YY3, MEDPHYS 4XX3
Cross-list(s): HTHSCI 2F03, 2FF3, 2LL3

HTHSCI 2LA2 A/B - INTRODUCTION TO INTEGRATED PATHOPHYSIOLOGY FOR NURSING FOR BASIC STREAM

The course combines online multimedia learning modules with integrated tutorials in which students learn and apply basic pathophysiological concepts.
Tutorials (twelve one hour sessions), nine online multimedia modules; two terms
Prerequisite(s): Minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, 1LL3 and registration in the B.Sc.N. Basic (A) Stream
Antirequisite(s): NURSING 2LA2 A/B
Co-requisite(s): NURSING 2MM3, 2NN3

HTHSCI 2LL3 - ANATOMY AND PHYSIOLOGY II: HOMEOSTASIS

An examination of structure-function relationships in the human body systems that are responsible for maintaining normal internal physiological conditions despite a changing environment. The systems covered include: cardiovascular, respiratory, immunology, gastrointestinal, nutrition, uro-genital, and renal.
Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term
Prerequisite(s): Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering (B.Eng.)
Antirequisite(s): BIOLOGY 1J03, HTHSCI 1D06 A/B, HTHSCI 1H06 A/B, 1HH3, HTHSCI 2FF3, KINESIOL 1A03, 1A06, KINESIOL 1AA3, 1X06, KINESIOL 1Y03, KINESIOL 1YY3, MEDPHYS 4XX3
Cross-list(s): HTHSCI 2F03, 2FF3, 2L03

HTHSCI 2M03 - REPRODUCTIVE PHYSIOLOGY

This course emphasizes intrinsic and extrinsic methods of regulation of reproduction and also provides the basis for understanding alterations from normal mechanisms including the influence of medical conditions.
One tutorial (three hours); first term
Prerequisite(s): HTHSCI 1D03 and 1DD3
Antirequisite(s): HTHSCI 1H06

HTHSCI 2MB3 - MICROBIOLOGY IN THE HEALTH SCIENCES

This course will explore the bacteria, viruses, parasites, fungi, and other microbes that are implicated in human health and disease. Through lectures and problem-based learning students will consider the classification and laboratory identification of pathogenic organisms, diseases associated with different microbes, and their pathogenesis.

- lectures, 1 tutorial; one term

Prerequisite(s): Registration in Level II and above and registration in a program in the Faculty of Health Sciences, or Arts & Science Program.
Antirequisite(s): HTHSCI 2HH3, LIFESCI 4L03, MOLBIOL 4P03
Not open to students in the Faculty of Science

HTHSCI 2S03 - INTRODUCTION TO STATISTICS FOR NURSING

An introduction to basic parametric and non-parametric statistical methods, including their application to the analysis of data relevant to nursing and health-related research questions. Computer analysis of data using appropriate software and interpretation of the statistical results will also be an integral component of the course.
Lecture (two hours), tutorial (one hour); one term
Prerequisite(s): Minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, 1LL3 and a Pass in NURSING 1K02 and registration in the B.Sc.N. Basic (A) Stream; or registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream; or permission of the instructor
Antirequisite(s): COLLAB 2L03, COMMERCE 2QA3, HTHSCI 2A03, SOCSCI 2J03

HTHSCI 2ST3 - SELECTED TOPICS IN HEALTH SCIENCES

An exploration of a selected topic in the health sciences. Topics will vary from year to year depending on student interests and faculty availability.

- hours; one term

Prerequisite(s): Announced at time of offering; see the Honours Health Sciences Program website for more information.

HTHSCI 2T03 - SEX, GENDER, & HEALTH

This course will explore the concepts of sex and gender, and take a critical perspective on how sex, gender, and social norms of masculinity and femininity affect health, healthcare, and health research.
Three hours; one term
Prerequisite(s): Registration in any Level II or above program.

HTHSCI 2X03 A/B - PRAXIS PATHWAYS 2

This is part two of the longitudinal Praxis Pathways Curriculum, in which students further develop and refine capacities for: collaboration in community; group process; leadership; lifelong learning; perspective-taking; reflection and reflexivity; and self-care and wellness. The development of information literacy and critical analysis skills supports and informs these goals.
Six hours per month; two terms
Prerequisite(s): HTHSCI 1X01 A/B S

HTHSCI 3AH3 - INDIGENOUS HEALTH

The goal of this course is to provide students with knowledge and skills related to health care from within Indigenous contexts. Enabling students to acquire and put into practice concepts and information required to understand health for Indigenous peoples; to engage in culturally competent and safe practice through knowledge development; and the ability to identify areas of need specific to Indigenous health.
Two lectures; one term
Prerequisite(s): Registration in Level III or above in any program

HTHSCI 3AI3 - UNDERSTANDING ANATOMICAL IMAGES

Real-world applications of anatomical knowledge in health care and health research are often mediated by various radiological imaging modalities. This course provides students with the opportunity to explore the relationships between the representation of tissues through anatomical images with the structure and function of anatomical specimens.

- lectures; 1 tutorial, 1 lab; one term

Prerequisite(s): Registration in Level III or above and one of the following: HTHSCI 2FF3, HTHSCI 2FB3, KINESIOL 1AA3, KINESIOL 1YY3, KINESIOL 2YY3, HTHSCI 2LL3, HTHSCI 1D06, or HTHSCI 1H06
Not open to students in the Medical Radiation Sciences Programs

HTHSCI 3BA3 - SYMPTOMATOLOGY

This unique course will examine the science of the symptoms of various diseases. Both the physiological and molecular mechanism(s) of symptoms will be explored pertaining to a disease state. Signals to various organs will be explored in the context of symptoms. The molecular basis of symptoms such as pain induced by cancer or cardiovascular disease will be elucidated. The course is an inquiry-based examination of symptoms. The course will be organized into small groups.
Three hours; one term
Prerequisite(s): HTHSCI 2E03 and 2K03; or registration in Level III or above of the Biomedical Discovery and Commercialization (B.H.Sc.) Program; or registration in Level III or above of the BioPharm Program; or registration in Level III or above of the Biochemistry Program, or registration in Level III or above in the Integrated Rehabilitation & Humanities Program.

HTHSCI 3CB3 - INTRODUCTION TO COMPUTATIONAL BIOLOGY

This course will provide an overview of computational biology applications across the domains of genomics, transcriptomics, proteomics, and epigenomics. Problem-based learning will be used to explore a range of computational methods across biological disciplines and consider common statistical and machine learning methods. Students will learn foundational programming skills in R for analyses of large scale data.
In-person; Two hour seminar, one tutorial; one term
Prerequisite(s): One of HTHSCI 2K03, BIOCHEM 2B03, BIOCHEM 3G03, ISCI 2A18, BIOLOGY 2C03, MOLBIOL 2C03; or permission of instructor
Not open to students in the Faculty of Science

HTHSCI 3CC3 - THEATRE FOR DEVELOPMENT

This course, rooted in Applied Drama, will enable students to actively participate and explore their creativity, enhancing transferable skills like communication and active listening through drama games and exercises.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Honours Health Sciences program or registration in Level III of the Honours Health Sciences Child Health Specialization, or Level III or above in the Integrated Rehabilitation & Humanities Program.

HTHSCI 3CH3 - CHS INQUIRY INTERMEDIATE

Building upon Level II, students will continue to learn in an Inquiry based environment and be expected to deepen their knowledge, integrate new material and experiences in order to understand and explore the complexities of child health and development within the community.
Four hours; one term
Prerequisite(s): Permission of Department. This course is available only to Honours Health Sciences Child Health Specialization students studying in the MacAbroad Exchange Program.

HTHSCI 3CH6 A/B S - CHS RESEARCH PRACTICUM

Students will continue to develop and apply their statistical knowledge, information literacy and research skills by developing and implementing an independent project in collaboration with a community partner and Child Health Specialization facilitators. Emphasis will be placed on communication and collaboration, skill development and the complexities, potential, and limitations of applied research.
Sessions arranged individually or in small groups; two terms.

Prerequisite(s): HTHSCI 2CH3 A/B and HTHSCI 2CH6 A/B

HTHSCI 3CH9 A/B - CHS INQUIRY INTERMEDIATE

Building upon Level II, students will continue to learn in an Inquiry based environment and be expected to deepen their knowledge, integrate new material and experiences in order to understand and explore the complexities of child health and development within the community.
Four hours; two terms.
Prerequisite(s): HTHSCI 2CH3 A/B and HTHSCI 2CH6 A/B

HTHSCI 3CP3 - RESEARCH PROJECT IN COMPUTATIONAL BIOLOGY

Students will undertake a research study based on data in publicly available omics datasets, in which they will investigate differentially expressed genes between groups, integrate statistical and qualitative methods to prioritize relevant genes and pathways, and validate and translate findings using publicly available data from human cohort studies.
In person; Two hour seminar, one tutorial; one term
Prerequisite(s): HTHSCI 3CB3 or permission of the instructor.
Note: Students in the Honours Health Sciences (B.H.Sc.) Program can use this course to fulfill the requirements of a 3rd year project course. Contact the Honours Health Sciences Program for more information.

HTHSCI 3CV6 A/B - CHILD VISUAL DEVELOPMENT AND COMMUNITY ENGAGEMENT

This interdisciplinary course will provide an introduction to the science of vision, eye health, and vision screening along with its intersection with public health. Students will engage in classroom and project-based learning, along with experiential learning as vision screeners in the community.
One lecture; (two hours every other week); one tutorial (weekly); two terms.
Prerequisite(s): Registration in Level II or above.

HTHSCI 3DA3 - DECOLONIZING AND CONCEPTUALIZING ANATOMY THROUGH ARTS PRACTICE

This course will approach the study of anatomy through art to inform a holistic and critical appreciation of anatomical knowledge from diverse perspectives and lived experiences. The lens of decolonization will inform the exploration of anatomy through inquiry, lecture, lab, and art experiences.

- hours (lectures, labs, studio); one term

Prerequisite(s): Registration in level III or above; no artistic experience is required.

HTHSCI 3DB3 - DEVELOPMENTAL BIOLOGY

Developmental biology integrates knowledge and perspectives from molecular biology, physiology, anatomy, evolution, and other disciplines. This course will use lectures and inquiry to delve into key aspects of developmental biology including embryonic development, cell differentiation, morphogenesis, genetic control of development, and environmental influences.
Three hours; one term.
Prerequisite(s): Registration in Level III or above and one of the following: HTHSCI 2FF3, HTHSCI 2FB3, KINESIOL 1AA3, KINESIOL 1YY3, KINESIOL 2YY3, HTHSCI 2LL3, HTHSCI 1D06, or HTHSCI 1H06
Antirequisite(s): MOLBIOL 3M03, MOLBIOL 4ED3
Not open to students in the Faculty of Science

HTHSCI 3DD6 A/B - ENGAGING THE CITY: AN INTRODUCTION TO COMMUNITY-BASED RESEARCH IN HAMILTON

An introduction to the city of Hamilton and community-based research. This course will place experiential emphasis on citizenship, community health, economics, geography, environment, and education.
Three hours; two terms
Prerequisite(s): Registration in Level III or above.

HTHSCI 3DM3 - DEMYSTIFYING MEDICINE

Students will work in small cross-disciplinary groups on selected topics presented at the McMaster Demystifying Medicine Seminar Series. Students will acquire a broad overview of various clinical topics, patient needs and associated biomedical research. Students will translate the acquired knowledge to patients and public, and develop educational material.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any Honours program
Antirequisite(s): HTHSCI 4DM3

HTHSCI 3DR3 - DEMYSTIFYING RESEARCH

Students will work in small cross-disciplinary groups on selected topics in research methods to acquire a broad overview of various research methods, and in-depth knowledge on specific applications of those such methods. Students will develop knowledge translation and science communication skills to demystify the research process for a variety of audiences.
Three hours; one term.
Prerequisite(s): Registration in Level III or above in any Honours program.

HTHSCI 3DT3 - DONATION & TRANSPLANTATION

This course will explore organ donation and transplantation from multiple perspectives, including the consideration of the medical and legal requirements for death determination, the immunological challenges of organ matching and post-transplant management, and the ethical, social, legal, and policy considerations around these processes.

- hours; one term

Prerequisite(s): Registration in Level III or above in a program in the Faculty of Health Sciences, Faculty of Science, or the Arts & Science Program

HTHSCI 3E03 - INQUIRY III: ADVANCED INQUIRY IN HEALTH SCIENCES

In this inquiry course, students will undertake an in-depth exploration of a specific health-related topic.
One term
Prerequisite(s): HTHSCI 2D06 A/B or HTHSCI 2E03 and registration in Level III of the Honours Health Sciences Program; or registration in Level III of the Honours Health Sciences Child Health Specialization; or registration in Level III or above of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program (HESE stream); BioPharm Program; or the Integrated Rehabilitation & Humanities Program.

HTHSCI 3EA3 - INTRODUCTION TO EXPRESSIVE ARTS THERAPY

This course offers exposure to the theories, scholarly literature, and professional practice of Expressive Arts Therapy. Various modes and methods of Expressive Arts Therapy will be explored, including applications such as artmaking, play, movement, drama, music, expressive writing, and others.
Prerequisite(s): Registration in Level III or above in any program.
3h; one term

HTHSCI 3EE3 - BIOMEDICAL GRAPHICS

Participants will learn the basics of visual literacy, design and the software used to create effective illustrations or figures in support of scientific communication.
One lecture; one lab; one term
Prerequisite(s): Registration in Level III or above of any program in the Faculty of Health Sciences, School of Interdisciplinary Science, Arts & Science Program, Kinesiology, Health, Aging & Society programs
Students must be artistically inclined.

HTHSCI 3EP3 - EPIGENETICS: LINKING NATURE AND NURTURE

Genes are important factors in determining biological function, but the expression of genes is more than just a matter of gene sequence. This course explores the epigenetic regulation of gene expression to develop a deeper understanding of how environment, behaviour, and experience can affect health and disease phenotypes.
Three hours; one term
Prerequisite(s): Registration in Level 3 or above in a program in the Faculty of Health Sciences, Faculty of Science, or the Arts & Science Program.

HTHSCI 3F03 - INQUIRY: ANATOMY & PHYSIOLOGY

Based on foundations from HTHSCI 2F03 and 2FF3, students use an inquiry-based approach to further enhance their understanding of the major human organ systems and the relationships between them in normal or pathological states.
Prerequisite(s): HTHSCI 2FF3
Antirequisite(s): HTHSCI 2FB3, HTHSCI 2G03, 4K03 or HTHSCI 4D03 where the topic was anatomy and physiology.

HTHSCI 3FC3 - SCIENCE OF FICTIONAL CHARACTERS

In this interdisciplinary inquiry course, students will use fictional characters as a model to apply and understand key concepts in various scientific disciplines (e.g. biology, psychology). Additional emphasis will be placed on science communication and the development of scientific inquiry skills.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any Honours program.

HTHSCI 3G03 - CRITICAL APPRAISAL OF THE HEALTH LITERATURE

Students will learn quantitative research design and how to evaluate the internal validity of published research to determine the effectiveness of an intervention, diagnostic test, screening program, prognostic or risk factor and systemic review.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 2G03

HTHSCI 3GG3 - HEALTH SYSTEMS AND HEALTH POLICY

This course reviews how health care is different from other goods and services, how governments have responded to these differences, and how governments make decisions about health care.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 2G03

HTHSCI 3H03 A/B S - INQUIRY PROJECT

An opportunity to explore one or more specialized areas of Health Sciences in preparation for Level IV Senior Project/Thesis.
One term
Prerequisite(s): Registration in Level III of the Honours Health Sciences Program
Antirequisite(s): Completion of or co-registration in HTHSCI 3H06 A/B S, HTHSCI 3MR6 A/B, HTHSCI 3HR3, IBEHS 3I06 A/B S

HTHSCI 3H06 A/B S - INQUIRY PROJECT

An opportunity to explore one or more specialized areas of Health Sciences in preparation for Level IV Senior Project/Thesis.
One term or two terms
Prerequisite(s): Registration in Level III of the Honours Health Sciences and permission of the Honours Health Sciences Program.
Antirequisite(s): Completion of or co-registration in HTHSCI 3H03, IBEHS 3I06 A/B S, HTHSCI 3HR3, HTHSCI 3MR6

HTHSCI 3HH3 - DECEPTIONS IN DECISION MAKING

Students will explore and examine how hidden strategies/factors are deployed to create popular mindsets, beliefs, propagandas and perceptions. By using examples from education, health care, psychology & behavior economics, students will have an exciting platform to deconstruct some of the popular mindsets/stereotypes/beliefs and then use that knowledge to become an effective advocate.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Honours Health Sciences program

HTHSCI 3HI3 - HUMAN HISTOLOGY & HISTOPATHOLOGY

This course will examine the microscopic structure and function of normal human tissue, and explore common disease processes in different tissue types. Students will develop skills in recognizing a range of histological features and their implications for human health.

- lectures, 1 tutorial/lab; one term

Prerequisite(s): Registration in Level III or above and one of the following: HTHSCI 2FF3, HTHSCI 2FB3, KINESIOL 1AA3, KINESIOL 1YY3, KINESIOL 2YY3, HTHSCI 2LL3, HTHSCI 1D06, or HTHSCI 1H06

HTHSCI 3HL3 - HEALTH LAW: CURRENT AND EMERGING ISSUES

In this course students will explore the use of legal instruments to understand their capacity to achieve health policy goals, as well as their limits as tools for health justice reform. Students will learn about Canadian jurisprudence, including legislation and case law, to critically apply them to emerging issues including the regulation of reproduction, access and rationing of care, and medical assistance in dying.
Three hours; one term.
Prerequisite(s): Registration in Level III or above of any Honours program

HTHSCI 3HR3 - RESEARCH SKILLS

This course will develop a variety of crucial skills for research, including research ethics, scientific communication and information literacy, and techniques and approaches used in different domains of health research.
One hour virtual core, two hour on-line tutorial; one term
Prerequisite(s): Registration in Level III or above in Honours Health Sciences Program or registration in Level III or above in Honours Health Sciences Child Health Specialization, and permission of the Honours Health Sciences Program
Antirequisite(s): Completion of or co-registration in HTHSCI 3H03, HTHSCI 3H06 A/B S, HTHSCI 3BM3, HTHSCI 3MR6, and HTHSCI 3BM6 A/B S, or any Level IV HTHSCI Senior Project or Thesis

HTHSCI 3I03 - INTRODUCTORY IMMUNOLOGY

An introduction to humoral and cellular immunity. The molecular and cellular basis of immunity, and an introduction to immunological techniques.
Two lectures, one tutorial; one term
Prerequisite(s): One of BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), HTHSCI 1I06, IBEHS 1EP6, or ISCI 1A24 A/B, and registration in Level II or above.
Antirequisite(s): BIOTECH 3IV3

HTHSCI 3K03 - PRINCIPLES OF VIROLOGY

This introductory course will focus on virology as an integrative disciple and examine the overarching principles and survival strategies adopted by viruses. Topics include the structure and composition of viruses, virus replication strategies, virus-host interactions and applications of viruses as tools in medicine and research.
Three lectures, one tutorial; one term
Prerequisite(s): One of BIOLOGY 2B03, HTHSCI 2K03, BIOTECH 2CB3, or ISCI 2A18 A/B; and registration in Level III or above
Antirequisite(s): BIOTECH 3IV3

HTHSCI 3L03 - INTRODUCTION TO BIOETHICS

This course will cover ethical issues that are relevant to biological sciences. Topics will include genetic engineering and cloning, genetic screening, reproductive technology and the use of behavioural strategies to alter societal behaviours.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level III or above
Antirequisite(s): HEALTHST 3E03, PHILOS 2D03

HTHSCI 3LT3 - PRACTICAL APPLICATIONS IN CLINICAL LABORATORY TESTING

This course will provide an overview of practical aspects of the clinical laboratory, with a focus on biochemistry. Topics could include processes and methods and clinical biochemistry, quality management, introduction of new testing modalities, and subspecialty areas like toxicology and immunology.

- lectures, 1 tutorial; 1 term

Prerequisite(s): One of HTHSCI 2D06, HTHSCI 2E03, BIOCHEM 2EE3, BIOCHEM 3D03, ISCI 2A18 A/B, LIFESCI 2L03, and registration in Level III or above.

HTHSCI 3MB3 - INTRODUCTION TO BACTERIOLOGY IN HEALTH SCIENCES

Through expert lectures and problem-based learning, students in this course will explore the bacteria in our environments and bodies, how they impact health and cause disease, and the challenges faced in the treatment of bacterial infection.
Two lectures, one tutorial; one term
Prerequisite(s): One of HTHSCI 1I06 A/B, IBEHS 1I06, BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), or ISCI 1A24 A/B and registration in Level III or above
Antirequisite(s): HTHSCI 2HH3, HTHSCI 4KK3, BIOLOGY 2EE3

HTHSCI 3MH3 - CRITICAL EXAMINATION OF MENTAL HEALTH

An examination of mental health and illness from different social, cultural and historical perspectives. In this course, students will consider a range of mental health issues and compare how these issues are commonly understood in a critical examination of mental health research and theory.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any Honours program.

HTHSCI 3MR6 A/B - PRACTICUM IN MEDICAL RESEARCH.

This course will provide a structured overview of health research methodology, basic statistics, validated appraisal tools, research project design and conduct, and career planning in health research. The course will include a practical research component under the supervision of a faculty member in the Department of Medicine, with independent student-led project work from inception to completion.
Two terms; bi-weekly tutorial and research work
Prerequisite(s): Registration in level II or above of the Honours Health Sciences Program and permission of the instructor (by application).
Antirequisite(s): Completion of or co-registration in HTHSCI 3H03, 3H06, 3HR3, or any Level IV HTHSCI senior project or thesis course, or registration in Level IV or higher.
Note: This course can replace the degree requirement for HTHSCI 3H03/6, but it is not open to students who have already completed 3H03, 3H06, 3HR3, or a 4th year project/thesis course. This course cannot replace a 4th year project/thesis course requirement.

HTHSCI 3MU3 - MUSIC, HEALTH, & THE COMMUNITY

This experiential interdisciplinary course will develop community experience and leadership in the Hamilton Intergenerational Music Program. In-class discussions will focus on the function and role of music in health and healthcare, intergenerational issues, leadership skills, and music education.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Honours Health Sciences Program, or registration in Level III or above of the Honours Health Sciences Child Health Specialization, or registration in Level III or above of a Music program, or registration in Level III or above of a Health, Aging & Society program, or permission of instructor.

HTHSCI 3N03 - CREATIVE WRITING IN THE HEALTH SCIENCES

This course will explore various genres of written communication. Students will develop their editing and writing skills in a small group.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the Honours Health Sciences Program or registration in Level III or above of the Honours Health Sciences Child Health Specialization, or permission of the instructor.

HTHSCI 3NN3 - INQUIRY IN PERINATAL & REPRODUCTIVE HEALTH

An examination of a variety of aspects pertaining to perinatal health, encompassing the child-bearing cycle. Biological, social, and global perspectives will be explored, along with the complex interplay between them.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any Program in the Faculty of Health Sciences or Faculty of Science or the Integrated Biomedical Engineering Program, or registration in Level I or above of the Midwifery Program, or permission of the instructor.

HTHSCI 3PA2 A/B - INTEGRATED PATHOPHYSIOLOGY FOR NURSING

Building on the concepts encountered in NURSING/HTHSCI 2LA2 A/B, this course combines online multimedia learning modules with integrated tutorials in which students learn and apply pathophysiological concepts.
Tutorial (twelve one hour sessions), eight online multimedia modules; two

terms
Prerequisite(s): Minimum grade of C- in NURSING 2NN3, HTHSCI 2H03, 2HH3, 2RR3, 2LA2 A/B, and a Pass in NURSING 2P03 and registration in the B.Sc.N. Basic (A); or a minimum grade of C- in NURSING 2AA3, NURSING 3CN3, 3QQ3, HTHSCI 2C06, 2RR3, 2C03 A/B S and registration in the B.Sc.N. Post
Antirequisite(s): NURSING 3PA2 A/B
Co-requisite(s): NURSING 3SS3 and 3TT3 or NURSING 3RS3 and 3RT3

HTHSCI 3PF1 - INTEGRATED PATHOPHYSIOLOGY FOR ACCELERATED STREAM

Building on the concepts encountered in NURSING/HTHSCI 2PF3 A/B, this course combines online multimedia learning modules with integrated tutorials in which students learn and apply pathophysiological concepts.
Tutorial (six one hour sessions); four online multimedia modules; one term
Prerequisite(s): Minimum grade of C- in NURSING 2V04, HTHSCI 2H03, 2HH3, 1RR2, 2C03 and a minimum grade of C- in NURSING 2PF3 A/B or HTHSCI 2PF3 A/B, and a Pass in NURSING 2J04 and registration in the B.Sc.N. Accelerated (F) Stream
Antirequisite(s): NURSING 3PF1
Co-requisite(s): NURSING 3V03

HTHSCI 3PH3 - THE POLITICS OF HELP

Helping is a political act, and the well-intentioned desire to help others is informed by power and values, and shaped by current and historical contexts. This course examines the ways that systems, roles, and implicit and explicit motivations impact community engagement and professional helping relationships, and fosters students' capacities for critical thinking, reciprocity, and transformative action for justice and equity.
Two lectures, one term
Prerequisite(s): Registration in Level III or above in any program.

HTHSCI 3PP3 - HEALTH VENTURES

In this case-based course, students will develop skills for defining problems, designing solutions, and activating opportunities for entrepreneurship and health innovation.
Three hours and online modules; one term
Prerequisite(s): Registration in Level III or above of any program
Antirequisite(s): IBEHS 3EE6 A/B

HTHSCI 3QA3 - QUALITATIVE RESEARCH METHODS IN HEALTH

An inquiry-based course examining a wide range of qualitative methods used in health research, including ethnography, narrative, phenomenology, and arts- and science-based approaches. We explore qualitative methods in the clinical, public, and biomedical health sciences.
Three hours; one term
Prerequisite(s): Registration in Level 3 or above of an Honours program

HTHSCI 3RB3 - HUMAN REPRODUCTIVE ANATOMY & PHYSIOLOGY

This course will examine the complex interplay of anatomical structures and physiological processes in human reproduction through case-based tutorials, laboratory sessions, and large group sessions.

- lectures, 1 tutorial/laboratory; one term

Prerequisite(s): Registration in Level III or above and one of the following: HTHSCI 2FF3, HTHSCI 2FB3, KINESIOL 1AA3, KINESIOL 1YY3, KINESIOL 2YY3, HTHSCI 2LL3, or HTHSCI 1H06

HTHSCI 3RH3 - RACISM AND HEALTH

This course examines how racism functions as a determinant of health both in the Canadian context and globally. Students will critically consider issues related to the impacts of interpersonal and systemic racism on the health of racialized people and communities, for racialized patients and health care professionals in health care contexts, epistemological racism and injustice, and explore practices of anti-racism in health contexts.
Three hours; one term
Prerequisite(s): Registration in Level 3 or above in any program.

HTHSCI 3RS3 - EXPLORING THE FOUNDATIONS OF REHABILITATION SCIENCES

Students will engage in discussions focused on the fundamental concepts and theories specific to the role of rehabilitation professionals in the local, national, and global contexts. Students will explore the clinical practices and unique roles of physical therapy, occupational therapy, and speech language pathology.
Three hours; one term
Prerequisite(s): Registration in Level III or above

HTHSCI 3S03 - COMMUNICATION SKILLS

This course offers students a variety of learning experiences that will enable them to better understand the relationship between effective communication and desired outcomes in professional settings. Students will be exposed to evidence based research, role playing, standardized simulations and audio-visual reviews.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any program in the Faculty of Health Sciences

HTHSCI 3SB3 - SUPERBUGS: BACTERIAL ANTIBIOTIC RESISTANCE

This course will examine the biochemistry of antibiotic resistance in bacteria. Prominent 'superbugs' plaguing patients will be covered, as well as potential novel interventions to move antimicrobial chemotherapy forward.
Three hours; one term
Prerequisite(s): HTHSCI 2K03

HTHSCI 3SS3 - SURVIVING SURVIVOR: INSIGHTS FROM REALITY TV FOR REAL LIFE

This interdisciplinary inquiry course will use the realty TV show Survivor as a lens through which to examine topics such as psychology, group dynamics and tribalism, human physiology, ethics and decision-making, and the representation of current social topics and movements.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any program.

HTHSCI 3ST3 - SELECTED TOPICS IN HEALTH SCIENCES

- third year seminar on a selected topic in the health sciences. Topics will vary from year to year depending on student interests and faculty availability.
- hours; one term

Prerequisite(s): Announced at time of offering; see the Honours Health Sciences Program website for more information.
HTHSCI 3ST3 may be repeated, if on a different topic, to a total of 6 units.

HTHSCI 3T03 - INQUIRY INTO WORK, SELF AND PURPOSE

This course will explore ideas of work, career/life design and personal purpose. Students will undertake self-assessment activities, group projects and personal reflection with a view to integrating a critical appreciation of course content into their personal decision making.
Three hours; one term
Prerequisite(s): Registration in Level III or above

HTHSCI 3U03 - MEDICAL GENETICS

This course will cover a broad spectrum of genetic disorders; with particular emphasis on inheritance patterns, molecular mechanisms, treatment and prevention.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 2K03 or BIOLOGY 2B03 and registration in Level III or above, or registration in Level III or above of the BioPharm Program.

HTHSCI 3V03 - RESEARCH AND EXPERIMENTAL DESIGN

Analytical review of fundamental experiments with a focus on experimental design, employing data sets to solve experimental problems with an emphasis on how to approach the problem.
Three hour lecture; one term
Prerequisite(s): Registration in Level III or above of the Arts & Science Program, or any Honours program in the Faculty of Science, or any program in the Faculty of Health Sciences.

HTHSCI 3WT3 - WHAT TRAUMA TEACHES: LESSONS FROM LISTENING

Trauma can be a teacher for the person who has experienced it, those around them, and broader communities. Facilitated by individuals with lived experience, this course will explore harm reduction as a health policy and advocacy approach, and provide students with an opportunity examine the importance of community knowledge, engagement, and reflexivity in uncovering lessons from trauma for broader systems change.
One semester; 3 hours
Prerequisite(s): Registration in Level 3 or above in any program

HTHSCI 3X00 A/B - PRAXIS PATHWAYS 3

This is part 3 of the longitudinal Praxis Pathways Curriculum, in which students develop greater facility in their capacities for: collaboration in community; group process; leadership; lifelong learning; perspective-taking; reflection and reflexivity; and self-care and wellness. The development of information literacy and critical analysis skills supports and informs these goals.
One hour per month; two terms
Prerequisite(s): HTHSCI 2X03 A/B
This course is evaluated on a Pass/Fail basis.

HTHSCI 3X03 - PAIN: PERCEPTIONS, MECHANISMS AND INTERVENTION

An introduction to perceptions, mechanisms and interventions for pain with a holistic interdisciplinary approach.
One lecture, one tutorial; one term
Prerequisite(s): Registration in Level III or above of any program in the Faculty of Health Sciences.

HTHSCI 4A09 A/B S - THESIS

- thesis-based research project conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Honours Health Sciences Program and permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program
Antirequisite(s): BIOLOGY 4F06 A/B S, 4C12 A/B S, HTHSCI 4B06 A/B S, 4A12 A/B S, 4A15 A/B S, MOLBIOL 4G12 A/B S, PHARMAC 4F09, PSYCH 4E09
Not open to students with credit or registration in BIOCHEM 4P03.
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4A12 A/B S - THESIS

- thesis-based research project conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Honours Health Sciences Program and permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program
Antirequisite(s): BIOLOGY 4F06 A/B S, 4C12 A/B S, HTHSCI 4B06 A/B S, 4A09 A/B S, 4A15 A/B S, MOLBIOL 4G12 A/B S, PHARMAC 4F09, PSYCH 4E09
Not open to students with credit or registration in BIOCHEM 4P03.
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4A15 A/B S - THESIS

- thesis-based research project conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Honours Health Sciences Program and permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program.
Antirequisite(s): BIOLOGY 4F06 A/B S, 4C12 A/B S, HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, MOLBIOL 4G12 A/B S, PHARMAC 4F09, PSYCH 4D06, 4D09, 4E09
Not open to students with a credit or registration in BIOCHEM 4P03.
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4AA3 - GROUP DYNAMICS AND PROCESSES

Students will develop skills and knowledge in pedagogy and facilitation as peer tutors in the setting of inquiry-based learning.
Sessions arranged individually or in small groups; one term (Spring term)
Prerequisite(s): HTHSCI 2E03 and 2K03, and permission of the Honours Health Sciences Program.
Antirequisite(s): HTHSCI 4SS6 A/B

HTHSCI 4AC3 - ADVANCED COMMUNICATION SKILLS

Students will master more complex communication skills (building on 3S03) and develop advanced knowledge about how these skills can be effectively used with different populations and psychosocial issues. Student will develop both an ability to work with complex situations (e.g., groups, families, couples).

Students will also develop perspective taking through the development of and participation in standardized scenarios.
Three hours; one term
Prerequisite(s): HTHSCI 3S03 and registration in Level IV

HTHSCI 4AL3 - MODEL SYSTEMS

Examining the use of human, animal and cell model systems in research through investigation of primary research.
One lecture or workshop (three hours); one term
Prerequisite(s): Registration in Level III or above in the Honours Health Sciences Program; or registration in Level III or above of the Honours Integrated Science Program, Arts & Science Program, or any Honours program in the Faculty of Science

HTHSCI 4B06 A/B S - SENIOR PROJECTS

- selection of information-based research projects conducted under the supervision of one or more members of the Faculty. Students are responsible for arranging a suitable project and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Honours Health Sciences Program and permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program
Antirequisite(s): BIOLOGY 4F06 A/B S, 4C12 A/B S, HTHSCI 4A09 A/B S, HTHSCI 4A12 A/B S, HTHSCI 4A15 A/B S, MOLBIOL 4G12 A/B S, PHARMAC 4F09, PSYCH 4D06, 4D09, 4E09, IBEHS 3I06 A/B S
Not open to students with credit or registration in BIOCHEM 4P03.
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4BB3 - NEUROIMMUNOLOGY

This course will examine immune-brain communication, immune molecules and their signalling pathways, and the role of the immune system in normal brain function and CNS disease. It is recommended that students have an understanding of Immunology.
Three hours, one tutorial; one term
Prerequisite(s): BIOTECH 3IV3, or HTHSCI 3I03

HTHSCI 4BL3 - PEER TUTORING IN DESIGN THINKING

This course provides students an opportunity to develop their skills and knowledge of design thinking by acting as peer tutors to other students enrolled in HTHSCI 4ID3: Innovation by Design, an introduction to design thinking. Students will have an opportunity to support up to two interdisciplinary teams of students through a series of design project milestones.
Developing skills and tools for facilitating a design mindset in others will serve as the focus of an individual and a team project.
Prerequisite(s): Registration in Level III or above in any program; HTHSCI 3QA3, 4ID3, or 4LA3; and permission of the instructor

HTHSCI 4BR6 A/B - RESEARCH SKILLS AND APPLICATION

This course will develop a variety of crucial skills for research, including research ethics, scientific communication and information literacy, and techniques and approaches used in different domains of health research. Students will undertake mini-projects in order to practice and apply these skills to a health research question.
One hour virtual core, two hour on-line tutorial; two terms
Prerequisite(s): Registration in Level IV in Honours Health Sciences Program, and permission of the Honours Health Sciences Program.
Antirequisite(s): HTHSCI 4B06 A/B S, HTHSCI 4A09 A/B S, HTHSCI 4A12 A/B S, HTHSCI 4A15 A/B S, HTHSCI 4C06 A/B S, HTHSCI 4C09 A/B S, HTHSCI 4C12 A/B S, HTHSCI 4C15 A/B S, HTHSCI 4D06 A/B S, HTHSCI 4D09 A/B S, HTHSCI 4D12 A/B S, HTHSCI 4G06 A/B S, HTHSCI 4G09 A/B S, HTHSCI 4G12 A/B S, HTHSCI 4G15 A/B S, HTHSCI 4R09 A/B S, HTHSCI 4R12 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4C06 A/B S - SENIOR PROJECT IN CHILD HEALTH

- selection of information-based research projects focused on Child Health conducted under the supervision of one or more members of the Faculty. Students are responsible for arranging a suitable project and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Level IV of the Child Health Specialization of the Honours Health Sciences Program and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4C09 A/B S, HTHSCI 4C12 A/B S, HTHSCI 4C15 A/B S

HTHSCI 4C09 A/B S - THESIS IN CHILD HEALTH

- thesis-based research project focused on Child Health conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Level IV of the Child Health Specialization of the Honours Health Sciences Program and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4C06 A/B S, HTHSCI 4C12 A/B S, HTHSCI 4C15 A/B S

HTHSCI 4C12 A/B S - THESIS IN CHILD HEALTH

- thesis-based research project focused on Child Health conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Level IV of the Child Health Specialization of the Honours Health Sciences Program and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4C06 A/B S, HTHSCI 4C09 A/B S, HTHSCI 4C15 A/B S

HTHSCI 4C15 A/B S - THESIS IN CHILD HEALTH

- thesis-based research project focused on Child Health conducted under the direction and supervision of a member of the Faculty. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Registration in Level IV of the Child Health Specialization of the Honours Health Sciences Program and permission of Honours Health

Sciences Program
Antirequisite(s): HTHSCI 4C06 A/B S, HTHSCI 4C09 A/B S, HTHSCI 4C12 A/B S

HTHSCI 4CH3 A/B - CHS EDUCATION PRACTICUM

Students will develop skills and knowledge in pedagogy, group process, and facilitation as peer tutors in the setting of inquiry-based learning in the Child Health Specialization.
Sessions arranged individually or in small groups; two terms
Prerequisite(s): Registration in Level IV of the Honours Health Sciences Child Health Specialization and permission of the instructor

HTHSCI 4CH6 A/B - CHS INQUIRY ADVANCED

The course will be a continuation of principles and core elements of knowledge, research and application experienced in Level III. Students will be expected to integrate and apply their knowledge and critical thinking about child health at a more advanced level.
Four hours; two terms
Prerequisite(s): HTHSCI 3CH9 A/B and HTHSCI 3CH6 A/B S

HTHSCI 4CU3 - CULTURAL COMPETENCY IN HEALTH SCIENCES

Cultural competent practitioners can interpret and effectively act on the cultural context of an individual. Relationship building is key to cultural competence. Communications skills help us understand and manage each other's expectations and attitudes and highlight each others' strength using a wide range of individual and community resources. This course will use theoretical and practical exercises to build our cultural competency and examine how we can effectively act in professional health contexts.
Three hours; one term
Prerequisite(s): HTHSCI 3S03

HTHSCI 4D03 - SPECIAL TOPICS IN HEALTH SCIENCES

This course provides an opportunity for individual or small groups to integrate concepts from their undergraduate courses.
Prerequisite(s): Registration in Honours Health Sciences Program and permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program

HTHSCI 4D06 A/B S - SENIOR PROJECT IN ENGAGING THE CITY

- project focused on community-based participatory research conducted under the direction and supervision of a member of the Faculty. The project can be an extension of a student's HTHSCI 3DD6 A/B Engaging the City project. Students are responsible for arranging a suitable project and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, 4A15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4D09 A/B S - THESIS IN ENGAGING THE CITY

- thesis focused on community-based participatory research conducted under the direction and supervision of a member of the Faculty. The thesis can be an extension of a student's HTHSCI 3DD6 A/B Engaging the City project. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, 4A15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4D12 A/B S - THESIS IN ENGAGING THE CITY

- thesis focused on community-based participatory research conducted under the direction and supervision of a member of the Faculty. The thesis can be an extension of a student's HTHSCI 3DD6 A/B Engaging the City project. t. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): Permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, 4A15 A/B S
Arrangements to register in this course, including agreement of the supervisor, must be made before the end of March in Level III.
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4D15 A/B S - THESIS IN ENGAGING THE CITY

- thesis focused on community-based participatory research conducted under the direction and supervision of a member of the Faculty. The thesis can be an extension of a student's HTHSCI 3DD6 A/B Engaging the City project. Arrangements to register in HTHSCI 4D15 A/B, including agreement of the supervisor must be made before the end of March in Level III.

Two terms
Prerequisite(s): Permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4B06 A/B S, 4A09 A/B S, 4A12 A/B S, 4A15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4DE3 A/B S - SENIOR PROJECT IN ENGAGING THE CITY

- project focused on community-based participatory research conducted under the direction and supervision of a member of the Faculty. The project can be an extension of a students HTHSCI 3DD6 A/B - Engaging the City project. Students are responsible for arranging a suitable project and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

One term
Prerequisite(s): Permission of Honours Health Sciences Program

HTHSCI 4DN3 - DANCE IN HEALTH AND WELLNESS

Students will explore the scientific literature related to dance and health, and examine how dance and movement are used in healing practices in various settings and cultures around the world. Topics may include: dance and dance therapy in health care; biomechanics and anatomy of dance and injury; the use of dance for emotional, mental, and spiritual wellbeing; Indigenous healing practices involving dance and movement.
Three hours; one term
Prerequisite(s): Registration in Level IV or above in any program

HTHSCI 4EE6 A/B - EDUCATION PRACTICUM IN HEALTH SCIENCES - INQUIRY

Students will develop skills and knowledge in pedagogy, group process, and facilitation as peer tutors in the setting of inquiry-based learning;
two terms
Prerequisite(s): Permission of the Honours Health Sciences program

HTHSCI 4G03 - PATHOANATOMY

Students will research the anatomy, surgical approach and etiology of a pathology assigned from an anatomical system of their choosing, depending on availability of cadavers. The goal is to give students an opportunity to prepare an educational surgical specimen from human materials.
Two lectures, one lab; one term
Prerequisite(s): One of HTHSCI 2FB3, HTHSCI 2FF3, KINESIOL 1AA3, 1YY3, or 2YY3

HTHSCI 4G06 A/B S - SENIOR PROJECT IN GLOBAL HEALTH

- senior project focused on a Global Health topic, with possible experiential components, conducted under the direction and supervision of a suitable expert. Students are responsible for arranging a suitable project and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): HTHSCI 2DS3, 3H03 A/B S, and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4G09 A/B S, 4G12 A/B S, 4G15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4G09 A/B S - THESIS IN GLOBAL HEALTH

- thesis-based research project focused on Global Health with experiential components, conducted under the direction and supervision of a suitable expert. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): HTHSCI 2DS3, 3H03 A/B S, and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4G06 A/B S, 4G12 A/B S, 4G15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4G12 A/B S - THESIS IN GLOBAL HEALTH

- thesis-based research project focused on Global Health with experiential components, conducted under the direction and supervision of a suitable expert. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): HTHSCI 2DS3, 3H03 A/B S, and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4G06 A/B S, 4G09 A/B S, 4G15 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4G15 A/B S - THESIS IN GLOBAL HEALTH

- thesis-based research project focused on Global Health with experiential components, conducted under the direction and supervision of a suitable expert. Students are responsible for arranging a suitable thesis and supervisor. The required forms must be submitted at least thirty days prior to the date classes begin.

Two terms
Prerequisite(s): HTHSCI 2DS3, 3H03 A/B S, and permission of Honours Health Sciences Program
Antirequisite(s): HTHSCI 4G06 A/B S, 4G09 A/B S, 4G12 A/B S
Not open to students enrolled in the Biomedical Discovery and Commercialization Program.

HTHSCI 4IC3 - INTEGRATION OF CHILDREN'S PHYSICAL AND MENTAL HEALTH

This course will examine issues related to the intersection of physical and mental health within the context of child health.
Three hours; one term.
Prerequisite(s): Registration in Level IV or above in Honours Health Sciences or Honours Health Sciences Child Health Specialization, or permission of instructor

HTHSCI 4ID3 - INNOVATION BY DESIGN I

This course will enable interdisciplinary student groups to engage in design thinking as a methodology to assess health-related challenges, collect meaningful data, iterate alternative design options, and build a prototype solution for testing with user groups. Students will learn conceptual and applied approaches to design thinking and develop capabilities for building innovative teams, having empathy with others and creative problem-solving.
Prerequisite(s): Registration in Level IV or above
Antirequisite(s): IBEHS 2E06

HTHSCI 4IH3 - INDIGENOUS HEALTH RESEARCH

This course examines the responsible conduct and use of health research involving Indigenous peoples, informed by anti-racist, trauma-informed, and decolonizing perspectives. By developing a deeper understanding of methodologies and research partnerships, students will gain insight into ethical, respectful, and culturally relevant Indigenous health research.
Three Lectures, one term
Prerequisite(s): HTHSCI 3AH3, INDIGST 3H03, INDIGST 3HH3, or permission of the instructor.

HTHSCI 4II3 - ADVANCED CONCEPTS IN IMMUNOLOGY

This course will build on knowledge of the immune system and focus on the immune system in disease: allergy, inflammation, autoimmunity, immune deficiency, malignancy and cancer immunotherapy.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 3I03 or BIOTECH 3IV3

HTHSCI 4J03 - IMMUNOLOGICAL PRINCIPLES IN PRACTICE

This advanced course applies problem-based learning to immunological problems. Topics concern development of immunoassays, resistance to infection and immunity in health and disease.
One session (three hours), one tutorial; one term
Prerequisite(s): HTHSCI 3I03 or BIOTECH 3IV3; or permission of the instructor
Cross-list(s): BIOCHEM 4J03

HTHSCI 4JJ3 - CAPACITY RESEARCH IN EVERYDAY LIFE

Research has an impact on everyday life. This course will examine health communication, social entrepreneurship and project management are real world skills that rely on quality research. This is a practical course for third-

and fourth-year students to work with their peers in learning how to use day-to-day research activities to further projects about which they are passionate. Skills focused on may include; grant applications and proposal writing; learning to manage multiple priorities on multiple projects; team management; health promotion; the writing process.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any Honours program.

HTHSCI 4K03 - HUMAN PATHOPHYSIOLOGY

The course is designed to allow participants to think and solve problems in the area of physiology, pathophysiology and anatomy.
One lecture, one tutorial, one lab; one term
Prerequisite(s): One of HTHSCI 2FB3, HTHSCI 2FF3, BIOLOGY 2A03, KINESIOL 1AA3, 1YY3, or 2YY3
Antirequisite(s): LIFESCI 3AA3

HTHSCI 4KT3 - DEMYSTIFYING SCIENCE - ADVANCED KNOWLEDGE TRANSLATION AND SCIENCE COMMUNICATION

Students will gain a broad overview of educational concepts related to knowledge translation and science communication, develop an innovation project to enhance the Demystifying Medicine and Demystifying Research Programs, and serve as peer mentors for students the Level 3 Demystifying courses.
Three hours; one term
Prerequisite(s): One of HTHSCI 3DR3, HTHSCI 3DM3, or HTHSCI 4DM3.

HTHSCI 4LA3 - INNOVATION BY DESIGN II

This course introduces students to strategic foresight and experiential futures in health leadership and innovation. Building on the design thinking methods and tools from Innovation by Design I, students will work in interdisciplinary teams to address a health-related challenge. Students will learn about identifying weak signals, scenario development, and storytelling as part of developing plausible health futures.
Prerequisite(s): HTHSCI 4ID3 (or equivalent by permission of instructor)

HTHSCI 4LD3 - GLOBAL HEALTH GOVERNANCE, LAW AND POLITICS

This course surveys contemporary issues and debates in global health governance, law, and politics from an interdisciplinary perspective. Theory will converge with practice as students examine the historical development of global health, relevant actors and institutions, regulatory framework, principal coordinating mechanisms and emerging challenges to its effective governance.
Three hours, one tutorial; one term
Prerequisite(s): Registration in Level III or above in any Honours Program.

HTHSCI 4LL3 - INTEGRATED HEALTH SYSTEMS

Consideration of the issues inherent to the integration of current conventional medical approaches with other healing systems.
Three hours; one term
Prerequisite(s): Registration in Level III or above of the BHSc. (Honours) Program; or registration in Level III or above of the BHSc. (Honours) Specializations

HTHSCI 4M03 - ADVANCED CONCEPTS IN HEALTH PSYCHOLOGY

This course will explore the role of psychological factors in health and disease. Topics include stress, coping, health promoting/compromising behaviours, patient-physician communication, adherence, pain, heart disease and cancer.
Three hours; one term
Prerequisite(s): Registration in Level III or above and one of HTHSCI 1G03, PSYCH 1F03, 1N03 or 1X03.
Offered on alternate years.

HTHSCI 4MS3 - THE SOCIAL LIVES OF MOLECULES

Ours is a molecular world. Complex interactions between individuals and diverse social groups underpin the discovery, manufacture, marketing and use of drugs, nutrients, poisons and cosmetics that influences our health and well- being in myriads of way; a fertile field for exploration in a problem-based course.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any program

HTHSCI 4NC3 - NAVIGATING COMPLEXITY IN HEALTH

Case studies from COVID-19, innovation adoption, and new technology implementations (e.g. Electronic Medical Record systems, Ontario Health Teams) are used to illustrate how to navigate ambiguity, understand interactions in change processes, and adapt to new information. Students will develop their capacity as change agents in health through the understanding and application of complexity theory, and build skills for leadership, strategic management, organizational behavior, and entrepreneurship.
Three hours; one term
Prerequisite(s): Registration in Level III or above in Honours Health Sciences Program or registration in Level IV or above in any program

HTHSCI 4NN3 - ADVANCED CREATIVE WRITING IN HEALTH SCIENCES

This course will be an advanced course in written communication, building on knowledge gained in Written Communication I. Students will explore and hone their writing skills in various forms. Three hours; one term
Prerequisite(s): HTHSCI 3N03

HTHSCI 4NR3 - NURSING RESEARCH

This course is designed to enhance the student's understanding of the research process. Emphasis is placed on the student's potential role as a research collaborator in projects related to professional practice.
Lecture (three hours), 24-30 hours research practicum; one term
Prerequisite(s): Minimum grade of C- in NURSING 3SS3, HTHSCI 2H03, 2HH3, 2S03, 2LA2 A/B, and a Pass in NURSING 2P03, and registration in the B.Sc.N. Basic (A) Stream; or a minimum grade of C- in HTHSCI 2C03 A/B S, and Pass in NURSING 3CN3, 3QQ3 and registration in the B.Sc.N. Post Diploma R.P.N. Stream; or minimum grade of C- in NURSING 3V04, and HTHSCI 3PF1, and a Pass in NURSING 3ZB3, 3QQ3, and registration in the B.Sc.N. Accelerated (F) Stream; or permission of the instructor
Antirequisite(s): HTHSCI 4L02

HTHSCI 4NU3 - NUTRITION

Students will have an opportunity to learn about nutrition and diet from a functional medicine approach. Multiple learning methods will be used including lecture, class activities and a term long group project.
Three hours; one term.
Prerequisite(s): Registration in Level 3 or above in Honours Health Sciences or Level 3 or above in Honours Health Sciences Specializations

HTHSCI 4O03 - PRINCIPLES OF VIRUS PATHOGENESIS

Current theories and knowledge on mechanisms that relate to virus pathogenesis and evasion of host cell responses.
Two lectures, one tutorial; one term
Prerequisite(s): HTHSCI 3I03, HTHSCI 3K03 or BIOTECH 3IV3 and registration in Level III or above

HTHSCI 4PA3 - GLOBAL HEALTH INNOVATION

Students will examine considerations, questions and challenges that govern the genesis, development and adoption of health innovation in low and middle income countries. There is an opportunity for students to build on their biomedical knowledge by applying interdisciplinary perspectives to a complex healthcare topic.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any Honours program and HTHSCI 2DS3 or GLOBALZN 1A03, or permission of the instructor.

HTHSCI 4PF6 A/B - EDUCATION PRACTICUM IN ANATOMY & PHYSIOLOGY

Students will develop skills and knowledge in pedagogy, group process, and facilitation as peer tutors in the setting of inquiry-based learning of anatomy and physiology.
Three hours; two terms.
Prerequisite: Permission of the instructor.

HTHSCI 4QQ3 A/B S - COMMUNICATION SKILLS PRACTICUM

Students will develop skills and knowledge in pedagogy, group process, and facilitation as peer tutors in the setting of communication skills.
Sessions arranged individually or in small groups; two terms
Prerequisite(s): Permission of the Assistant Dean, Honours Health Sciences program

HTHSCI 4RD3 - INTEGRATED STATISTICS AND RESEARCH DESIGN

This course provides a scaffolded approach to statistics and research design for students engaged in undergraduate project or thesis courses. Topics include ethics, statistical analysis, presentation and knowledge translation, project management, and other elements of the research process.
Three hours; one term
Prerequisite(s): Co-registration in HTHSCI 3H03, 3H06, or a 4th year HTHSCI Senior Project or Thesis, and permission of the instructor.

HTHSCI 4SC3 - SOCIAL DETERMINANTS OF CHILD HEALTH

This course will examine issues related to social determinants within the context of child health.
Three hours; one term
Prerequisite(s): Registration of Level IV Honours Health Sciences or Honours Health Sciences Specializations or permission of instructor.

HTHSCI 4SM3 - SKELETAL MUSCLE IN HEALTH AND DISEASE

This course considers skeletal muscle anatomy and physiology and its role in health and disease. Students will have opportunities to explore the normal structure and function of skeletal muscle and the neuromuscular junction, pathological conditions of the muscle, adaptation of skeletal muscle to aging, disease, and training, and the methods used to study skeletal muscle biology.

- lectures, 1 tutorial; one term

Prerequisite(s): Registration in Level III or above and one of the following: HTHSCI 2FF3, HTHSCI 2FB3, KINESIOL 1A03, KINESIOL 1Y03, KINESIOL 2Y03, HTHSCI 2LL3, HTHSCI 1D06, or HTHSCI 1H06
Antirequisite: KINESIOL 3Z03, KINESIOL 2C03

HTHSCI 4SR3 - GLOBAL SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

Students will apply a critical lens and explore systems of power and ideological frameworks in order to situate sexual and reproductive health and rights in frameworks of human rights and justice. We will attend to the suppressed voices and movements that have advanced our knowledge and understandings of phenomenon that undergird and remedy ill health, and study examples of resistance through and for health.
Three hours; one term
Prerequisite(s): Registration in Level 3 or above of any program, or registration in Level 1 or above of the Midwifery program.

HTHSCI 4SS6 A/B - GROUP PROCESS PRACTICUM

Students will develop skills, knowledge, and experience in pedagogy and facilitation as peer tutors in the setting of inquiry-based learning, with particular emphasis on exploring theory and applying concepts of group dynamics and processes.
Sessions arranged individually or in small groups; two terms
Prerequisite(s): Permission of the Honours Health Sciences program
Antirequisite(s): HTHSCI 4AA3

HTHSCI 4ST3 - ADVANCED SEMINAR IN HEALTH SCIENCES

An advanced exploration of a selected topic in the health sciences. Topics will vary from year to year depending on student interests and faculty availability.

- hours; one term

Prerequisite(s): Announced at time of offering; see the Honours Health Sciences Program website for more information.
HTHSCI 4ST3 may be repeated, if on a different topic, to a total of 6 units.

HTHSCI 4TE3 - THE TEACHING HOSPITAL

This inquiry course will permit students to explore the evolution of the modern teaching hospital from its early days as bimaristans in medieval Persia to the modern global technological institutions that link patient care with the training of practitioners.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any program

HTHSCI 4TT3 A/B S - HEALTH AND RESEARCH ETHICS PRACTICUM

This course will examine current issues in health ethics including research ethics. We will develop activities that promote appropriate ethical behavior on campus through small group inquiry-based learning, peer tutoring and community engagement and to explore theory and apply concepts related to health ethics.
Three hours; two terms
Prerequisite(s): Registration in Level III or above of any Honours program.

HTHSCI 4W03 - SPECIAL TOPICS IN HEALTH SCIENCES II

This course provides an opportunity for individual or small groups to integrate concepts from their undergraduate courses.
Sessions arranged individually or in small groups; one term
Prerequisite(s): Registration in Honours Health Sciences Program and

permission of Honours Health Sciences Program, or supervision by a Faculty of Health Sciences supervisor and permission of Honours Health Sciences Program

HTHSCI 4WW3 A/B - EDUCATION PRACTICUM - COMMUNITY ENGAGEMENT

Students will develop skills and knowledge in mentoring, building relationships, and critical pedagogy as peer tutors in the setting of community-engaged research.
Three hours; two terms
Prerequisite(s): HTHSCI 3DD6 A/B, registration in Level IV and permission of instructor.

HTHSCI 4XP3 A/B - PRAXIS PATHWAYS 4

This is the culmination of the longitudinal Praxis Pathways Curriculum, in which students enhance and deepen their capacities for: collaboration in community; group process; leadership; lifelong learning; perspective-taking; reflection and reflexivity; and self-care and wellness. The development of information literacy and critical analysis skills supports and informs these goals.
Eight hours per month; two terms
Prerequisite(s): HTHSCI 3X00

HTHSCI 4XX3 - PROFESSIONAL TRANSITIONS

This course will provide students with an opportunity to explore issues related to professionalism, the uncertainty of new directions, success/failure, choices, expectations and career challenges.
Three hours; one term
Prerequisite(s): Registration in Level IV in any Honours program

HTHSCI 4Y03 - SCIENCE, CULTURE AND IDENTITY

Through selected readings and discussion, this course will explore some critiques of science and will appraise the challenge they present to scientific authority. The course will culminate in the presentation of a research project on a question developed by students individually or in groups.
Three hours; one term
Prerequisite(s): Registration in Level III or above in the Honours Health Sciences Program, or Level III or above in the Honours Health Sciences Specialization; or registration in Level III or above of the Honours Integrated Science Program, Arts & Science; or registration in Level III or above in any Honours program and permission of the instructor.

HTHSCI 4ZZ3 - GLOBAL HEALTH ADVOCACY

This course aims to foster appreciation for the complexity of today's most pressing global health challenges and the ways that various actors work to overcome them. Students will examine how individuals, organizations, and corporations advocate to national and international government organizations to tackle challenges that affect policy changes, and garner resources to address communicable and non-communicable diseases.
Three hours, one tutorial; one term
Prerequisite(s): Registration in Level III or above in any Honours program

Health Sciences (Engineering, Midwifery, Nursing)

Note
The following Health Sciences courses are normally available only to students registered in Engineering (Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering), Midwifery, or B.Sc.N. (A), (B), (E) or (F) Streams, as applicable.
Courses

HTHSCI 1CC6 - INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE I

Students will apply principles of cellular biology, biochemistry and human anatomy and physiology essential to the assessment and understanding of health care challenges.
Lecture with integrated tutorial (three hours), online tutorial (three hours); one term
Prerequisite(s): Registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream
Antirequisite(s): HTHSCI 1LL3, 1H06, KINESIOL 1Y03, 1YY3

HTHSCI 1H06 A/B - HUMAN ANATOMY AND PHYSIOLOGY I

An examination of structure-function relationships in the human body systems including the integument, nervous, musculoskeletal, endocrine, cardiovascular, immune, respiratory, gastrointestinal, urinary and reproductive systems with an emphasis on the role of each system in maintaining homeostasis.
Lecture (two hours), lab/tutorial (two hours); two terms
Prerequisite(s): Registration in the B.Sc.N. Basic (A) Stream
Antirequisite(s): BIOLOGY 2A03, HTHSCI 2L03, HTHSCI 2LL3, KINESIOL 1A03, KINESIOL 1AA3, KINESIOL 1Y03, KINESIOL 1YY3, MEDPHYS 4XX3
Co-requisite(s): WHMIS 1A00

HTHSCI 1LL3 - HUMAN BIOCHEMISTRY I

Introduction to proteins, DNA, RNA, chromosomes and their building blocks; gene expression; proteins, carbohydrates and fats as fuels in the production of energy for living, including nutritional aspects.
Lecture with integrated tutorial (three hours); one term
Prerequisite(s): Registration in the B.Sc.N. Basic (A) Stream or permission of the instructor
Antirequisite(s): HTHSCI 1CC6

HTHSCI 2C03 - RESEARCH APPRAISAL AND UTILIZATION IN EVIDENCE INFORMED DECISION MAKING

Introduction to quantitative and qualitative designs with a focus on critical appraisal of evidence and application to nursing practice and healthcare.
Lecture/tutorial (three hours); one term
Prerequisite(s): Registration in the B.Sc.N. Accelerated (F) Stream; or minimum grade of C- in HTHSCI 2S03 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream; or permission of the instructor

HTHSCI 2C06 - INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE II

Students will integrate concepts of pathophysiology and will include principles of microbiology and pharmacology essential to the assessment and understanding of health care challenges.
Lecture (three hours), tutorial (one hour), online tutorials (two hours); one term
Prerequisite(s): Minimum grade of C- in HTHSCI 1CC6 and registration in the B.Sc.N Post Diploma R.P.N. (E) Stream
Antirequisite(s): HTHSCI 2H03, HTHSCI 2HH3, KINESIOL 1Y03, KINESIOL 1YY3

HTHSCI 2PF3 A/B - INTRODUCTION TO INTEGRATED PATHOPHYSIOLOGY FOR ACCELERATED STREAM

The course combines online multimedia learning modules with integrated tutorials in which students learn and apply pathophysiological concepts.
Tutorial (eighteen one hour sessions), twelve online multimedia modules; two

terms
Prerequisite(s): Registration in the B.Sc.N. Accelerated (F) Stream
Antirequisite(s): NURSING 2PF3 A/B
Co-requisite(s): NURSING 2I04

HTHSCI 3BB3 - HUMAN BIOCHEMISTRY II: NUTRITION AND METABOLISM

This course will examine diet and exercise for health as well as biochemical processes in disease states. Nutritional requirements in different life stages and in prevalent disease states will also be discussed.
Lecture (two hours), tutorial (two hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2NN3, HTHSCI 2H03, 2HH3, HTHSCI 2LA2 A/B and a Pass in NURSING 2P03 and registration in the B.Sc.N. Basic (A) Stream; or permission of the instructor
Antirequisite(s): KINESIOL 1F03, LIFESCI 2N03

HTHSCI 3BE4 - NURSING CONCEPTS IN CONTINENCE CARE

This course provides students with the opportunity to integrate existing scientific knowledge (e.g. Anatomy, physiology) with emerging empiric knowledge to develop an understanding of the factors that contribute to bladder and bowel incontinence. Selected problem based cases will be explored through online, interactive learning modules, while integrative tutorial sessions will provide students with opportunities to discuss their assessments, identify contributing factors and consider treatment recommendations for continence care.

- online multimedia modules, 12 one-hour tutorials, two terms

Prerequisite(s): Registration in the BScN Basic (A) Stream, Accelerated (F) Stream or Post Diploma R.P.N.(E) Stream; or department consent.

HTHSCI 3BF3 - NURSING CONCEPTS IN CONTINENCE CARE PLACEMENT

This course is an applied professional practice course that focuses on the assessment and management of urinary and fecal incontinence, including the introduction to the educator role in staff and patient care related to incontinence. Students are individually placed in a variety of health-care settings based in their area of interest including but not limited to urology, urogynecology, acute care, rehabilitation, primary care, community, and long-term care.
Clinical Placement (eight hours/week for twelve weeks); one term
Prerequisite(s): Completion of HTHSCI 3BE4 and 3BG3

HTHSCI 3BG3 - ADVANCED NURSING CONCEPTS IN CONTINENCE CARE

Advanced Concepts in Continence Care builds on the introductory course HTHSCI 3BE4 Nursing Concepts in Continence Care. It integrates asynchronous learning modules and discussion boards as well as synchronous online tutorials which will focus on specific bladder and bowel incontinence issues that require specialized knowledge and management strategies. This will further expand students' understanding about the role that nursing can play in assessment, management as well as patient and staff education. Selected problem based clinical cases will be explored through online, interactive, multimedia learning modules.
Eight online multimedia modules, ten one-hour synchronous tutorials; one term
Prerequisite(s): Registration in the BScN Basic (A) Stream, Accelerated (F) Stream or Post Diploma R.P.N.(E) Stream; or department consent

HTHSCI 4AR3 - NURSING RESEARCH PROJECT

This independent study course enhances the student's understanding of the research process through active engagement in clinical research, quality improvement, or patient safety research projects. Working alongside the researcher/faculty member and his/her research team, students have the opportunity to fully engage in scholarly research, which may include contributing to the writing of a proposal, collecting and/or analyzing data, and/or disseminating results. The student's plan of study is negotiated with the individual researcher/faculty member.
Thirty-six hours of research practicum plus independent study; one term
Prerequisite(s): Registration in Level II or above of any Stream of the B.Sc.N. Program; and permission of the instructor; and permission of the B.Sc.N. Programs Office.
This course may contain an off-campus component.
Students will not normally be permitted to apply more than two independent study or research project courses in the Health Sciences toward their elective requirements for the B.Sc.N. Program.

Hebrew

Courses in Hebrew are administered by the Department of Religious Studies.
University Hall, Room 123, ext. 23109
http://religiousstudies.mcmaster.ca

Department Notes

1. Students are advised to consult both the Department (University Hall, Room 123) and the Undergraduate Timetable for a list of the courses offered in the current year.
2. Students pursuing the Interdisciplinary Minor in Jewish Studies are urged to take at least six units of Hebrew language as part of their List A requirements.

Courses

If no prerequisite is listed, the course is open.

HEBREW 2A03 - INTRODUCTION TO BIBLICAL HEBREW I

An introduction to the basics of grammar, syntax and vocabulary of the language of the Hebrew Bible. The student will begin to read in the Hebrew Bible.
Lectures and discussion (four hours); one term
Cross-list(s): SCAR 2HC3

HEBREW 2B03 - INTRODUCTION TO BIBLICAL HEBREW II

An introduction to more grammar, syntax and vocabulary of the language of the Hebrew Bible. The knowledge acquired should enable the student to read the simple prose and poetry of the Hebrew Bible.
Lectures and discussion (four hours); one term
Prerequisite(s): One of HEBREW 2A03, RELIGST 2HC3, or SCAR 2HC3; or permission of the instructor
Cross-list(s): SCAR 2HD3

HEBREW 3A03 - INTERMEDIATE HEBREW I

- reading course in classical (biblical) Hebrew. Sample texts will be read from some or all of the following: the Hebrew Bible, Mishnah, ancient Hebrew inscriptions and the Dead Sea Scrolls.

Four hours (two lectures); one term
Prerequisite(s): One of HEBREW 2B03, RELIGST 2HD3, or SCAR 2HD3; or permission of the instructor
Cross-list(s): SCAR 3HC3

HEBREW 3B03 - INTERMEDIATE HEBREW II

Further sample texts will be read from some or all of the following: the Hebrew Bible, the Mishnah, ancient inscriptions and the Dead Sea Scrolls.
Four hours (two lectures); one term
Prerequisite(s): One of HEBREW 2B03, RELIGST 2HD3, or SCAR 2HD3; or permission of the instructor
Cross-list(s): SCAR 3HD3

History

Courses in History are administered by the Department of History.
Chester New Hall, Room 619, ext. 24270
http://history.humanities.mcmaster.ca/

Note Regarding Level IV Seminars

Level IV seminars are open only to students registered in Levels III or IV of an Honours History program. Enrollment will be limited to approximately 15 students per seminar. The Department is able to offer only a selection of the seminars listed below every year. Information on courses may be obtained from the Department. Seminar places will be allotted each March for the succeeding session; early application to the Department is essential.

Note Regarding Online Courses

Some courses will be available online, including the following:

- HISTORY 1DD3 - The Making of the Modern World, 1750-1945
- HISTORY 1M03 - History of Greece and Rome
- HISTORY 1P03 - A History of Magic
- HISTORY 1Q03 - History of Medicine
- HISTORY 2A03 - Modern Middle Eastern Societies
- HISTORY 2CS3 - The History of Slavery in the Americas
- HISTORY 2SH3 - Canadian Sport History
- HISTORY 2ST3 - Empire, War, Welfare State: Britain, 1867-2020
- HISTORY 3H03 - Italian Renaissance, 1300-1600
- HISTORY 3HQ3 - History of Quebec
- HISTORY 3JJ3 - Crime, Constables, and Courts: Modern Criminal Justice, 1700 to Present
- HISTORY 3KK3 - The Vietnam War
- HISTORY 3TC3 - Science, Technology in World History
- HISTORY 3WW3 - Women in Canada and the U.S. from 1920
- HISTORY 3XX3 - Human Rights in History

Students should note, however, that not all of these courses will be available online every year.

Department Notes

1. The Department of History offers eight Level I courses, each of which is designed to introduce the student to the study of History at the university level.
2. Not every History course listed in this Calendar is offered every year. Students should consult the Department of History web site (http://history.humanities.mcmaster.ca/) in March for a list of courses that will be offered in the following academic year.
3. Enrolment in any Level IV History seminar will be limited to approximately 15 students. Students must be registered in a Level III or IV Honours History program to enrol.
4. Students interested in Ancient History are advised to examine the courses offered by the Department of Greek and Roman Studies.
5. Historical experiences are vast and varied across time periods, nations and identity groups. The Department of History recommends that students take courses that reflect the diverse experiences of different peoples in various time periods and geographical locations. As part of the Truth and Reconciliation process in Canada, the department also strongly recommends that students take courses that focus in whole or in part on the experiences of Indigenous peoples.

Courses

If no prerequisite is listed, the course is open.

HISTORY 1CC3 - TEN EMPIRES THAT SHAPED OUR WORLD, 500 BCE TO PRESENT

- thematic survey of the interactions among peoples, cultures, and the environment as structured by evolving political and economic systems in the pre-modern era.

Three hours (lectures and tutorials); one term
Antirequisite(s): HISTORY 1B03

HISTORY 1DD3 - THE MAKING OF THE MODERN WORLD, 1750-1945

An introduction to themes of global oppression and resistance, trade and consumption, the movement of peoples and ideas, and environmental change across the 19th and 20th centuries.
Three hours (lectures and tutorials); one term
May be offered in person or online

HISTORY 1EE3 - THE HISTORICAL ROOTS OF CONTEMPORARY ISSUES

An investigation of the complex historical roots of contemporary social, political, and economic issues.
Lectures and tutorials (three hours); one term

HISTORY 1M03 - HISTORY OF GREECE AND ROME

The history of Greece and Rome from the bronze age to the fall of Rome based on literary, documentary and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list(s): GKROMST 1M03
Antirequisite(s): CLASSICS 1M03
This course is administered by the Department of Greek and Roman Studies. May be offered in person or online.

HISTORY 1MA3 - THE POWERS OF MODERN EAST ASIA: CONSTITUTIONAL POLITICS AND HISTORICAL CHANGES

As exemplified by the Two Koreas or China before and after 1978, East Asian countries have taken vastly different trajectories of development. This course will survey modern East Asia history to explain why constitutional politics determine historical changes in human societies.
Lectures and tutorials (three hours); one term

HISTORY 1P03 - A HISTORY OF MAGIC

This course probes the meaning and influence of magic in human societies from ancient societies through to the present. Topics include magic and religion, the social and political practices of astrology and charms, medicine and healing, the European Witchcraze and persecution, magic and political protest, and contemporary pop culture (i.e. Harry Potter).
Two lectures, one tutorial; one term
May be offered in person or online.

HISTORY 1PP3 - POP GOES THE PAST!

History has a valued place in pop culture that impacts the public understanding of the past. This course interrogates these representations, from films to fashion to video games, as cultural artifacts that shape understandings of the past.
Three hours (lecture and tutorial); one term

HISTORY 1Q03 - HISTORY OF MEDICINE

This course explores developments in the history of health and medicine from a global perspective between 1500-present. Topics include religion and healing; global medical theories; medicine and colonialism; the impact of pandemics and epidemic diseases, the development of modern medicine.
Two lectures, one tutorial; one term
May be offered in person or online.

HISTORY 2A03 - MODERN MIDDLE EASTERN SOCIETIES

- survey of the political and cultural history of the Middle East from 1800 to the present, with emphasis on contemporary social problems emerging from post-WWI colonialism, nationalism, Islamism and Arab-Israeli relations.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 2F03
May be offered in person or online.

HISTORY 2AM3 - ANATOMY OF A MOMENT

This topics course puts a discrete moment in history under the microscope. It then telescopes out to demonstrate that everything is connected to everything else. Depth and breadth of analysis are merged to help students to appreciate history's wonders and complexities.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above
This course may be repeated, if on a different topic, to a total of six units.

HISTORY 2CC3 - THE MEDIEVAL WORLD 400-1050

The Early Middle Ages: The barbarian kingdoms to the feudal monarchies.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2CH3 - INTRODUCTION TO CRITICAL HERITAGE STUDIES

What is "Heritage"? How does it differ from History? Using Canadian and international examples the course examines the multiple ways in which the concept of heritage is understood and used, in relation to preservation, to museums and material culture, and to collective and individual identity.
Lectures (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2CS3 - THE HISTORY OF SLAVERY IN THE AMERICAS

This course explores the system of slavery in the Caribbean from the sixteenth to the nineteenth centuries within the context of the Atlantic World. It addresses such topics as slave resistance, the social, economic, and cultural consequences of slavery, and its abolition in the nineteenth century.
Three hours (two lectures, one tutorial); one term
Prerequisite(s): Registration in Level II or above
May be offered in person or online.

HISTORY 2DD3 - THE MEDIEVAL WORLD 1050-1400

The High and Late Middle Ages: Themes in European history, society and culture.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2DF3 - FROM THE GUILLOTINE TO THE EIFFEL TOWER, FRANCE 1789-1889

This course examines art and the narrative of revolutionary politics in France from c.1789 to 1889. We will study the politics of visual artists and government representatives. During a period of history that is often celebrated for the rise of democracy, we will investigate those who were marginalized and excluded as a result of racial, gender, sexual and other identities.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ARTHIST 2DF3

HISTORY 2EN3 - THE POST-SLAVERY CARIBBEAN

This course considers the transition to freedom in the Caribbean from the late nineteenth century and the social, political, and cultural transformation of the region following the end of slavery.
Three hours (two lectures, one tutorial); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 3RC3

HISTORY 2G03 - MODERN LATIN AMERICA SINCE 1820

Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite(s): Registration in Level II or above

HISTORY 2GW3 - A HISTORY OF GLOBAL WAR

- survey of the course and development of the two global wars of the twentieth century covering the period from 1914 to 1945. The emphasis is on the military, economic, and political events that characterised the conflicts.

Lectures (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2S03, 2Y03, PEACEST 2GW3
Cross-list(s): PEACJUST 2GW3

HISTORY 2H03 - TUDOR AND STUART BRITAIN, 1485-1714

This survey course examines a period of profound political, religious, economic and social change in Britain during the reigns of the Tudor and Stuart Dynasties.
Three hours; lectures and tutorial
Prerequisite(s): Registration in Level II or above

HISTORY 2HC3 - THE HISTORY OF CHILDHOOD (IN)JUSTICE IN CANADA

This course examines how diverse childhoods have been shaped by injustice and movements for justice from the late 19th century to today in Canada. The course considers the concept of childhood and childrens lived experiences through a socio-historical lens.
Two hour lecture, one hour tutorial; one term.
Prerequisite(s): Registration in Level II or above
Cross-list(s): PEACJUST 2HC3

HISTORY 2HE3 - HISTORY OF EDUCATION IN CANADA

This course considers the development of education as an institution within Canadian society and provides an understanding of significant educational issues and policies from a historical perspective.
Two hour lecture, one hour tutorial; one term

Prerequisite(s): Registration in Level II or above
First offered in 2026-27

HISTORY 2HH3 - PIRATES, PILGRIMS AND THE ENSLAVED IN THE MEDITERRANEAN, 1450-1750

This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): SCAR 2FF3
Antirequisite(s): RELIGST 2FF3

HISTORY 2II3 - MODERN GERMANY

This course examines the complexities of German social and political history since 1890, including World War One, Third Reich, cold war division, questions of national identity and the peaceful revolution of 1989.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 2II3

HISTORY 2IS3 - HISTORICAL ROOTS OF CURRENT SOCIAL AND POLITICAL CRISES IN THE UNITED STATES

This course explores the historical roots of current social and political challenges in the United States with emphasis on histories of race, gender, class, citizenship status, and other hierarchies. Sample topics include movements for racial justice, voting and voting rights misinformation and conspiracy theories, pandemics, and health care.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2J03 - AFRICA UP TO 1800

Survey of the political, social and economic history of Africa including the evolution of early human cultures, the rise and fall of civilizations and the contact between Africans and Europeans.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 2J03

HISTORY 2JJ3 - AFRICA SINCE 1800

Survey of the political, social and economic history of Africa including the partitioning of the continent, the practices of European imperialism, independence and the process of national building.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 2JJ3

HISTORY 2KK3 - HISTORY OF CAPITALISM

- History of Capitalism from 1500 to the present. This team-taught course introduces students to characteristics of capitalism, core institutions, and explanations for periodic crises. There are opportunities to read selections from leading proponents, agents, critics, and reformers. Essay topics will be negotiated with students, so that there will be an alignment with their programme/faculty.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II and above
Cross-list(s): IBH 2BF3

HISTORY 2LM3 - LOVE AND MONSTERS

This course asks how, where, when love and monsters intersect. It investigates historical and philosophical themes - love, fear, trust, dignity - that underpin the human experience and the social realities that inform it. What makes things monstrous? What does love require of us? Can monsters love?
Three hours (lecture); one term
Cross-list(s): IINSPIRE 2LM3, PHILOS 2LM3
This course is administered by the INSPIRE Office of Flexible Learning.

HISTORY 2MC3 - MODERN CHINA

- survey of China from 1840 to the present, with emphasis on political developments, revolutionary movements, social change, and China's relations with East Asia and the West.

Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2MI3 - MODERN IRELAND

This course surveys political and social conflict in Ireland since the eighteenth century: from the emergence of a polarised sectarian society, through devastating famine and revolutionary turmoil, to today's partitioned island maintaining a delicate peace in the face of the Brexit debacle.
Three hours (two lectures, one tutorial); one term
Prerequisite(s): Registration in Level II or above.

HISTORY 2MP3 - THE IRRATIONAL WEST: MORAL PANIC, CONSPIRACY AND DISINFORMATION SINCE THE ENLIGHTENMENT

This course asks how and why people in the West over the past two centuries have often succumbed to prejudice and passion and abandoned toleration and reason, privileging rumour, innuendo and fake news over empirical evidence and commonsense?
Two hour lecture, one hour tutorial; one term
Prerequisite(s): Registration in Level II or above

HISTORY 2PP3 - FROM ARCHIVE TO HISTORY

This course provides students with field experience working in the archives under the direction of a trained archivist. Students will think critically about knowledge production and public history through hands-on work with archival materials.
Seminar (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2PQ3 - HISTORIES OF THE WRITTEN WORD

How do we know what we know about the past? Working with rare books and maps from McMaster's collections, students will explore the history of writing & recording information around the world. This course is taught by McMaster's rare books librarian.
Three hours; one term
Prerequisite(s): Registration in Level II or above

HISTORY 2Q03 - IMPERIAL RUSSIA

- survey of Russian history from Peter the Great to the Revolutions of 1917.

Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2QQ3 - THE SOVIET UNION

- history of the Soviet Union from 1917 to the present with an emphasis on social history, culture and identity.

Lectures and discussion (Three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2RR3 - U.S. HISTORY SINCE THE CIVIL WAR

- survey of the political, cultural, social and economic development of the United States from Reconstruction to the present.

Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2SH3 - CANADIAN SPORT HISTORY

An exploration of selected topics and themes in the history of sport in Canada.
Three hours (two lectures, one tutorial); one term
Prerequisite(s): Registration in Level II or above
May be offered in person or online.

HISTORY 2SS3 - LIBERTY, EMPIRE AND INDUSTRY: BRITAIN, 1688-1867

- wide-ranging survey of the British experience from the Glorious Revolution of 1688 to the widening of the Parliamentary franchise that included working-class men for the first time in 1867.

Three hours (two lectures, one tutorial); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2MM3

HISTORY 2ST3 - EMPIRE, WAR, WELFARE STATE: BRITAIN, 1867-2020

This course covers: the height of British global power, imperial and anti-colonial politics; the two world wars; the establishment and meaning of the welfare state; and the fraught relationship between Britain and the rest of Europe between 1945 and 2020.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2MM3
May be offered in person or online.

HISTORY 2T03 - SURVEY OF CANADIAN HISTORY, BEGINNINGS TO 1885

- survey of the political, cultural, social and economic development of Canada to 1885, from first nations and colonial origins to Confederation and the North West Rebellion.

Two lectures, one tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2TC3 - TRUE CRIME

Historians are like detectives: they hunt for clues to give meaning to past events. This course embraces that comparison by inviting students to become historian/detectives and delve into a collection of archival materials to uncover the secrets behind a specific crime.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2TT3 - SURVEY OF CANADIAN HISTORY, 1885 TO THE PRESENT

- survey of the political, cultural, social and economic development of modern Canada, from the North West Rebellion and nation-building era to the present.

Two lectures, one tutorial (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 2V03 - RE-MAKING HISTORY

This course invites students to participate in the remaking of a moment in history-in the emotions, debates and conflicts that made that event important for our twenty-first-century world. See the department website for this year's topic. The course will consist of lectures and experiential learning, individual and group assignments, and a weekend conference.
Prerequisite(s): Registration in Level II or above

HISTORY 3AR3 - ATLANTIC REVOLUTIONS, 1750-1804

An intensive exploration of the great eighteenth-century Atlantic Revolutions in comparative perspective. The course will examine the differing cultural and social rationales for revolution, the nature of the new revolutionary regimes in America, France, and Haiti, and an exploration of the phenomenon of counter-revolution in all three societies.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3BE3 - THE BRITISH EMPIRE

How the rise and retreat of the British Empire shaped the modern world. We will explore how slavery, conquest, and settler colonialism helped forge industrial capitalism, and we will compare famines, resistance, and partitions across the global north and south.
Three hour lecture; one term.
Prerequisite(s): Registration in Level II or above

HISTORY 3CG3 - CANADIANS IN A GLOBAL AGE, 1914 TO THE PRESENT

This course considers ways in which global developments influenced and were influenced by Canadian peoples, with a thematic emphasis on selected developments such as wars and revolutions, the development of international alliances and organizations, and the spread of mass communication and consumer culture.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3CH3 - CLIMATE HISTORY

An examination of how natural and technological disasters have shaped past societies and how catastrophe features as an important method of understanding the human condition.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3DD3 - JEWS AND JESUS

- study of Judaism in the Greco-Roman World. The course will explore selected questions in political history, the development of sects and parties, the role of the temple, apocalypticism and the Dead Sea Scrolls.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): SCAR 3DD3

Antirequisite(s): RELIGST 3DD3
This course is administered by the Department of Religious Studies.

HISTORY 3DF3 - ART AND POLITICS IN SECOND EMPIRE FRANCE

This course examines the intersections of politics and visual culture in France 1852-1870 and critical issues related to photography, painting, sculpture, printmaking, architecture and the Universal Expositions of 1855 and 1867.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ARTHIST 3J03
Cross-list(s): ARTHIST 3DF3

HISTORY 3DS3 - DIASPORAS, TRADE AND CONFLICT: THE SEA IN HISTORY, 1000 BCE TO PRESENT

- study of the global socio-economic, cultural and political impact of maritime communities, from the Polynesians and Chinese to the Ottomans and Europeans. Topics: ships and technology, navigation history, trade and plunder, enclaves/colonies, Atlantic slave trade, and naval warfare.

Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above of any program

HISTORY 3EC3 - CHINESE INTELLECTUAL TRADITIONS

- survey of philosophical traditions and political thought in pre-modern Chinese history.

Three lectures; one term
Prerequisite(s): Registration in Level II or above

HISTORY 3FF3 - NAZI GERMANY

This course examines the origins and growth of National Socialism, its twelve years in power and the war that led to its demise. Themes under consideration will also include daily life in Germany in the 1930s and the Holocaust.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3H03 - ITALIAN RENAISSANCE, 1300-1600

An examination of the nature and influence of one of the most important cultural episodes in European history. Topics will include the Italian merchant and urban life, political culture, humanism, art and architecture.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
May be offered in person or online.

HISTORY 3HQ3 - HISTORY OF QUEBEC

This course is a lecture-seminar survey of Quebec history from the British Conquest of 1760 to the present. Topics to be covered include Quebec's place in a new empire, colonial society and economy, the rise of political protest, rebellion, and nationalism, the role of key institutions such as the Catholic Church, the industrialization of Quebec, and the postwar modernization of state and society. Students will engage in seminar discussions and be expected to complete a number of written assignments stressing critical and analytical skills.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
May be offered in person or online.

HISTORY 3I03 - THE INTERNATIONAL RELATIONS OF THE EUROPEAN POWERS, 1870-1945

An examination of the origins and course of the First World War; the failure of post-war stabilization; and the origins and course of the Second World War.
Three lectures; one term
Prerequisite(s): Registration in Level II or above

HISTORY 3J03 - THE UNITED STATES IN THE 1960S

An examination of the political, social and cultural changes that occurred in the United States during the 1960s. Topics include the civil rights struggle, Black Power movement, New Left, opposition to the Vietnam War, counterculture, feminism and the conservative backlash.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3JJ3 - CRIME, CONSTABLES, AND COURTS: MODERN CRIMINAL JUSTICE, 1700 TO PRESENT

- study of the changing face of the institutions of criminal justice and of criminal behaviour, as revealed in statistical and conventional historical works. The focus will be on North America, Great Britain and France.

Three lectures; one term
Prerequisite(s): Registration in Level II or above, with a minimum of six units of History

HISTORY 3JR3 - JUSTICE AND REPARATIONS IN THE POST-SLAVERY WORLD

This comparative course examines struggles for justice and freedom in post-slavery societies in the nineteenth and twentieth centuries. Focusing on the post-slavery Americas, the course will explore social, legal and political struggles to create free societies and reparations for slavery.
Lecture and discussion (three hours); one term.
Prerequisite(s): Registration in Level II or above

HISTORY 3KK3 - THE VIETNAM WAR

The history of the First and Second Indochina Wars (1945-1973) is examined from multiple perspectives. Explores how and why the war was fought, as well as its global legacy.
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 3KK3

HISTORY 3N03 - POVERTY, PRIVILEGE AND PROTEST IN CANADIAN HISTORY

An examination of the political, economic, and social factors shaping the persistence of poverty in Canada in the 1800s and 1900s, together with an analysis of reactions to such inequality. This includes investigation of ideological divisions, ethnic relations, and gender dynamics within the working class and within the labour movement.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): IBH 3BC3

HISTORY 3RU3 - EARLY MODERN RUSSIA

This course explores the changing character of Russia in the pre-modern period. It provides an important foundation for later courses on Imperial and Soviet history.
Lecture and discussion (three hours)
Prerequisite(s): Registration at Level II or above

HISTORY 3SR3 - HISTORIES OF INDIGENOUS SPORT AND RECREATION

Sport and recreation improve quality of life with physical health, personal wellness and fostering belonging. Indigenous Peoples sport history will be studied from various nations level of organization, covering techniques, demonstration and non-competitive gains.
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.
Cross-list(s): INDIGST 3Q03
This course is administered by the Indigenous Studies Department.

HISTORY 3ST3 - STREET LIFE IN CANADA

This course explores the role the street has played in Canada since the mid-19th century in shaping lives and identities. We will examine the different users of the street, and the changing representation of the street as urban spaces developed.
Lecture and discussion (three hours); one term
Prerequisite(s): Registration at Level II or above

HISTORY 3TC3 - SCIENCE, TECHNOLOGY IN WORLD HISTORY

An introduction to the manner in which science and technology influence society and how society influences science and technology, paying particular attention to the transfer of knowledge and machines over time and between cultures.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2EE3
May be offered in person or online.

HISTORY 3TR3 - TREES AND THEIR HISTORIES

Inspired by the trees on McMaster's campus, this course examines trees and their significance in history and the present through multiple lenses including: biology; colonial and economic histories; visual, material and performing arts practices; indigenous and environmental studies; poetry, prose and psychology.
Three hours (lectures and discussion); one term
Cross-list(s): ARTSSCI 3TR3
Prerequisite(s): Registration in Level II and above

HISTORY 3TU3 - HISTORY OF YOU

We are all historical actors. This course introduces genealogy, autobiography, and memoir among other approaches to foster historical examination of the self and to consider the challenges associated with putting the self in historical context.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): INSPIRE 3TU3

HISTORY 3UA3 - THE HISTORY OF THE FUTURE

This course examines how technology has historically shaped social ideas about the future and how these social ideas about the future shaped subsequent technology.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3UV3 - AMERICAN FOREIGN RELATIONS SINCE 1898

Survey of major events and turning points of U.S. diplomatic history since the late 19th century. Emphasis on cultural dimensions of the American empire and selected historiographical controversies.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HISTORY 2UV3

HISTORY 3WW3 - WOMEN IN CANADA AND THE U.S. FROM 1920

This course examines key areas of women's history, such as the impact of the Great Depression and the Second World War, the civil rights movement, the sexual revolution and the second wave of the women's movement.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): WOMENST 3GG3
May be offered in person or online.

HISTORY 3XX3 - HUMAN RIGHTS IN HISTORY

- thematic examination of the global historical evolution of the notion of human rights from antiquity up to the Universal Declaration of Human Rights in the 20th century.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): PEACEST 3XX3
Cross-list(s): PEACJUST 3XX3
May be offered in person or online.

HISTORY 3YB3 - YOUTH SUBCULTURES IN BRITAIN: FROM THE TEDS TO THE ACID RAVERS

Post-World War II youth formed distinctive sub-cultures based on music, fashion and visual culture. This course explores the transnational origins and legacy of (among others) the Teddy Boys, Mods and Rockers, Skinheads, Hippies, Punks, Glam and Goths, 2-Tone, Hip-Hop and Acid Rave cultures.
Lectures(three hours); one term
Prerequisite(s): Registration in Level II or above

HISTORY 3ZZ3 - JUDAISM IN THE MODERN WORLD

Jews and Judaism in a century of catastrophe and renewal. The progress of Emancipation; Jews in Canada and the U.S.; the Jewish catastrophe in Europe; the Jewish identities in literature and the arts.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): RELIGST 2XX3, 3ZZ3
Cross-list(s): SCAR 3ZZ3
This course is administered by the Department of Religious Studies.

HISTORY 4AR3 - ARKS & ARCHIVES

This course considers histories of the arks and archives that are designed to preserve people, ideas, and things against global catastrophe; the relationship between power and information; and how marginalized voices have created alternative forms of record-keeping and record-saving in response.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History.
Departmental permission required.

HISTORY 4AW3 - NORTH ATLANTIC CROSSINGS, 1750-1940

This course focuses on the cultural and intellectual interplay between Britain, Canada, and the United States, focusing on the contexts of Enlightenment; the effect of transatlantic revolution; the rise of evangelicalism; the Darwinian revolution; and the differing origins and outcomes of the 'progressive' impulse.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4CM3 - MODERN CANADIAN HISTORY

- selected theme in the history of modern Canada. Information on the precise focus of the seminar may be obtained in the Department each February.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4DW3 - INDIGENOUS HISTORY IN A DECOLONIZING WORLD

This course is designed to be an in-depth seminar examining Indigenous history centered around the theories and methodologies of 'decolonization'. Informed by a selection of readings from Indigenous authors, primary sources, and oral histories, topics include Indigenous/non-Indigenous relations, decolonization, resurgence and traditionalism, Indigenous feminism, land-based knowledge, and Indigenous nationhood.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4E03 - MEDIEVAL PEOPLE

An examination of some representative medieval lives. Figures discussed may include the abbess Hildegard of Bingen, the scholars and lovers Heloise and Abelard, the knight William Marshall, and the 'Good Wife' of the Magier de Paris.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4FF3 - HISTORY OF HEALTH AND MEDICINE IN THE COLONIAL WORLD

Themes will vary, and may include health and medicine from a comparative perspective, the relationship between imperialism and medicine, public health and urban environment, exercise and health.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4FM3 - FEMALE MAKERS AND THEIR HISTORIES

This course examines the creations of female-identifying makers and collectors - including visual artists, fashion designers, and art patrons - from the 11th century through to the present. The course critiques constructions of history that have privileged creative figures according to dominant cultural and political orders.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4G03 - NATION AND GENOCIDE IN THE MODERN WORLD

- thematic study of genocide and mass murder in the twentieth century from a human rights and humanitarian law perspective. The first part of the course covers the theoretical and legal aspects of genocide studies. The second part explores specific case studies of colonial massacres, the Holocaust, and the Cambodian and Rwanda genocides.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History, Global Peace and Social Justice, or Peace Studies
Antirequisite(s): PEACEST 4GG3
Cross-list(s): PEACJUST 4GG3
Departmental permission required.

HISTORY 4HH3 - CHINA'S GREAT CULTURAL REVOLUTION

- critical assessment of the origins, development, and consequences of the darkest political campaign in 1960s-70s China.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4HM3 - HISTORY, HERITAGE AND MEMORY: HOW THE PAST IS USED IN MODERN WESTERN CULTURE

This course will explore how the past is represented and used within western societies. The focus is on the divergence between academic views and uses of the past and the role of the market, politics and popular culture in shaping and creating understandings of the past.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History.
Departmental permission required.

HISTORY 4HP3 - HERITAGE PLACEMENT

The heritage placement offers a capstone experience for upper-level students. It is an opportunity for experiential learning in the field of history. Selected students will work closely with a supervisor on an ongoing historical project at one of Hamilton's many heritage sites.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV or above of any Honours program in History; or HISTORY 2CH3 and registration in Level IV of any program.
Antirequisite(s): HISTORY 3HP3
Departmental permission required.

HISTORY 4I03 - WOMEN AND SOCIAL MOVEMENTS IN THE 19TH- AND 20TH- CENTURY UNITED STATES

Women's involvement in social movements such as anti-lynching, unionization, feminism and civil rights is used to discuss power, social change, race, femininity, masculinity and class in U.S. history.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History

Departmental permission required.

HISTORY 4JJ3 - U.S. FOREIGN RELATIONS

Topics in the history of the United States Foreign relations in the modern era.
Seminar (three hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4LP3 - THE CULTURAL HISTORY OF PARIS, 1789-1914

Topics to be examined include: developments in architecture and city planning; the conservation of historic buildings and monuments; cultural institutions such as museums and art exhibitions; and the impact of gender, race and economics on experiences and concepts of identity in France's capital.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Cross-list(s): ARTHIST 4LP3
Departmental permission required.

HISTORY 4PP3 - DIVIDED GERMANY

This seminar will examine the social, political, and cultural development of East and West Germany from Allied occupation to the fall of the Berlin Wall.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4QQ3 - THE SOVIET EXPERIENCE

Focuses on themes and issues of historical and historiographical importance in Russia from 1917.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4QR3 - QUANTITATIVE RESEARCH ON MAJOR TOPICS IN HISTORY

- study of selected major topics where statistics have been prominent (for example, the emergence of modern economies, the slave trade, class and wealth, local and regional studies, crime); assessment of statistical evidence; collecting and analyzing data for a research paper.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History.
Departmental permission required.

HISTORY 4RP3 - INDEPENDENT RESEARCH PROJECT

- reading and/or research program under the supervision of one member of the Department. A major paper is required, as well as a formal oral examination.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History with a Grade Point Average of at least 9.0
Antirequisite(s): HISTORY 4RP6 A/B
Departmental permission required.

HISTORY 4RP6 A/B - ADVANCED INDEPENDENT RESEARCH

- reading and research program under the supervision of one member of the Department. A major paper is required, as well as a formal oral examination.

Seminar (two hours); two terms
Prerequisite(s): Registration in Level III or IV of any Honours program in History with a Grade Point Average of at least 10.0
Antirequisite(s): HISTORY 4RP3
Departmental permission required.

HISTORY 4RR3 - TRUTH AND RECONCILIATION AFTER ATROCITY

This course explores truth commissions and other truth-seeking mechanisms established globally to address historical atrocities and contemporary human rights abuses.
Seminar (two hours): one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History, Global Peace and Social Justice, or Peace Studies
Antirequisite(s): PEACEST 4RR3
Cross-list(s): PEACJUST 4RR3
Departmental permission required.

HISTORY 4S03 - THE GERMAN REFORMATION

This course examines the Reformation as a critical religious, political and cultural event. Topics include Lutheran and Calvinist theology, gender, confessionalization and the role of printing.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4SS3 - EARLY MODERN FRANCE, 1450-1789

France was without question one of the most powerful polities in early modern Europe and serves as a useful focal point for understanding the emergence of absolutism, colonization, imperialism, urbanization and changing gender and social roles.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

HISTORY 4TT3 - INTERWAR EUROPE, 1918-1939

- seminar devoted to the examination of selected themes - cultural, diplomatic, economic, military, political, and social - in the history of interwar Europe.

Seminar (three hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History
Departmental permission required.

Human Behaviour

Human Behaviour Courses in HUMBEHV are administered by the Department of Psychology, Neuroscience & Behaviour.
Psychology Building, Room 102, ext. 23000
http://www.science.mcmaster.ca/pnb/

Department Note

Students entering Level IV Honours Applied Psychology in Human Behaviour

(including Autism and Behavioural Science or Early Childhood Studies Specialization students interested in using a seminar course to fulfil their Human Behaviour Course List requirement) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Applied Psychology in Human Behaviour programs during the Winter Term. Students wishing to take these courses must complete and submit a ballot by the end of March. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar, though completion of the ballot does not guarantee enrolment in a preferred seminar. The Human Behaviour program pre-registration ballot will include all Level IV Human Behaviour research seminar courses (HUMBEHV 4HB3, 4HC3, 4HD3, 4HE3, 4HF3, 4HG3).

Courses

If no prerequisite is listed, the course is open.

See also courses in *PSYCH.*

HUMBEHV 2A06 A/B - INTRODUCTION TO AUTISM SPECTRUM DISORDER (ASD)

Apply neurodevelopmental and behavioural characteristics to Autism Spectrum Disorder (ASD) and its core features and diagnostic criteria. This course provides an introduction to understanding individuals with ASD.
Three hour lectures; two terms
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 2AP3 - INTRODUCTION TO APPLIED PSYCHOLOGY

This course will introduce students to the field of applied psychology. Students will learn how applied psychologists use psychological research and theory in an attempt to address and solve real-world problems.
One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): Registration in Level II or above of an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program
Antirequisite(s): HUMBEHV 2HB0

HUMBEHV 2B06 A/B - INTRODUCTION TO APPLIED BEHAVIOUR ANALYSIS (ABA) I

Apply principles of behaviour analysis. Access and interpret journal publications in the field of autism and applied behaviour analysis.
Three lectures; two terms
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 2C03 - SPECIALIZED INSTRUCTIONAL STRATEGIES (SIS) I

Analyze evidence-based behavioural approaches to teaching individuals with autism new skills.
Three hour lectures; one term
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 2FP6 A/B S - FIELD PLACEMENT I

Experience 126 hours in the field working within individuals with Autism Spectrum Disorder or other behavioural challenges.
This course is evaluated on a Pass/Fail basis.
Placement (126 hours); Spring/Summer Term
Prerequisite(s): HUMBEHV 2A06 A/B, 2B06 A/B, 2C03 and completion or registration in HUMBEHV 3F03
Co-requisite(s): HUMBEHV 2FS3 A/B S

HUMBEHV 2FS3 A/B S - FIELD PLACEMENT I SEMINAR

Seminar to be taken concurrently with HUMBEHV 2FP6 A/B S - Field Placement I.
Online seminar/discussion (two hours); Spring/Summer Term
Co-requisite(s): HUMBEHV 2FP6 A/B S

HUMBEHV 2L03 - PHILOSOPHY AND CURRICULUM DESIGN

Examine and evaluate the impact of personal beliefs and values in regard to professional practice with children, families and communities. Utilize theories of curriculum to examine the interests and intelligence of children.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 2M03 - LEARNING ENVIRONMENT I

Plan, organize, implement and evaluate program ideas and activities. Develop a repertoire of resources by setting up an engaging learning environment.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 2TL3 - RESPONSIVE CARE FOR INFANTS AND TODDLERS

In this course, students will explore positive and responsive communications with infants and toddlers. Students will design appropriate environments based on developmentally appropriate practices.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 2XP6 A/B S - ECS PRACTICUM I

Apply knowledge, skills and ethics in a professional practice environment while working with individuals with autism or behavioural needs or their caregivers.
This course is evaluated on a Pass/Fail basis.
Professional practice (144 hours); Session I, Spring/Summer Term
Prerequisite(s): HUMBEHV 2L03, 2M03, 2TL3
Co-requisite(s): HUMBEHV 3XS3 A/B S

HUMBEHV 3AP3 - ADVANCED APPLIED PSYCHOLOGY

This course will continue students' education in the field of applied psychology using a series of projects and assignments.
One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): HUMBEHV 2AP3

HUMBEHV 3CB3 - TREATING CHALLENGING BEHAVIOUR I

Students will learn theory behind assessing/analyzing why people engage in problem behaviours. Emphasis will be placed on ethical considerations based on the BACB ethical code.

Three lectures, tutorial (two hours); one term
Prerequisite(s): HUMBEHV 2B06 A/B, 3F03
Antirequisite(s): HUMBEHV 4K06 A/B

HUMBEHV 3D03 - APPLIED BEHAVIOURAL ANALYSIS (ABA) II

Apply principles of behaviour analysis. Access and interpret journal publications in the field of autism and applied behaviour analysis.
Three hour lecture; one term
Prerequisite(s): HUMBEHV 2B06 A/B and registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3E06 A/B - BEHAVIOURAL SKILL BUILDING

This course focuses on curriculum development with an emphasis on speech and language, social and play skills, personal care skills and inclusion into less restrictive environments.
Three hour lecture; two terms
Prerequisite(s): Registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3F03 - ETHICS AND PROFESSIONALISM

This course will introduce the foundations of ethical thinking and will review the different perspectives and rationale for ethical decision making within a behavioural framework.
On-line lecture/discussions (three hours); one term
Prerequisite(s): HUMBEHV 2A06 A/B, 2B06 A/B and registration in Level II or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3FP9 A/B S - FIELD PLACEMENT II

The placement will consist of 210 hours of participation in an ABA / IBI program for children with ASD. The student will further develop their technical skills through application of their knowledge gained in the prerequisite courses. In addition to implementing a further range of treatment plans, students will be required to critically evaluate ongoing interventions within the placement.
This course is evaluated on a Pass/Fail basis.
Placement (210 hours); Spring/Summer Term
Prerequisite(s): HUMBEHV 3E06 A/B, 3G03
Co-requisite(s): HUMBEHV 3FS3 A/B S

HUMBEHV 3FS3 A/B S - FIELD PLACEMENT II SEMINAR

Seminar to be taken concurrently with HUMBEHV 3FP9 A/B S - Field Placement II.
Online seminar/discussion (two hours); Spring/Summer Term
Co-requisite(s): HUMBEHV 3FP9 A/B S

HUMBEHV 3G03 - SPECIALIZED INSTRUCTIONAL STRATEGIES (SIS) II

This course introduces the student to evidence-based behavioural approaches applied in teaching individuals with autism. Topics will be approached by providing the student with an understanding of the terms used, a description of the teaching techniques characterized in each of the models (where applicable) and a basic understanding of the conceptual elements motivating the approaches.
Three hour lecture; one term
Prerequisite(s): HUMBEHV 2C03 and registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3H03 - WORKING WITH FAMILIES AND TEAMS

This course presents the student with theories, terminology and applications underlying current approaches to teamwork and working with the families of children with Autism Spectrum Disorders. The focus will be on effective collaboration with a multi-disciplinary team, which is essential to successful intensive behavioural intervention. Students will develop the interpersonal, job-oriented skills necessary to problem-solve as team members in a flexible, empathetic, resourceful, and productive manner.
Three hour lecture; one term
Prerequisite(s): Registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3IP3 A/B S - INQUIRY PROJECT

Students will explore a topic of their choosing under the supervision of an approved faculty member. Over the course of their project, students will develop the skills necessary to systematically investigate and assess an existing body of empirical literature.
Prerequisite(s): Registration in Level III or above of an Honours B.A.Sc. Applied Psychology in Human Behaviour program and permission of faculty supervisor and program director. Students are expected to have a minimum cumulative GPA of 8.0.
Not open to students with credit in PNB 3Q03 A/B S.

HUMBEHV 3MD3 - RESEARCH METHODS FOR APPLIED PSYCHOLOGY IN HUMAN BEHAVIOUR

This course will give students an overview of how to think empirically, and of the methods psychologists use to study behaviour.
One two-hour lecture, one tutorial; one term
Prerequisite(s): Registration in Level III or above of an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program
Antirequisite(s): PNB 3RM3

HUMBEHV 3O03 - CURRICULUM THEORY AND APPROACHES

Integrate and evaluate various curricula and theories of early learning. Reflect on the impact of diverse beliefs and values systems and the role in curriculum development.
Lectures, may include blended content (three hours); one term
Prerequisite(s): HUMBEHV 2L03 and registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 3P03 - LEARNING ENVIRONMENT II

Recognizing that children's interests and abilities are key components of effective learning environments, develop advanced skills in planning curriculum for children.
Plan developmentally appropriate activities.
Three hours (lectures, may include blended content); one term
Prerequisite(s): HUMBEHV 2M03 and registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 3Q03 - HEALTH, SAFETY & NUTRITION

Apply the basic principles of health, safety & nutrition in young children. Transfer the principles of health policies and practices to situations in child care settings.
Two hours (lectures, may include blended content); one term
Prerequisite(s): Registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 3RS3 - ABA RESEARCH DESIGNS

This course will prepare students on how to conduct research using an ABA framework. A focus will be on how to conduct and draw conclusions based on single subject designs.
Three lectures; one term
Prerequisite(s): HUMBEHV 2B06 A/B, and registration in Level III or above of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 3ST3 - STATISTICS FOR APPLIED PSYCHOLOGY IN HUMAN BEHAVIOUR

This course will give students an overview of descriptive and inferential statistics as applied in psychology.
Three lectures; one term
Prerequisite(s): Registration in Level III or above of an Honours B.A.Sc. Applied Psychology in Human Behaviour program
Antirequisite(s): HUMBEHV 3HB3, SOCSCI 2J03
Not open to students with credit or registration in STATS 2B03, PNB 2XE3, 3XE3, ARTSSCI 2R03, COMMERCE 2QA3, or HTHSCI 2A03, 2GG3.

HUMBEHV 3XP6 A/B S - ECS PRACTICUM II

Building on previous experience, students will participate in early learning environments through field practice. Outcomes of this course are to expand the student's teaching techniques and to provide opportunities for practical application of program related content.
This course is evaluated on a Pass/Fail basis.
Professional practice (144 hours); Session II, Spring/Summer Term
Prerequisite(s): HUMBEHV 2XP6 A/B S
Co-requisite(s): HUMBEHV 3XS3 A/B S

HUMBEHV 3XS3 A/B S - THEORY TO PRACTICE I AND II

Students will be supported throughout their field placement experience. Pedagogy for the Early Years with focus on the four foundations: belonging, well-being, engagement, and expression.
Online lecture/discussions (two hours); Spring/Summer Term
Co-requisite(s): HUMBEHV 2XP6 A/B S, 3XP6 A/B S

HUMBEHV 4CB3 - TREATING CHALLENGING BEHAVIOUR II

Students will learn how to develop intervention plans for individuals engaging in problem behaviours. Emphasis will be placed on utilizing the least intrusive, least restrictive and most effective treatment.
Lecture (three hours), tutorial (two hours); one term
Prerequisite(s): HUMBEHV 3CB3
Antirequisite(s): HUMBEHV 4K06 A/B

HUMBEHV 4HB3 - SEMINAR IN APPLIED PSYCHOLOGY

This capstone seminar course will immerse students in an advanced topic in applied psychology, to be determined on a yearly basis.
Seminar and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program. Permission of the Department is required.
Preferential enrolment is done by preregistration ballot (See Department Note above).

HUMBEHV 4HC3 - SEMINAR IN APPLIED PSYCHOLOGY

This capstone seminar course will immerse students in an advanced topic in applied psychology, to be determined on a yearly basis.
Seminar and discussion (three hours); one term
Prerequisite(s): Registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program.
Permission of the Department is required.
Preferential enrolment is done by preregistration ballot (See Department Note above).

HUMBEHV 4HD3 - ADVANCED SEMINAR IN PERSONALITY DEVELOPMENT

This capstone seminar course will immerse students in an advanced topic in personality development. Seminar and discussion (three hours); one term
Prerequisite(s): 6 units from PSYCH 2AA3, 2B03, 2C03 and registration in Level IV of an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program.
Permission of the Department is required.
Preferential enrolment is done by preregistration ballot (See Department Note above).

HUMBEHV 4HE3 - ADVANCED SEMINAR IN APPLIED LIFESPAN & DEVELOPMENTAL PSYCHOLOGY

This course will immerse students in an advanced topic in applied lifespan and/or developmental psychology.
Seminar and discussion (three hours); one term
Prerequisite(s): PSYCH 2AA3 with a grade of at least 8 and registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program. Permission of the Department is required.
Antirequisite(s): HUMBEHV 4SC6 A/B
Preferential enrolment is done by preregistration ballot (See Department Note above)

HUMBEHV 4HF3 - ADVANCED SEMINAR IN APPLIED SOCIAL PSYCHOLOGY

This course will immerse students in a topic in applied social psychology. Topics may include, but are not limited to, race and gender bias, social influence, persuasion, and political psychology.
Seminar and discussion (three hours); one term
Prerequisite(s): PSYCH 2C03 with a grade of at least 8 and registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program. Permission of the Department is required.
Antirequisite(s): HUMBEHV 4SC6 A/B
Preferential enrolment is done by preregistration ballot (See Department Note above)

HUMBEHV 4HG3 - ADVANCED SEMINAR IN MENTAL HEALTH

This seminar course will focus on contemporary psychological models of the development and maintenance of specific categories of psychopathology. An intensive examination of current research and practice will allow for the

exploration of diagnosis, assessment, and treatment options. Specific topics may include clinical psychological disorders and/or subclinical presentations of symptoms.
Seminar and discussion (three hours); one term
Prerequisite(s): PSYCH 2AP3 with a grade of at least 8 and registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program. Permission of the Department is required.
Antirequisite(s): HUMBEHV 4SC6 A/B
Preferential enrolment is done by preregistration ballot (See Department Note above)

HUMBEHV 4I03 - PARENT AND STAFF TRAINING

Students will learn and practice techniques for individual and group presentation formats for the training of families or professionals. Students will also learn how to maintain procedural integrity, use performance feedback, evaluate the effects of training, and understand the challenges that may impact before, during and after mediator training. Emphasis will be placed on in-class presentations and role-play practice.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 4IP3 A/B S - SENIOR INQUIRY PROJECT

Students will explore a topic of their choosing under the supervision of an approved faculty member. Over the course of their project, students will develop the skills necessary to systematically investigate and assess an existing body of empirical literature.
Prerequisite(s): Registration in Level IV of an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program and permission of faculty supervisor and program director. Students are expected to have a minimum cumulative GPA of 8.0.
Cannot be taken concurrently with HUMBEHV 3IP3 A/B S.
Not open to students with credit or registration in HUMBEHV 4RP6 A/B S, 4SC6 A/B, PNB 3Q03 A/B S, 4Q03 A/B S

HUMBEHV 4J03 - TRANSITION PLANNING AND IMPLEMENTATION

This course will prepare the student for assisting in planning and mediating transitions for children with ASD within and across home, school and community settings.
Three lectures (may include blended content); one term
Prerequisite(s): Registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Autism & Behavioural Science Specialization) program

HUMBEHV 4N03 - PRINCIPLES OF ETHICAL PRACTICE

Apply principles of fairness, equity and diversity to support the development and learning of children, within the context of their family, culture and society. Examine professional ethics and partnership practices as it relates to working with children and families.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 4RP6 A/B S - INDEPENDENT RESEARCH PROJECT

Students will explore a topic of their choosing under the supervision of a faculty member by systematically investigating an existing body of empirical literature or data set to produce a major scholarly work.
Prerequisite(s): Registration in Level IV of an Honours B.A.Sc. Applied Psychology in Human Behaviour program and permission of the faculty supervisor and program director. Students are expected to have a minimum cumulative GPA of 10.0.
Cannot be taken concurrently with HUMBEHV 3IP3 A/B S.
Not open to students with credit or registration in HUMBEHV 4IP3 A/B S.

HUMBEHV 4SC6 A/B - SCIENCE COMMUNICATION IN THE BEHAVIOURAL SCIENCES

Students will learn critical writing skills to translate basic research for popular media outlets. Examples of bad journalism and inaccurate reporting will be highlighted.
Two lectures, one tutorial; two terms
Prerequisite(s): Registration in Level IV of an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program
Antirequisite(s): PNB 4SC6 A/B
Cannot be taken concurrently with BIOLOGY 4C09 A/B, 4C12 A/B S, 4F06 A/B S, HUMBEHV 4RP6 A/B S, ISCI 4A12 A/B, NEUROSCI 4L09 A/B, 4L12 A/B, PNB 4D06 A/B, 4D09 A/B, 4DD6 A/B.
Not open to students with credit or registration in HUMBEHV 4IP3 A/B S.

HUMBEHV 4U03 - INCLUSION IN THE ECE CLASSROOM

Examine attitudes toward children with exceptionalities and the concept of inclusion and integration. Integrated programs will be explored as well as class-wide adaptive programming. Develop an awareness of diversity around the area of exceptionality.
Lectures, may include blended content (three hours); one term
Prerequisite(s): Registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

HUMBEHV 4V12 A/B S - ECS PRACTICUM III

Building on the skills from previous two practica, students will have opportunities to pursue their special interest and passion in an alternative practical experience. In these settings, students will engage with children, families, staff, and other professionals.
This course is evaluated on a Pass/Fail basis.
288 hours; Spring/Summer Term
Prerequisite(s): HUMBEHV 3O03, 3P03, 3Q03, 3XP6 A/B S
Co-requisite(s): HUMBEHV 4VS3 A/B S

HUMBEHV 4VS3 A/B S - THEORY TO PRACTICE III

Seminar to be taken concurrently with Professional Practice III, HUMBEHV 4V12 A/B S.
Online lecture/discussion (two hours); Spring/Summer Term
Co-requisite(s): HUMBEHV 4V12 A/B S

HUMBEHV 4W03 - SUPERVISION FOR LEADERSHIP AND QUALITY

Apply relevant legislation and necessary administrative procedures for operating a child care centre. Reflect on the importance of the supervisor/administrator's role in establishing an effective team and mentoring relationship, personnel management, and the role of professional and

community resources.
Two and a half hours (lectures, may include blended content); one term
Prerequisite(s): Registration in Level IV of the Honours B.A.Sc. Applied Psychology in Human Behaviour (Early Childhood Studies Specialization) program

Humanities

Courses *If no prerequisite is listed, the course is open.*

HUMAN 1DL3 - DIGITAL LITERACY FOR THE HUMANITIES

In this course, students will learn foundational digital skills and gain fluency in digital literacy to complement the skills developed in their disciplinary courses. Students will become familiar with key digital skills that will help them during and beyond their time at McMaster. Topics will include digital communication tools, digital collaboration, data management, numeracy, and knowledge mobilization in the digital context.

- hours; one term

Prerequisite(s): Registration in Humanities I or Integrated Arts I

HUMAN 1HL3 - HUMANITIES FOR LIFE: THE VALUE OF A HUMANITIES DEGREE

In this course, students will learn how to critically reflect on the skills and capacities developed as part of a Humanities degree. Students will focus on critical thinking as a valuable skill that will serve them beyond their time at McMaster University in work and life. Topics may include social responsibility, social change, equity, diversity, and inclusion, citizenship, and the examined life.

- hours; one term

Prerequisite(s): Registration in Humanities I

HUMAN 1VV3 - VOICE AND VISION: WORDS TO CHANGE THE WORLD

Writing is arguably the foundation of an education in the Humanities. We say this at a time when its practice is rapidly changing in relation to social media and the internet. Using freewriting, this course seeks to harness students' verbal energy, while helping them to adapt it as a tool for success in all our Humanities programs.

- hours, discussion; one term

Prerequisite(s): Registration in Humanities I, Integrated Arts I or Music I

HUMAN 2AR1 - ADAPTABILITY AND RESILIENCY

In this course, students will learn about and develop the foundational skill of adaptability and resiliency that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities
This course is evaluated on a Pass/Fail basis.

HUMAN 2CP3 - HUMANITIES CAREER PLANNING AND DEVELOPMENT

Utilize your education and skills toward career success. Learn how to analyze job postings and create effective applications. Identify strategies to ace interviews and create an online profile for networking and success in the workplace.
Three hours; one term
Prerequisite(s): Registration in level II or above of a program in the Faculty of Humanities
Antirequisite(s): SOCSCI 2EL0, SOCSCI 2EL3, HUMAN 2CP2

HUMAN 2DH3 - CREATIVE, COLLABORATIVE, CRITICAL: APPROACHES TO DIGITAL SCHOLARSHIP

This course will provide a comprehensive overview of topics in digital scholarship through project-based learning, including project management, digitization, curation, information visualization, digital storytelling, and the social and ethical implications of digital domains of knowledge. Students will develop a framework from which to create and understand digital scholarship across a range of disciplines.
Three hours; one term
Prerequisite(s): Registration in Level II or above

HUMAN 2DU1 - DIVERSITY AND INTERCULTURAL UNDERSTANDING

In this course, students will learn about and develop the foundational skill of diversity and intercultural understanding that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities
This course is evaluated on a Pass/Fail basis.

HUMAN 2FI3 - THE FUTURE OF THE INTERNET

This course explores the internet. From its founding as a radical and academic tool to a future metaverse. Students will examine how the internet has evolved, some of the business models that led us to where the internet is today, and what a future looks like when the internet collides with AI.

- hours, one term

Prerequisite(s): Registration in Level 2 or above

HUMAN 2IC1 - SOCIAL CHANGE AND INNOVATION

In this course, students will learn about and develop the foundational skill of social change and innovation that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities
This course is evaluated on a Pass/Fail basis.

HUMAN 2PS1 - PROBLEM SOLVING

In this course, students will learn about and develop the foundational skill of problem solving that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities
This course is evaluated on a Pass/Fail basis.

HUMAN 2TC1 - TEAMWORK AND COLLABORATION

In this course, students will learn about and develop the foundational skills of teamwork and collaboration that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities

This course is evaluated on a Pass/Fail basis.

HUMAN 2TP1 - TIME AND PROJECT MANAGEMENT

In this course, students will learn about and develop the foundational skill of time and project management that will enable them to lead richer and more balanced lives, while at university and as future working professionals.

- hour per week; one term

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities

This course is evaluated on a Pass/Fail basis.

HUMAN 3CL3 - COMMUNITY LEADERSHIP AT MCMASTER

Students complete at least 48 hours of volunteer work as mentors to other McMaster students in a variety of positions; for example, as language assistants and conversation partners in Level 1 language classes; as writing tutors, peer helpers, or note-takers for specific courses. Students work with the faculty supervisor to set learning objectives, and reflect on these experiences. The course is graded on a Pass/Fail basis.

Prerequisite(s): Registration in Level II or above of any program; and completion of a student-initiated application.

Departmental permission is required. Details on the application process may be found in the course schedule notes, and on the Faculty of Humanities' Academic Advising website (Faculty Experiential Courses).

HUMAN 3EL3 - EMOTIONALLY INTELLIGENT LEADERSHIP

Effective leaders possess strong ethical values, emotional and social intelligence, excellent communication skills, and creativity; they have empathy, and can influence and inspire through informed, reasoned arguments. In this course, students will learn about emotionally intelligent leadership and engage in reflective practice to increase self-awareness and develop their philosophy of leadership. Case studies of real life leaders will also be considered to invite students to reflect on integrating the theory of emotionally intelligent leadership with the practice of leadership. Lecture and discussion (3 hours); one term

Prerequisite(s): Registration in Level II or above of any program

HUMAN 3IF0 A/B S - FULL-TIME INTERNSHIP

Full-time, non-credit internship or experiential education opportunity. The goal of the internship or placement experience is for students to focus on professional development and expanding their employment-related skills, while exploring career options and beginning to build networks in different professional fields.

This course is evaluated on a Pass/Fail basis.

Normally 26-40 hours per week.

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities; and permission of the Associate Dean or delegate.

HUMAN 3IF0 A/B S may be repeated.

HUMAN 3IF1 A/B S - FULL-TIME INTERNSHIP

Full-time, 1-credit, paid, internship opportunity. The goal of the internship experience is for students to focus on professional development while identifying and expanding employment-related skills, exploring career options and building their professional network.

HUMAN 3IF1 is evaluated on a Pass/Fail basis.

Normally 26 - 40 hours per week.

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities; and permission of the Associate Dean or delegate

HUMAN 3IF1 A/B S may be repeated.

HUMAN 3IP0 A/B S - PART-TIME INTERNSHIP

Part-time, non-credit internship or experiential education opportunity. The goal of the internship or placement experience is for students to focus on professional development and expanding their employment-related skills, while exploring career options and beginning to build networks in different professional fields.

This course is evaluated on a Pass/Fail basis.

Normally 5-15 hours per week.

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities; and permission of the Associate Dean or delegate.

HUMAN 3IP0 A/B S may be repeated.

HUMAN 3IP1 A/B S - PART-TIME INTERNSHIP

Part-time, 1-credit, paid, internship opportunity. The goal of the internship experience is for students to focus on professional development while identifying and expanding employment-related skills, exploring career options and building their professional network.

HUMAN 3IP1 is evaluated on a Pass/Fail basis.

Normally 5 - 25 hours per week.

Prerequisite(s): Registration in Level II or above of a program in the Faculty of Humanities; and permission of the Associate Dean or delegate

HUMAN 3IP1 A/B S may be repeated.

HUMAN 3W03 A/B S - APPLIED HUMANITIES I

Students gain applied experience in a field related to a Humanities discipline by applying skills and knowledge acquired in undergraduate studies in practical areas such as research projects, pedagogy and work placements. Students participate in defining learning goals and experiences.

Prerequisite(s): Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Academic Advising Office, CNH-107, for details on the application process.

Permission of the Associate Dean of the Faculty of Humanities, or delegate, is required.

HUMAN 4LC3 - MAJOR LEADERSHIP PROJECT: THEORY AND PRACTICE

Working with a faculty supervisor, students will combine theory and practice by conducting in-depth research on a chosen aspect of leadership followed by proposing and, in most cases, implementing a practical application of that knowledge. This course is intended for those completing the Concurrent Certificate in Leadership, Equity & Social Change.

Three hours; one term

Prerequisite(s): HUMAN 3LM3 or HUMAN 3EL3 and registration in level III or above; and completion of application

Departmental permission is required. Details on the application process may be found in the course schedule notes, and on the Faculty of Humanities Academic Advising website (Faculty Experiential Courses).

HUMAN 4RM3 - BOUNDARIES AND BRIDGES: RELATIONSHIP SKILLS FOR EFFECTIVE LEADERS

In this course, collaborative team work, conflict management, negotiation, giving and receiving of feedback, and the communication of vision and expectations are viewed through the lens of effective and ethical leadership practice. Students have the opportunity to deepen and apply this knowledge in real time, as they work in teams to conceptualize and execute a community service initiative.

Three hours; one term

Prerequisite(s): Registration in level III or above of any program

Antirequisite(s): HUMAN 4LM3

HUMAN 4SI3 - INNOVATION FOR SOCIAL IMPACT

This course provides students from Humanities, Social Sciences, and Business the opportunity to learn and apply social innovation skills in the non-profit sector. In the classroom, students will gain an understanding of key social innovation concepts including impact assessment, systems mapping, design thinking, collective impact, and theory of change while also learning about the unique characteristics and work environment of the non-profit sector. In the community, students will engage with a non-profit partner to help them conceptualize, develop, and/or implement a social innovation.
Three hours(lectures); one term
Prerequisite(s): Registration in Level IV or above in any Bachelor of Commerce, Social Sciences, or Humanities program.
Cross-list(s): COMMERCE 4SI3, SOCSCI 4SI3
This course is administered by DeGroote School of Business.

HUMAN 4W03 A/B S - APPLIED HUMANITIES II

Students gain applied experience in a field related to a Humanities discipline by applying skills and knowledge acquired in undergraduate studies in practical areas such as research projects, pedagogy and work placements. Students participate in defining learning goals and experiences.
Prerequisite(s): Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Academic Advising Office, CNH-107, for details on the application process.
Permission of the Associate Dean of the Faculty of Humanities, or delegate, is required.

HUMAN 4WL3 A/B - WILSON LEADERSHIP SCHOLAR CAPSTONE

This course may be taken by Wilson Leadership Scholar Award winners. Working under the supervision of the Wilson Leadership Scholar Award Director and Associate Director, students will combine leadership theory and practice through the creation and completion of applied community outreach projects.
Two to four hours; two terms
Prerequisite(s): Open to Wilson Leadership Scholar Award winners; permission of the Wilson Leadership Scholarship Award Associate Director is required.
This course is graded on a Pass/Fail basis.

IBH (Integrated Business and Humanities)

IBH courses are administered by the DeGroote School of Business and the Faculty of Humanities.

IBH 1AA3 - FINANCIAL ACCOUNTING

This course will help students understand the purpose of accounting, its implementation, its usefulness for decision-making, its effect on behaviour and contracts, and its surrounding controversies over accounting methods.
Lectures (three hours)
Prerequisite(s): Registration in Level I of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in COMMERCE 1AA3

IBH 1AB3 - PERSPECTIVES ON CANADIAN BUSINESS

This course will examine how the business environment can affect Canadian organizations and their stakeholders. Functional areas of business will be introduced in order to understand the basics of management. The course will introduce students to business principles, techniques, and terms within both the Canadian and global context. This will include a discussion on the business environment, management theory, and the introduction of functional areas of business. The overall objective is that upon completion, students will have a foundation for future business courses.
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Lectures (three hours)
Antirequisite(s): COMMERCE 1E03

IBH 1AC3 - INTRODUCTION TO LANGUAGE AND SOCIETY

This course equips students with basic linguistic terminology and the necessary tools to examine the relationship between language and society. Topics covered include linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, multilingualism, language change, pidgin and creole languages.
Lectures (three hours)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in LINGUIST 1ZZ3 or 2S03

IBH 1AD3 - IBH IN THE COMMUNITY

As community engagement is a key component of the IBH program, this course will introduce students to the politics, processes and functioning of communities and provides foundational knowledge and skills for effective and principled community engagement. As an IBH student, you will be a member of many communities - your workplace, your professional group, your neighborhood, your city, your country, the world. In the future, whether as a business professional, humanist or health /social services provider, you will be called upon to participate in community activities and community change.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in CMTYENGA 2A03

IBH 1BA3 - ORGANIZATIONAL BEHAVIOUR

As a core course in the Integrated Business Humanities, this course provides the foundations for building critical competencies in Understanding Behaviour ("Why We Act") and Managing Behaviour ("Motivating the Right Actions"). It is designed to (1) facilitate students' learning of key principles and concepts of human behaviour in organizations; (2) develop students' awareness of skills and tools needed to successfully manage and lead organizations; and (3) provide students with the opportunity to apply these knowledge and skills to tackle contemporary management concerns (sustainability, SME, ethical leadership).
Lectures (three hours)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in COMMERCE 1BA3

IBH 1BB3 - INSIGHT AND INQUIRY: EXAMINING OURSELVES AND THE WORLD AROUND US

Effective leaders are able to formulate creative questions, recognizing that how we ask a question determines the nature of the answers available to us. Working in the technology-enriched environment of an active learning classroom, students will focus on how to ask good questions about specific issues and how to use those questions to interrogate evidence in different ways.
Lectures (three hours)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in HUMAN 1QU3

IBH 1BC3 - FUNDAMENTALS OF ETHICS

An introduction to ethical theory and to its application to contemporary moral problems. Topics covered may include the nature of morality and its relationship to culture, religion, and self-interest; the strengths and weaknesses of normative ethical theories, including utilitarianism, Kantianism, virtue ethics and social contract theory; and ethical issues raised by war, torture, world hunger, assisted dying, affirmative action, corporations, and the environment.
Lectures (three hours)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in PHILOS 2YY3

IBH 1BD3 - INTRODUCTION TO PEACE STUDIES FOR IBH

An introduction to the applications of peace research to business and the Triple Bottom Line (economics, ecology, ethics), focusing on the concepts of peace, war, security, conflict, violence and nonviolence, and examining opportunities for active peace-making and conflict transformation in daily life and in business.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): Registration in Level 1 of the Integrated Business and Humanities Program
Antirequisite(s): Not open to students with credit or enrolment in PEACEST 1A03

IBH 1LD0 - LEADERSHIP DEVELOPMENT - SELF AWARENESS

As the first course in leadership development, each student will undergo a battery of leadership self-awareness assessments, receive individualized feedback on the assessments, submit a reflection on assessment outcome, and submit a personalized leadership development plan.
Prerequisite(s): Registration in Level I of the Integrated Business and Humanities Program

IBH 2AA3 - INTRODUCTION TO MARKETING

This course introduces the conceptual underpinnings and operational facets of marketing with a primarily consumer (as opposed to an industrial) focus. During this course, students will learn about the 4Ps of marketing: product, price, promotion, and place.
Lectures (three hours)
Prerequisite(s): Registration in Level II of the Integrated Business and Humanities Program

IBH 2AB3 - INFORMATION SYSTEMS IN MANAGEMENT

This course prepares Integrated Business and Humanities students to leverage information systems effectively. The course focuses on the opportunities and pitfalls provided by information systems, how they are likely to affect the world, and what managers need to know to make effective use of information systems in business and society.
Prerequisite(s): IBH 1AA3 and registration in Level 2 of the Integrated Business and Humanities Program
Antirequisite(s): COMMERCE 2KA3

IBH 2AC3 - TALENT MANAGEMENT

This course provides knowledge of the key aspects of identifying, selecting, developing, and managing people in organizations, emphasizing the link between talent management and practices and organizational strategy. Topics include job design and job analysis, staffing, the legal environment, training and development, performance appraisal, compensation, health and safety, and labour relations.
Lectures (three hours)
Prerequisite(s): IBH 1BA3 and registration in Level II of the Integrated Business and Humanities Program.

IBH 2AD3 - STATISTICAL DATA ANALYSIS

Overwhelmed with big data, businesses are looking at ways of analysing this data to better understand their customers and develop innovative business models. Using several programming tools, this course will provide students with skills to build data models and perform common statistical analysis techniques. Topics will include sampling techniques, common distributions, inference and hypothesis testing, regression, analysis of variance, categorical data analysis and nonparametric inference. The course will also address issues related to data security, confidentiality and ethics.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): Registration in Level 2 of the Integrated Business and Humanities Program.
Antirequisite(s): COMMERCE 1DA3 and COMMERCE 2DA3

IBH 2AE3 - CRITICAL THINKING

This course aims to develop students' skills in identifying and evaluating various kinds of reasoning frequently encountered in everyday life. Likely topics covered in the course include typical reasoning patterns, methods for identifying and classifying reasoning when reading, methods for assessing the quality of reasoning, and fallacies or cognitive biases that can negatively impact reasoning.
Lectures (three hours)
Prerequisite(s): Registration in Level II of the Integrated Business and Humanities Program

IBH 2AF3 - GLOBAL BUSINESS EXPERIENCE

This course has two main objectives: 1) is to understand the role that business plays in the global economy, especially its role in global poverty as well as global peace by immersing students in an international learning experience. 2) For students to understand the historical, sociological, and economic impact in order to assess economic development projects in a developing country. In this course students will learn how globalization connects the developed and developing worlds; how business and the economy maintain structural inequalities and global wealth disparities; the global economic, social, and environmental impact of Western business decisions; the historical, political, geographical, gendered, and cultural context in which business operates, and the impact of economic development policies.

Lectures (3 hours)
Prerequisite(s): Registration in Level II of the Integrated Business and Humanities Program

IBH 2BA3 - MANAGERIAL ACCOUNTING

An introduction to concepts underlying the use of cost accounting information for managerial planning and control and for inventory valuation. The nature and analysis of costs and the usefulness and limitations of accounting data for decision-making, including ethical considerations, will be discussed.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): IBH 1AA3 and registration in Level II of the Integrated Business and Humanities Program.
Antirequisite(s): COMMERCE 2AB3

IBH 2BB3 - INTRODUCTION TO FINANCE

This course provides an overview of financial management and the financial system. The goal is to equip students with the basic understanding of how financial decisions are made. Students will learn fundamental finance concepts and tools, and how they are applied in practice. The course will lay a foundation for more advanced finance courses that students will subsequently take. Topics include time value of money, capital budgeting, risk and return tradeoff, and security valuation.
Lectures (three hours)
Prerequisite(s): IBH 1AA3, ECON 1B03 and registration in Level II of the Integrated Business and Humanities Program.
Antirequisite(s): COMMERCE 2FA3

IBH 2BD3 - MORAL ISSUES

An introduction to moral philosophy through a consideration of issues in professional ethics (e.g., health care and energy). Topics such as abortion, human experimentation, euthanasia, genetic screening, sustainability and pollution will be investigated.
Lectures (two hours), tutorial (one hour)
Prerequisite(s): Registration in Level 2 of the Integrated Business and Humanities Program.

IBH 2BF3 - HISTORY OF CAPITALISM

- History of Capitalism from 1500 to the present. This team-taught course introduces students to characteristics of capitalism, core institutions, and explanations for periodic crises. There are opportunities to read selections from leading proponents, agents, critics, and reformers. Essay topics will be negotiated with students, so that there will be an alignment with their programme/faculty.

Lectures (3 hours), tutorial (1 hour)
Prerequisite(s): Registration in Level II or above in the Integrated Business and Humanities Program.

IBH 2LD0 A/B S - LEADERSHIP DEVELOPMENT - LEADERSHIP EMERGENCE

This course builds upon the foundation of leadership awareness gained in IBH 1LD0. In 2LD0 A/B S, students will take an outward focus by understanding how their leadership impacts others. They will receive feedback from peers regarding factors such as status, power and leadership emergence. Students will use this understanding to update their leadership development plans supported by small group workshops and 1:1 coaching.
Prerequisite(s): Registration in Level II in the Integrated Business and Humanities Program

IBH 3AA3 - RELATIONSHIP MANAGEMENT

Team work, conflict management, negotiation, giving and receiving feedback, communicating vision and expectations these are all key elements of leadership. Ultimately, succeeding in these areas is about managing relationships. Building upon the foundational elements of leadership already acquired, students will gain a deeper awareness of their own and others' motivations, strengths, filters, and responses to conflict, of and how to apply this knowledge to communicate effectively.
Lectures (3 hours)
Prerequisite(s): Registration in Level III of the Integrated Business and Humanities Program

IBH 3AB3 - APPLIED MARKETING MANAGEMENT

This course builds upon material covered in Introduction to Marketing. It relies on practical, real world case studies to develop students marketing decision-making skills, and their ability to analyze the business environment in which organizations operate. A major field project, which has student teams working with businesses to audit current practices, study the environment and develop a marketing plan, is a critical part of this course.
Lectures (3 hours)
Prerequisite(s): Registration in Level III of the Integrated Business and Humanities Program

IBH 3AC3 - CORPORATE FINANCE

This course examines various aspects of the financial management of the firm including the sources and methods of financing, capital structure, dividend policy, leasing, mergers and acquisitions, working capital management, effects of taxation on financial decisions and international aspects of finance.
Lectures (3 hours), tutorial (1 hour)
Prerequisite(s): IBH 2BB3 and Registration in Level III or above in the Integrated Business and Humanities Program
Antirequisite(s): COMMERCE 2FB3

IBH 3AD3 - CROSS-CULTURAL COMMUNICATION

Students will explore the links between language and culture and learn skills necessary to be intermediaries between cultures. Topics include: communication between genders, the cognitive role of metaphor, language and perception, emotions across cultures, culture and advertising, body language and cultural stereotyping.
Lectures (3 hours)
Prerequisite(s): Registration in Level III or above in the Integrated Business and Humanities Program

IBH 3BA3 - UNDERSTANDING ENTREPRENEURSHIP AND SOCIAL ENTREPRENEURSHIP FROM A HISTORICAL AND THEORETICAL LENS

Students in this course will learn what constitutes entrepreneurship, how it has been practiced throughout history, as well as the necessary social, political, ethical and economic foundations that support a contemporary entrepreneurial economy. They will study empirical research examining entrepreneurial trends in Canada and world-wide, including social entrepreneurship.
Lectures (3 hours)
Prerequisite(s): Registration in Level 3 of the Integrated Business and Humanities Program

IBH 3BB3 - ORGANIZATIONAL STRATEGY

In this course, students will explore frameworks that help them conduct strategic analysis, and formulate and implement new strategies to improve

organizational performance. The course is structured to provide strategic management tools and frameworks to assist organizations of all types, from public and private for-profit firms through social businesses and social enterprises to traditional non-profit and charitable organizations. Through case-based discussion, guest speakers, and experiential exercises, professors will push students to answer key questions such as: How do organizations across the for-profit and non-profit continuum define their purpose, and conceptualize, create, and capture value? How do these organizations analyze strategic opportunities and structure effective investments? What is the nature of competitive advantage in for-profit and non-profit contexts and how is it gained and sustained?
Lectures (3 hours)
Prerequisite(s): Registration in Level III or above in the Integrated Business and Humanities Program
Antirequisite(s): COMMERCE 4PA3

IBH 3BC3 - POVERTY, PRIVILEGE AND PROTEST IN CANADIAN HISTORY

An examination of the political, economic, and social factors shaping the persistence of poverty in Canada in the 1800s and 1900s, together with an analysis of reactions to such inequality. This includes investigation of ideological divisions, ethnic relations, and gender dynamics within the working class and within the labour movement.
Lectures (3 hours)
Prerequisite(s): Registration in Level III or above in the Integrated Business and Humanities Program

IBH 3BD3 - INTERPERSONAL COMMUNICATION

This course offers an introduction to contemporary interpersonal communication theories and research. Topics include: small group communication, persuasive communication, argumentation strategies, conflict resolution and computer mediated, intercultural, international and political communication.
Lectures (3 hours)
Prerequisite(s): Registration in Level III or above in the Integrated Business and Humanities Program

IBH 3BE3 - OPERATIONS MANAGEMENT

Operations management (OM) is the science and art of creating and delivering goods and services to customers. Basic topics in operations management include goods and service design, facility design, locating facilities, quality management, project planning, supply chain management, lean operating systems, forecasting customer demand, process strategy, and inventory management. These days this field of study is subjected to changes and challenges. Maintaining a sustainable environment while efficiently converting resources into safe and quality outputs, coordinating between operations and other business functions, increasing profitability while providing a safe workplace and honouring stakeholder commitments are a few to mention. These topics will be discussed in this introductory operations management course.
Lectures (three hours), tutorial (one hour)
Prerequisite(s): IBH 2AD3 and Registration in Level III of the Integrated Business and Humanities Program

IBH 3LD0 A/B - LEADERSHIP DEVELOPMENT - LEADERSHIP EFFECTIVENESS

This course builds upon the foundation of leadership self-awareness gained in IBH 1LD0 and self-regulation gained in 2LD0 A/B S. In 3LD0, students will continue to take an outward focus by understanding how their leadership impacts others. Students will reflect upon how their personality and values influence their decision-making and how those decisions impact those they lead and broader stakeholders. Students will further develop their leadership development plans supported by small group workshops and 1:1 coaching.
Prerequisite(s): Registration in Level III or above of an Integrated Business and Humanities program

IBH 4AA3 - CRITICAL SEEING

This course is designed to further expand students' foundation in ethical business practice in a leadership position; in critical thinking and verbal expression; and in business- and social history with a global perspective; it will detail these skills and qualities by providing students with acute awareness of the impact of the multi-faceted visual environment they will work in, and with the necessary skills of visual literacy to 'read', evaluate, manage and produce visual messages adequately in different socio-cultural settings. The importance of creativity that is at play in visual communication will be explored, and students will have an opportunity for hands-on experience with the creative process in making art. Experience with accessing their own creative potential will contribute to their professional success.
Lectures (three hours), tutorials (one hour)
Prerequisite(s): Registration in Level IV of the Integrated Business and Humanities Program

IBH 4CE3 - COMMUNITY ENGAGEMENT CAPSTONE

This capstone community engagement course will help students unify the functional knowledge and a wide range of skills gained throughout the program. Students will apply themselves to a hands-on project that will leverage their quantitative skillset and understanding of social enterprises to analyze community data from a developing country or similar research oriented social enterprise data as specified by the instructor. Students will develop a high-quality and actionable research report driven by data and insight.
Lectures (three hours)
Prerequisite(s): Registration in Level IV of the Integrated Business and Humanities Program

IBH 4LD3 - LEADERSHIP DEVELOPMENT - LEADERSHIP CAPSTONE

This capstone leadership course will put student's understanding of leadership into practice. Students will engage in a creative process to develop leadership programming and deliver that programming to McMaster community members and/or members of the broader community. This course and the events it generates will act as a celebration and culmination of leadership growth within the IBH program.
Lectures (three hours)
Prerequisite(s): IBH 1BA3 and IBH 3AA3; and registration in Level IV of the Integrated Business and Humanities Program
Antirequisite(s): COMMERCE 4BN3

IBH 4SE3 - SOCIAL ENTREPRENEURSHIP CAPSTONE

This capstone social enterprise course will help students unify the functional knowledge and a wide range of skills gained throughout the program. Students will apply themselves to a research project that will leverage their understanding of community engagement and activism to address a real problem in our local community. Students will develop a high-quality and actionable research report driven by data and informed by prior research on similar topics.
Lectures (three hours)
Prerequisite(s): Registration in Level IV of the Integrated Business and Humanities Program

Indigenous Studies

Courses in Indigenous Studies are administered by the Indigenous Studies Department.
L.R Wilson Hall, Room 1811, ext. 27426
https://indigenous.mcmaster.ca

Department Notes

1. Students who have completed only 3 units of level I Indigenous Studies will be required to complete 3 more units of Level I Indigenous Studies by the end of the following academic year.

Courses

If no prerequisite is listed, the course is open.

INDIGST 1A03 - INTRODUCTION TO INDIGENOUS STUDIES

An introduction to Indigenous peoples' world views from pre-contact to the Indian Act of 1876. Indigenous history and philosophy will be examined along with the issues of representation and colonialism.
Lectures and seminars (three hours); one term

INDIGST 1AA3 - INTRODUCTION TO CONTEMPORARY INDIGENOUS STUDIES

This course will explore the relationship between Indigenous peoples and mainstream society in the 20th century with regard to governmental policy, land claims, economic development, and self-determination.
Three hours (lectures and seminars); one term
Cross-list(s): ARTSSCI 1AA3

INDIGST 1B03 - RECONCILING WHAT? INDIGENOUS RELATIONS IN CANADA

An examination of sociopolitical and historical relations between Indigenous peoples and Canada in a post-1951 time period. We will study how colonialism, assimilation and resistance movements are situated in an era of reconciliation.

- hours; lecture and seminar: one term

Antirequisite(s): RECONCIL 1A03

INDIGST 1G03 - TRANSITION - GAODADEIHWAHNI:YA:S "THEY ARE STRENGTHENING THEIR KNOWLEDGE"

In this course, students will build on prior academic skills while learning new concepts commonly encountered in undergraduate studies. Students will be introduced to guest speakers, student support services, and relationship building while engaging in hands-on activities to promote an inclusive learning environment. Throughout the term, students will learn critical thinking skills, scholarly writing strategies, time and stress management, organization, and how to engage in research. Throughout the course, students will have the opportunity to utilize a cultural perspective and participate in cultural learning activities to emphasize the importance of overall wellness and balance. This will build a lifelong foundation for academic and cultural balance in student success.
Prerequisite: Enrolment is restricted to incoming Indigenous learners. Students must have permission from the Indigenous Transition Program Coordinator (indigstp@mcmaster.ca). Recommended for all level 1 or 2 students in any program; Indigenous students in upper levels will be considered on a case-by-case basis Fall workshops (lecture and tutorial); one term

INDIGST 2A03 - INDIGENOUS PEOPLES' SPIRITUALITY

This course will examine the spirituality based knowledge of Indigenous peoples across North America. The philosophies, world view, sacred ways of knowing and relationship to the natural world will be explored.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department

INDIGST 2B03 - INDIGENOUS SOVEREIGNTY

An examination of North America Indigenous People's political and economic systems. Focus of study may include pre-contact, early contact, and contemporary eras within a post-colonial context. Topics will include: self-determination, resource management, land claims, and economic development.
Three hours (lectures and seminars); one term

INDIGST 2C03 - CURRENT ISSUES IN INDIGENOUS STUDIES: SELECTED TOPICS

- review of the geographic, cultural and demographic composition of Inuit, First Nations and Metis, and of the major current developments on land, cultural integrity, treaties, economic development, community social development and self-government.

Three hours (lectures and seminars); one term
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department
INDIGST 2C03 may be repeated, if on a different topic, to a total of six units.

INDIGST 2D03 - TRADITIONAL INDIGENOUS ECOLOGICAL KNOWLEDGE

This course is a study of the ecological teachings of Indigenous peoples and of their relationships with the natural environment in historical and contemporary times.
Three hours (lectures and seminars); one term
Cross-list(s): ANTHROP 2DA3, ENVSOCTY 2EK3

INDIGST 2F03 - INDIGENOUS EDUCATION IN CANADA

This course will examine the assimilationist policies that underscored the Indian Residential School system in Canada. The subsequent effects of intergenerational trauma and approaches to healing and reconciliation will also be explored. Further topics of discussion will include Indigenous approaches to education, decolonizing curriculum and pedagogy.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department.

INDIGST 2G03 - INDIGENOUS PERSPECTIVES ON PEACE AND CONFLICT

An examination of Indigenous philosophies of peace and approaches to conflict resolution from pre-contact to the present, with particular emphasis on Haudenosaunee tradition and the Great Law of Peace.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department

INDIGST 2H03 - INDIGENOUS CELEBRITY

An examination of (in)famous Indigenous people who have become cast as icons in the national consciousness of North America. We will discuss selected individuals and the circumstances around their fame, both historically and in

the present.
Three hours (lecture and seminar); one term

INDIGST 2IR3 - INDIGENOUS RESURGENCE

This course introduces and critically analyzes the theory of Resurgence within diverse Indigenous perspectives. Resurgence is a set of contemporary scholarly, political, and cultural practices that, as Leanne Simpson argues, stem from within Indigenous thought systems and are continually generated in relationship to place. The goal is for students to gain an understanding of the theory and practice of Resurgence and explore the concept through the works of Indigenous writers, artists, scholars, Elders, and Knowledge Holders.
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department

INDIGST 2J03 - INDIGENOUS EXPERIENTIAL EDUCATION

This course will incorporate a variety of interfaces (both within and outside the classroom) in the exploration of Indigenous-based approaches to knowledge. Students will gain insight into how voice, sound, materiality and the land inform how knowledge is transmitted and understood.
Three hours; lecture and seminar; one term

INDIGST 2K03 - INDIGENOUS FUTURISMS AND WONDERWORKS

Through a focus on Indigenous articulated realities and futures, this course refuses colonial narratives of the 'disappearing Indian' and insists upon Indigenous presence in past, present, and future as essential for envisioning a human future. Genres of study will include fiction, graphic novels, film, non-fiction, performance, and wonderworks.
Three hours; lecture and seminar: one term
Prerequisites(s): Three units Level I Indigenous Studies; or three units of Level I English and Cultural Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department
Cross-list(s): ENGLISH 2KA3

INDIGST 2M03 - INDIGENOUS RESEARCH METHODS AND ETHICS

This course will address methodological and ethical issues related to conducting research with Indigenous peoples. Indigenous and Western approaches to the constructions of knowledge are explored with an emphasis on Indigenous knowledges and how they are practiced in methodological approaches to research.
Three hours; lecture and seminar
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department
Antirequisite(s): INDIGST 2AA3, INDIGST 2M06 A/B

INDIGST 2MM3 - INDIGENOUS WAYS OF KNOWING: THEORY

This course will explore Indigenous ways of knowing as they relate to Indigenous cosmologies and worldviews. A range of written text and oral tradition will be introduced as foundational aspects of Indigenous knowledges. Interdisciplinary approaches based on the work of Indigenous scholars redefining the field of Indigenous Studies will also be examined.
Three hours; lecture and seminar
Prerequisite(s): Three units Level I Indigenous Studies; or one of ARTSSCI 1CC3 or ARTSSCI 1AA3; or permission of the Department
Antirequisite(s): INDIGST 2AA3, INDIGST 2M06 A/B

INDIGST 2N03 - PERSPECTIVES ON INDIGENOUS AND EUROCENTRIC ASTRONOMY

An introduction to the intersection between Indigenous and Eurocentric/ Western astronomy, particularly as it relates to naked-eye observations of the night sky; using astronomy as a gateway to learn more about Indigenous culture, history, and the process of decolonization and reconciliation.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above of the Faculty of Science or Indigenous Studies
Cross-list(s): ASTRON 2A03
This course is administered by the Department of Astronomy

INDIGST 2U03 - ELEMENTS OF INDIGENOUS DESIGN

An examination of Indigenous material, culture and design. Focus will vary upon instructor. Possible topics under study may include: textile, digital arts, visual arts, music, and art-based practices. Students will gain cultural and technical knowledge through the creation of their own pieces.
Three hours; lecture and seminar; one term
Students who completed INDIGST 2C03 on the topic of Elements of Indigenous Design will not be permitted to enrol in 2U03.

INDIGST 3C03 - STUDY OF HAUDENOSAUNEE FIRST NATIONS IN CONTEMPORARY TIMES

An intensive examination of the Haudenosaunee Confederacy and its attempts to maintain its culture, socio-political systems and economic independence.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3CC3 - CONTEMPORARY INDIGENOUS SOCIETIES: SELECTED TOPICS

An intensive examination of selected political, economic, or realities faced by selected Indigenous peoples.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units Level II Indigenous Studies or permission of the Department.
INDIGST 3CC3 may be repeated, if on a different topic, to a total of six units.

INDIGST 3D03 - CONTEMPORARY INDIGENOUS LITERATURES OF TURTLE ISLAND

This course is a study of contemporary literary works by Indigenous writers across Turtle Island - including oral narratives, short stories, novels, poetry, graphic novels, and drama. Native representations of identity, gender, health, aesthetics, traditional knowledge, and anti-colonialism will be examined. Students will also develop an understanding of various Indigenous literary approaches such as nationalism, resurgence, trans-Indigeneity, and body sovereignty.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies or six units of Level II English or permission of the Department.
Cross-list(s): ENGLISH 3W03, PEACEST 3W03

INDIGST 3EE3 - INDIGENOUS FILM

- study of Indigenous peoples and narratives in film. We explore how the historical and sociopolitical are informed through Indigenous creatives.
- hours; lecture and seminar: one term.

Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3EN3 - NORTHERN ENVIRONMENTS AND SOCIETIES

Exploration of the environmental, social, cultural, economic, and political opportunities and challenges that shape the Canadian North. Particular emphasis is placed on diversity and change.

- hours; Lecture; one term.

Prerequisite(s): One of ENVSOCTY 2EI3, 2EK3, INDIGST 2D03 (or permission of the Instructor).
Cross-list(s): ENVSOCTY 3EN3
This course is administered by the School of Earth, Environment & Society.

INDIGST 3F03 - INDIGENOUS ART AND VISUAL CULTURE IN CANADA

- survey of visual art production by Indigenous Canadian communities since c.1960 including: painting, sculpture, installation, film/video, performance and hip hop. The course focuses on Indigenous (First Nations', Metis' and Inuit) artistic practices and examines how those are framed in the context of museums in the 21st century.

Three hour lecture; one term.
Prerequisite(s): Registration in Level II or above of any program and one of IARTS 1PA3, IARTS 1PB3, INDIGST 1A03, INDIGST 1AA3, INDIGST 1B03; or enrolment in Level III or above of Art History; or permission of the instructor.
Cross-list(s): ARTHIST 3BB3, IARTS 3IA3
This course is administered by the School of the Arts.

INDIGST 3G03 - INDIGENOUS CREATIVE ARTS AND DRAMA: SELECTED TOPICS

The creative processes of Indigenous cultures are studied through the examination of selected forms of artistic expression, which may include art, music, dance and/or drama.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.
INDIGST 3G03 may be repeated, if on a different topic, to a total of nine units.

INDIGST 3H03 - INDIGENOUS MEDICINE I: PHILOSOPHY

This course will examine Indigenous concepts of health and wellness. The wholistic traditional approach will be used in the classroom as well as in visits by elders, medicine people and class trips to places of health, wellness and healing.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3HH3 - INDIGENOUS MEDICINE II: PRACTICAL

This course will examine the concept of traditional medicines, their histories and their connection to Indigenous philosophies of wellness (studied in Part I); procedures for procurement and use of the medicines will be addressed and emphasis will be placed on the reasons for efficacy.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3ID3 - SPECIAL TOPICS IN INDIGENOUS SOCIAL WORK RESEARCH AND PRACTICE

Critical examination of current topics indigenous Social Work Research and Practice. Topics will vary from year to year and the School should be consulted for details for any particular year.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03.
Antirequisite(s):
Cross-list(s): SOCWORK 3ID3
This course is Administered by the School of Social Work

INDIGST 3II3 - SOCIAL WORK AND INDIGENOUS PEOPLE

Examination of structural and cultural variables underlying the complex relationships between Indigenous communities and mainstream society, with particular attention to how they are played out in social work practice.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03
Antirequisite(s): SOCWORK 4I03
Cross-list(s): SOCWORK 3I03
This course is Administered by the School of Social Work
Not open to students with credit in SOCWORK 4G03 if the topic was Indigenizing Social Work and Indigenous Peoples.

INDIGST 3J03 - GOVERNMENT, POLITICS, AND INDIGENOUS PEOPLES RIGHTS

An historical examination of the leadership and politics in Canada's indigenous communities, with a particular focus on pre-contact political structures, the Indian Act and its consequences and contemporary social questions. Course content will consider political themes in relation to the impacts upon individual and collective rights of Indigenous Peoples.
Three hours; (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies; or permission of the Department; or registration in Honours Political Science Specialization in Public Law and Judicial Studies.
Cross-list(s): POLSCI 3C03

INDIGST 3L03 - INDIGENOUS INDEPENDENT STUDY

In consultation with the Chair of the Indigenous Studies Department, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required. Students who are interested in taking INDIGST 3L03 should contact a potential supervisor prior to registration. Please contact the Indigenous Studies Department for information on how to register.
Prerequisite(s): Registration in an Indigenous Studies program and permission of the Department.

INDIGST 3N03 - INDIGENOUS WOMEN: LAND, RIGHTS, AND POLITICS

This course will focus on issues Indigenous women identify as relevant to their current quality of life and social wellbeing. Indigenous knowledge, women's ways of knowing, the impacts of colonialism, gender and methodologies will be examined.
Three hours (lectures and seminars); one term
Prerequisite(s): Three units of Level II Indigenous Studies; or permission of the Department.

INDIGST 3P03 - DISH WITH ONE SPOON HEALTH, DIET AND TRADITIONAL BOTANY

Working with traditional knowledge holders, this course will explore the relationship between ethnobotany and agricultural practice to Haudenosaunee cultural beliefs and concepts of health and wellness amongst Indigenous people living within Dish with One Spoon territory.
Three hours (two hour lecture, one hour tutorial); one term
Prerequisite(s): Three units of Level I or II Indigenous Studies, Indigenous language course, or permission of the Department.
Cross-list(s): ANTHROP 3PA3

INDIGST 3Q03 - HISTORIES OF INDIGENOUS SPORT AND RECREATION

Sport and recreation improve quality of life with physical health, personal wellness and fostering belonging. Indigenous Peoples sport history will be studied from various nations level of organization, covering techniques, demonstration and non-competitive gains.

- hours; lecture and seminar: one term.

Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.
Cross-list(s): HISTORY 3SR3

INDIGST 3R03 - EXPERIENTIAL LAND-BASED LEARNING

This experiential course immerses students in material and social expressions of Indigenous culture. Students will learn about ancient wisdoms, knowledges and beliefs as expressed through storytelling, history, art and song. Students will engage, experience and produce knowledge through Indigenous ways of knowing and being.

- hours; lecture and seminar: one term.

Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3S03 - OTHER-THAN-HUMAN WORLDS AND RELATIONS

This course will draw on Indigenous cosmological foundations of human and other-than-human relations in the formation of Indigenous realities. We will explore the multiplicity of other-than-human worlds and their role in Indigenous knowledge generation.

- hours (lecture and seminar); one term

Prerequisite(s): Three units of Level II Indigenous Studies or permission of the Department.

INDIGST 3T03 - HAUDENOSAUNEE ORAL TRADITIONS, NARRATIVE AND CULTURE

An examination of oral narratives with an emphasis on the significance of language, meaning, and translation, this course will give students a greater understanding of Haudenosaunee cultural philosophies.
Three hours (two hour lecture, one hour tutorial); one term
Prerequisite(s): Three units of Level I or II Indigenous Studies, Indigenous language course, or permission of the Department.

INDIGST 3VV3 - THE INDIAN ACT: A SOCIAL PROBLEM

An overview of Indigenous policy in Canada, with a focus on the Indian Act (the earliest race-based legislation in Canada) and its legal and sociopolitical ramifications.
Three hours (lectures and discussion); one term
Prerequisite(s): Three units of Level II Indigenous Studies; or one of SOCIOL 1C03 or 1Z03 and enrollment in Level III Sociology or above; or permission of the Department
Cross-list(s): SOCIOL 3VV3
SOCIOL 2EE3 or 2UU3 and/or a background in Indigenous Studies is recommended.

INDIGST 3Y03 - INDIGENOUS COMMUNITY HEALTH AND WELLBEING

- critical examination of the determinants of health in Indigenous communities, processes of community revitalization and recent government policy initiatives.

Three hours (lecture and discussion), one term
Prerequisite(s): Registration in Level II or above in any program.
Cross-list(s): ANTHROP 3Y03, HLTHAGE 3YY3
This course is administered by the Department of Anthropology.

INDIGST 4A03 - INDIGENOUS CLIMATE JUSTICE

- focus on Indigenous land-based sovereignty, jurisdiction, and stewardship, this course examines the multiple overlapping jeopardies of settler colonialism, ecocide, climate crisis, pandemics, war, gender-based violence, and the cost of living. A just transition away from fossil fuels and the land theft, resource extraction, and colonial genocide that it requires is only possible through the dismantling of settler capitalism. Through the study of Indigenous storytelling, stewardship, activism, community organizing, and conservation students will create a just transition roadmap based upon collective, organized movement towards wealth redistribution, mutual aid, landback, and a care-based economy.
- hours; lecture and seminar: one term

Prerequisite(s): Six Units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4B03 - INDIGENOUS LITERARY GOVERNANCE AND RESISTANCE

Through an examination of non-fiction Indigenous writings, this course will focus on Trans-Indigenous practices of governance, diplomacy, advocacy, and resistance to settler colonialism through literary means. Students will engage both historic and contemporary examples of politicized writings by Indigenous peoples who insist upon and fight for the sovereignty of their nations.

- hours; lecture and seminar; one term

Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4C03 - CONTEMPORARY INDIGENOUS SOCIETIES AND ISSUES: SELECTED TOPICS

- guided seminar of selected political, economic, or social realities faced by selected Indigenous peoples. Students will combine theory and ways of knowing to discuss and expand on real world solutions and activities.

Seminar (three hours), one term
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.
INDIGST 4C03 may be repeated, if on a different topic, to a total of six units.

INDIGST 4CW3 - INDIGENOUS WOMEN'S LITERATURE

This course explores the rich and diverse literary contributions of Indigenous women writers, focusing on themes of community, feminisms, body sovereignty, and healing. Students will engage with a variety of genres, including novels, poetry and essays, to understand how Indigenous women authors articulate their experiences and envision futures rooted in cultural strength and resilience.

Seminar (three hours), one term
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4D03 - INDIGENOUS CRITICAL THEORY AND INQUIRY

An intensive examination of current scholarship by Indigenous theorists from an array of disciplines, including feminism, environmentalism, literature, and governance.

- hours; seminar: one term

Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4DW3 - INDIGENOUS HISTORY IN A DECOLONIZING WORLD

This course is designed to be an in-depth seminar examining Indigenous history centered around the theories and methodologies of decolonization. Informed by a selection of readings from Indigenous authors, primary sources, and oral histories, topics include Indigenous/non-Indigenous relations, decolonization, resurgence and traditionalism, Indigenous feminism, land-based knowledge, and Indigenous nationhood.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of any Honours program in History or registration in any Indigenous Studies Program.
Departmental permission required.
Cross-list(s): *HISTORY 4DW3*
This Course is Administered by the History Department.

INDIGST 4G03 - INDIGENOUS GENOCIDE

That the literature on Indigenous genocide is relatively sparse reflects the degree in which non-Indigenous North Americans have constructed their national histories that either erases Indigenous historical presence as in the United States or as in Canada promotes a benevolent national character. As a result, in both countries there is a refusal to take seriously any claims of Indigenous genocide. This reading and seminar course will provide students the opportunity to explore the various ways in which genocide has been enacted upon Indigenous peoples, how discussions about Indigenous genocide have shifted in recent years, and the multitude of long-term implications genocide has created for Indigenous people.
Seminar (three hours); one term
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4HH3 - INDIGENOUS HEALTH AND INTERDISCIPLINARY APPROACHES

This course will explore the multiple components of health and wellness as viewed by Indigenous cultures in the past and in a contemporary context. Social determinants of health, including the effects of colonialism, will be evaluated and discussed.

- hours; seminar: one term

Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4IM3 - INDIGENOUS POLITICS

This course will examine various Indigenous responses to the ways in which colonial nation-states have attempted to subjugate Indigenous people, usurp Indigenous sovereignty, and undermine leadership as a means of accessing, controlling, and benefiting from Indigenous lands and resources. Through course readings, class discussions, student presentations, and research papers this course will explore issues such as treaty making, Indian Act, citizenship, identity, land claims, United Nations, systemic racism, criminal justice system, gender issues, self-government initiatives, and various policy developments. All the materials presented in the class will be from Indigenous scholars allowing students an opportunity to engage with Indigenous perspectives of Indigenous-State relations critically and thoroughly.
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4IW3 - TWENTY-FIRST CENTURY INDIGENOUS WRITING AND FILM

- critical examination of recent works by Indigenous authors and filmmakers that give voice to contemporary social, cultural, and political realities in Canada.

Seminar (two hours); one term
Prerequisite(s): Six Units of Level III Indigenous Studies and enrolled in Honours Indigenous Studies or permission of the Instructor.
Cross-list(s): ENGLISH 4IW3
This course is administered by the Department of English and Cultural Studies.

INDIGST 4J03 - INDIGENOUS EROTICS

This course is an in-depth study of the visual and literary forms of Indigenous erotics in North America. We examine a broad selection of historical and contemporary Indigenous expressions of sexualities and genders. Manifestations of the erotic will be examined and understood as a way for Indigenous Peoples to reclaim corporeal sovereignty, overcome centuries of sexual repression, dispossession and shame and revive understandings of gender and sexualities deeply rooted within Indigenous cultural paradigms. Discussions will include theoretical analyses of the social, political, historical, spiritual and intellectual realms and serve as a platform to disrupt the heteropatriarchal normative. Indigenous eroticanalysis is a methodology with which to engage in a critical dialogue on the understandings of Indigenous bodies and their established belief systems.
Seminar (three hours); one term
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4K03 - 20TH CENTURY INDIGENOUS RIGHTS AND THE LEGACY OF CHIEF DESKAHEH (LEVI GENERAL)

This course will examine the emergence of Indigenous peoples rights on an international level and the foundational role played by Haudenosaunee Chief Deskaheh (Levi General) at the League of Nations over a century ago.
Three hours (lecture and discussion; one term
Prerequisites(s): Six (6) units of Level III Indigenous Studies, or permission of the Instructor.

INDIGST 4L03 - INDIGENOUS COMMUNITY RESEARCH EXPERIENCE

Students will work with a supervisor to conceive and develop a community based research project that directly benefits an Indigenous community, whether urban or rural. Topics may include health and wellness, land claims, education, language, and/or environmental issues. Students who are interested in taking INDIGST 4L03 should contact a potential supervisor prior to registration. Please contact the Indigenous Studies Program Administration office for on information on how to register.
Prerequisite(s): Six units of Level III Indigenous Studies or permission of the Instructor.

INDIGST 4LF3 - DINÉ & DENE LITERATURE & FILM

This course will analyze the ways Din(Navajo) and Dene literature and film challenge and reframe self (subjectivity) and place (dislocated, relocated, diasporic, and decolonized). Texts may include film, fiction, poetry, orality, autobiography, literary criticism, and scholarly prose.
Seminar (two hours); one term
Prerequisite(s): Six units of Level III Indigenous Studies or registration in Level IV of an Honours program in English and Cultural Studies or permission of the Instructor.
Cross-list(s): ENGLISH 4LF3

INDIGST 4QQ3 - INDIGENIZING SOCIAL WORK PRACTICE APPROACHES

This course examines the social workers role and responsibility in working with diverse Indigenous peoples such as First Nation, Metis and Inuit living on reserve and in urban areas. The concept and process of ethical tensions indigenizing social work practice approaches will be connected to indigenous philosophy and epistemology with the approach of understanding and building relationships and reconciliation between indigenous and non-indigenous peoples, as well practices within the social work profession.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work, Work and Labour Studies, or Indigenous Studies program; or registration in level III or above and completion of one of SOCWORK 1AA3 or SOCWORK 1BB3 and one of INDIGST 1A03, INDIGST 1AA3 or INDIGST 1B03
Antirequisite(s): SOCWORK 3Q03.
This course is Administered by the School of Social Work
Cross-list(s): SOCWORK 4QQ3
Not open to students with credit in SOCWORK 4G03 if the topic was Indigenizing Social Work Practice Approaches.
Students are strongly encouraged to take INDIGST 3II3 before taking INDIGST 4QQ3.

INDIGST 4RI3 - THE DIVINE FEMININE: INDIGENOUS FEMMES, FEMINISMS, & REMATRIATION

This course looks to representations of Indigenous womanhood in a range of contemporary and historical cultural productions such as: television and film; literature; performance and visual art; print, news, and social media; policy; and sonic materials (e.g., oral herstories, music, soundscapes, podcasts, etc.). With a focus on gender expansiveness (i.e., female masculinity, transgender and non-binary identities, high femmes, etc.) this course will provide an overview of Indigenous feminisms including the divine feminine in Indigenous cosmologies, traditional (aka pre-contact) gender roles and concepts, colonial gender-based violence, and contemporary Indigenous feminist movements, organizing, and rematriation. Further topics of discussion may include: mmiwg, warrior wxmen, matriarchy, anti-colonial feminist care ethics, two-spirit stories and analysis, erotics and intimacy, body as archive, mothering, Indigenous drag, Indigenous burlesque, leadership, and intergenerational right relating.
Prerequisite(s): Six units of Level III Indigenous Studies or Registration in Level IV of an Honours program in English and Cultural Studies or permission of the Instructor.
Cross-list(s): ENGLISH 4RI3

INDIGST 4T06 A/B - HONOURS THESIS

In consultation with a member of the Program's Committee of Instructors, students will prepare an essay on an approved topic. Students who are interested in taking INDIGST 4T06 A/B should contact a potential supervisor early in the first term. Students who are interested in taking INDIGST 4T06 A/B should contact a potential supervisor prior to registration. Please contact the Indigenous Studies Program Administration office for on information on how to register.
Prerequisite(s): Level IV of Indigenous Studies Program and permission of Instructor.

INDIGST 4TR3 - DEYOHAHAGE:GIHE'GOWAHNEH / TWO ROW ON THE GRAND: CULTURAL RESURGENCE, RESPECT & RECONCILIATION

This land/water-based interdisciplinary and experiential course will join the Two Row on the Grand participants in a community-based and organized 10-day canoe paddle from Cambridge, Ontario to Port Maitland, Ontario (163 km). The course will explore Indigenous and decolonizing theoretical knowledge, skills, and practices that are guided by the Haudenosaunee Great Law of Peace and the original peace treaty Deyohahage:gihę'gowahneh - Two Row Wampum between the Haudenosaunee and settler nations/communities.
Prerequisite(s): Registration in any level of an Indigenous Studies or Social Work program.
Cross-list(s): SOCWORK 4TR3
Department permission required.

Innovation

INNOVATE 1C03 - CASES IN ENTREPRENEURSHIP AND INNOVATION

This course is designed to introduce students to the fundamental concepts of entrepreneurship and innovation through case studies, imagination exercises, and real-world applications. Students will learn how to identify opportunities, develop innovative solutions, and understand the entrepreneurial process from ideation to execution. Critical thinking, creativity, and teamwork will be emphasized.
One lecture (three hours), one term.

INNOVATE 1X03 - THE WORLD OF ENTREPRENEURSHIP

Course description: Fundamentals of entrepreneurship via a series of guest lectures by prominent entrepreneurs. Case studies will be used to analyse strategies and methods for growing a scalable business.
One lecture (two hours); one tutorial (one hour); offered in both terms

INNOVATE 1Z03 - ARTIFICIAL INTELLIGENCE - INNOVATIVE TECHNOLOGIES

Students will cover the history, goals, social impact and philosophical implications of artificial intelligence via a series of guest lectures by prominent researchers, entrepreneurs and theorists in this area. Speakers will highlight the numerous applications and huge possibilities in the field of AI.
One lecture (three hours), one term

INNOVATE 2C03 - CREATIVE INNOVATION FOR THE MODERN WORLD

This course is designed to help students unlock their creative potential and apply innovative thinking to real-world problems. Through a combination of imagination exercises, interactive workshops, and hands-on projects, students will develop the skills to innovate in various fields. The course focuses on fostering creativity, exploring new ways of thinking, and using interdisciplinary approaches to tackle complex challenges. Emphasis will be placed on collaboration, ideation, experimentation, and the integration of technology in innovation.
One lecture (three hours), one term.

Prerequisite(s): INNOVATE 1C03

INNOVATE 2SI3 - SOCIAL INNOVATIONS

This interdisciplinary course will explore how startups and corporations generate positive social impact while remaining economically viable. Topics include social entrepreneurship, social finance, impact investing, corporate social innovation, and social enterprises.
One lecture (three hours); one term

INNOVATE 2X03 - LEAN STARTUP

Course description: Introduction to lean methodologies of building a successful start-up business, including market validation, analysing market potential for start-up ideas, establishing a business model and "failing fast". Students will learn how to test business ideas and hypotheses with customers and stakeholders.
One lecture (three hours); one term

INNOVATE 2Z03 - SPRINT METHODOLOGIES

Rapid prototyping, testing and iteration of ideas with customers using design sprint methodologies. Students will also learn about agile development and pathways from idea to market.
One lecture (three hours); one term
Prerequisite(s): Registration in Level II or above of any program

INNOVATE 3EX3 - EXPERIENTIAL LEARNING IN INNOVATION

This course will provide students an opportunity to gain direct experience working at an existing start-up company. Course credit will be evaluated based on the maintenance of a comprehensive learning portfolio.
One lecture (three hours); one term
Prerequisite(s): INNOVATE 1X03; INNOVATE 2X03 or 2Z03; and permission of the instructor

INNOVATE 3X03 - PERSUASION, PITCHING SKILLS AND MARKETING

In both individual and group settings, students will explore the theoretical and practical aspects of how to persuasively market and sell their ideas, their vision and their products to target audiences.
One lecture (three hours); one term
Prerequisite(s): Registration in Level II or above of any program

INNOVATE 3Z03 - FROM FOUNDER TO CEO

Students will learn how a start-up Founder transitions into becoming a CEO to properly manage and grow the company, effectively manage Human Resources and work with a Board of Directors.
One lecture (three hours); one term
Prerequisite(s): Registration in Level II or above of any program

INNOVATE 3ZZ3 - IMAGINING AND NAVIGATING THE FUTURE

This ambitious interdisciplinary course provides a platform for students to develop the strategic foresight, planning and leadership skills needed to imagine and shape the future. Students will analyse the systems, trends and uncertainties driving the future of such business and social domains as workplaces, healthcare systems, climate change, and financial markets. Students will also develop the skills needed to mobilize people and resources towards desired outcomes. In addition to team experiential learning projects, students will explore future directions on issues of personal interest.
One lecture (three hours); one term
Prerequisite(s): Registration in Level III or above in a four or five year program

INNOVATE 4EX6 A/B - FOUNDERS STARTUP

Working with The Forge, McMaster's startup accelerator, students will form teams to develop a new startup venture. Through the application of lean startup and design sprint methodologies, students will rapidly test and iterate product-market fit with customers and refine their business models. Admission to the course will be based on an application (one application per team).
One lecture (three hours); both terms
Prerequisite(s): INNOVATE 1X03; INNOVATE 2X03 or 2Z03; and permission of the instructor

INNOVATE 4EX6 A/B S - FOUNDERS STARTUP

Working with The Forge, McMaster's startup accelerator, students will form teams to develop a new startup venture. Through the application of lean startup and design sprint methodologies, students will rapidly test and iterate product-market fit with customers and refine their business models. Admission to the course will be based on an application (one application per team).
One lecture (two hours); one tutorial (one hour); one term
Prerequisite(s): INNOVATE 1X03, 2X03, 2Z03; and permission of the instructor

INSPIRE (INSPIRE Office of Flexible Learning)

Peter George Centre for Living and Learning, M04
https://inspire.mcmaster.ca/
inspire@mcmaster.ca
Courses

INSPIRE 1A03 - MULTIDISCIPLINARY EXPERIENTIAL LEARNING OPPORTUNITIES

This experiential learning course supports student exploration of questions and issues impacting Hamilton and the surrounding region over a four-week period in May. Students will choose from a series of learning experiences that occur in studios, workshops, labs, and in the field, both on and off campus, allowing the course to be geared towards their interests. Content and schedule will vary. Details for this course can be found on the INSPIRE Office of Flexible Learning website: https://inspire.mcmaster.ca.
Nine hours; one lecture; students must enrol in three modules; one term
This course is open to students from all McMaster Faculties and the Arts & Science Program.

INSPIRE 1PL3 - PERSONAL LEADERSHIP THROUGH UNIVERSITY TRANSITION

Students will explore questions of leadership, personal reflection and what it is to thrive in a university environment from a social, sustainability, and forward-thinking perspectives. Through a variety of individual and group activities, students will develop and reflect on various elements of personal growth and communication skills. To further understand how actions and perceptions impact those around them, students will explore individual leadership styles, how potential actions can impact group dynamics, understandings of equity, diversity, and inclusion; and the leadership and communication styles of others.
Lectures (three hours); one term
Antirequisite(s): COMMERCE 1GR0, HTHSCI 3T03
Not open to students with credit or registration in INSPIRE 1HR3 Personal

Leadership for First Year Students. Due to some overlap of INSPIRE 1PL3 modules with courses in the Praxis Pathways Curriculum, students in the BHSc (Hons) Program who wish to take INSPIRE 1PL3 must receive approval from the BHSc Praxis Coordinator in their selection of modules.

INSPIRE 2II3 - INTRODUCTION TO INTERDISCIPLINARY INQUIRY

This topics course sets out to introduce interdisciplinary inquiry in learning and discovery on selected topics in various areas of study. Topics vary from year to year and the timing of the course will be dependent on the offering. Details on course topics and timing can be found on the INSPIRE Office of Flexible Learning website: https://inspire.mcmaster.ca.
This course is open to students from all McMaster Faculties and the Arts and Science Program.
INSPIRE courses may be repeated if on a different topic.

INSPIRE 2LM3 - LOVE AND MONSTERS

This course asks how, where, when love and monsters intersect. It investigates historical and philosophical themes love, fear, trust, dignity that underpin the human experience and the social realities that inform it. What makes things monstrous? What does love require of us? Can monsters love?
Three hours (lecture); one term

INSPIRE 3AR3 - EXPLORING LEADERSHIP IN ATHLETICS & RECREATION

This course provides students with the opportunity to explore and participate in active learning in partnership with various units within McMasters Department of Athletics and Recreation. Students will complete a minimum of 36 hours of practice or experiential learning in a predetermined role and connect their co-curricular experience in Athletics and Recreation with their own leadership, mentorship, and communication skills development. Students will reflect on their co-curricular experiences and how they are related to their learning journey. More information and the online application can be found on the INSPIRE Office of Flexible Learning website: https://inspire.mcmaster.ca. Students are required to submit an online application 30 days prior to date classes begin in each term (see the Sessional Dates section of this Calendar).
Lectures (two hours); one term
Prerequisite(s): Registration in Level II or above. Must hold a student role within Athletics and Recreation concurrent with enrolment in the course and permission of the instructor via intersession@mcmaster.ca

INSPIRE 3AS3 - LANGUAGE AND COMMUNICATION IN AUTISM SPECTRUM DISORDER

Students will learn about Autism Spectrum Disorder and theories put forth to explain it, with a focus on language and social impairments. Conflicting views on language deficits in ASD will be explored and current research into language abilities in ASD will be introduced.
Cross-list(s): LINGUIST 3AS3
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HUMBEHV 2A06 A/B
Not open to students with credit in INSPIRE 3EL3 if the topic was Language and Communication in Autism Spectrum Disorder.

INSPIRE 3EL3 - EXPERIENTIAL LEARNING OPPORTUNITIES

Experiential learning courses supporting the exploration of multidisciplinary topics. Content and schedule will vary. Details can be found on the INSPIRE Office of Flexible Learning website: http://inspire.mcmaster.ca. INSPIRE courses may be repeated on a different topic. Some experiential learning opportunities may require a fee to cover costs of travel and other logistics.

INSPIRE 3IE1 - INTERDISCIPLINARY EXPERIENCES

Exploration of interdisciplinary topics from a variety of modules. Content and schedule will vary. Details can be found on the INSPIRE Office of Flexible Learning website: http://inspire.mcmaster.ca. This course is open to students from all McMaster Faculties and the Arts and Science Program.
INSPIRE courses may be repeated on a different topic.
Some experiential learning opportunities may require a fee to cover the cost of travel and other logistics.

INSPIRE 3II3 - INTERDISCIPLINARY INQUIRY

Interdisciplinary inquiry is the working, learning, and imagining across traditional academic paradigms. Topics vary from year to year and the timing of the course will be dependent on the offering. Details on course topics and timing can be found on the INSPIRE Office of Flexible Learning website: https://inspire.mcmaster.ca.
This course is open to students from all McMaster Faculties and the Arts & Science Program.
INSPIRE courses may be repeated if on a different topic.

INSPIRE 3MP3 - A WORLD OF BIG QUESTIONS AND MULTIPLE PERSPECTIVES

There are many perspectives to understanding the world, and academia provides a method for society to objectively build knowledge to answer the Big Questions. However, academic papers and textbooks are written by humans who have their own perspectives, biases and agendas; often, the behind-the-scenes story is even more interesting. While exploring an eclectic mix of fascinating topics with short modules from working academics from a range of fields, we will explore the history, philosophy, controversies, and applications of the scholarly pursuit. Students will experience an expanded view of the nature of evidence-based practices, gain in-depth knowledge of contemporary research questions that scholars at McMaster University are exploring, and learn to become informed and critical consumers of information and media.
Lectures (three hours); one term
Not open to students with credit or registration in INSPIRE 3EL3 if the topic was Perspectives in Science.

INSPIRE 3TU3 - HISTORY OF YOU

We are all historical actors. This course introduces genealogy, autobiography, and memoir among other approaches to foster historical examination of the self and to consider the challenges associated with putting the self in historical context.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HISTORY 3TU3

INSPIRE 3WW3 - EXPLORING LEADERSHIP IN UNIVERSITY ORIENTATION

This course is open to students volunteering as University orientation representatives in the current academic year of study. Students will develop and reflect on their personal leadership, mentorship, and communication skills to better understand group dynamics, the leadership and communication style of others, the impact of orientation programming on the university experience, student development, and critical considerations of the strategic priorities of orientation. More information and the online application can be found on the INSPIRE Office of Flexible Learning website: https://inspire.mcmaster.ca. Students are required to submit an online application 30 days prior to date

classes begin in each term (see the Sessional Dates section of this Calendar).
Lectures (two hours); one term
Prerequisite(s): Must hold a position and/or role as a University orientation representative concurrent with enrollment in the course and permission of the instructor via intersession@mcmaster.ca.

INSPIRE 4B06 - URBAN INNOVATION AND POLICY WITH CITYLAB

Intensive experience where students work in interdisciplinary teams on real-world challenges originating from Hamilton city staff or community organizations. Students attend class daily at the CityLAB space next to Hamilton City Hall and take part in workshops and field trips. The focus is on research and presentation of ideas for urban innovation, and change-making in a complex urban environment.
This course requires permission from the Office of Community Engagement.
Offered in intersession only.
Six hours (lecture); one term
Prerequisite(s): Registration in Level III or above
Cross-list(s): CMTYENGA 4B06
Antirequisite(s): CMTYENGA 4A06, CMTYENGA 4A09

Integrated Arts

IARTS 1BD3 - 2D PRACTICES IN ART

This course is designed to facilitate development of tacit knowledge, intuitive judgement, perception and theoretical understanding through direct material engagement.
Three hours studio; one term
Prerequisite(s): Registration in iArts (Integrated Arts) I or Humanities I
Antirequisite(s): ART 1OS3, ART 1MI3
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work

IARTS 1CR3 - ACTING: BODY AND VOICE

Through studio work, students learn core physical and vocal acting skills, and explore key theories central to performance arts practice. This introductory performance class is designed to be accessible for all students. No previous acting or performance experience is needed.
Three-hour studio

IARTS 1HA3 - INTRODUCTION TO HISTORIES OF THE ARTS

This course examines how studies of the arts have responded to recent social changes, evolving beyond 19th century Eurocentric bias, and resituates arts histories in the diverse and complex contexts of our contemporary world.
Two hours lecture; one hour tutorial
Antirequisite(s): ARTHIST 1A03, ARTHIST 1AA3

IARTS 1PA3 - PERSPECTIVES A: ARTS IN SOCIETY: SOCIAL CONSTRUCTIONS OF CLASS, RACE AND GENDER

By means of hands-on creation and critical analysis of case studies in performance, theatre, film and visual arts, students will develop skills in formal analysis and investigate how the arts can both challenge and perpetuate constructions of class, race and gender.
Two hours lecture; one hour tutorial
Antirequisite(s): ARTHIST 1PA3

IARTS 1PB3 - PERSPECTIVES B: ARTS IN SOCIETY: TECHNOLOGY AND THE ENVIRONMENT

By means of both hands-on creation and critical analysis of case studies in performance, theatre, film and visual art, students develop skills in formal analysis and investigate issues of technology and the environment in the arts within the context of industrial capitalism and the climate crisis.
Two hour lecture; one hour tutorial

IARTS 1RP3 - PROJECT PRODUCTION 1

Building on skills and concepts introduced in IARTS 1RR3, this course guides students through the steps of creating research-creation arts projects of their own direction, working alone or in collaboration with other students. Students will learn how to navigate the various artistic spaces needed to execute projects and synthesize their ideas and acquired skills.
Three hours studio
Prerequisite(s): IARTS 1RR3 and registration in level 1 of the BFA iARTS program
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work

IARTS 1RR3 - PROJECT DEVELOPMENT 1

Introduction to the techniques and principles of research-creation including the use of specialized studio facilities, various arts methods and basic research skills. Students will learn how to create arts projects that integrate theory and practice and intersect with more traditional forms of social and academic research.
Three hours studio
Prerequisite(s): Registration in level 1 of the BFA iARTS program
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work

IARTS 1SS3 - 3D PRACTICES IN ART

This course facilitates the development of tacit knowledge, intuitive judgment, perception and theoretical understanding through direct material engagement with metals, plaster, clay, fibres, and use of fabrication technologies.
Two hours studio; one hour lecture
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work
Antirequisite(s): ART 1DM3
Prerequisite(s): Registration in iArts (Integrated Arts) I or Humanities I

IARTS 1T03 - STORY AND DESIGN IN THEATRE AND FILM

Through design workshops and weekly lectures, students learn how story-tellers and designers in theatre and film use the elements of their craft to reflect and refract the social contexts in which they work. Students engage with the conceptualization and manipulation of time, space, light, sound, and materials within theatre and film.
Two hour lecture; one hour tutorial; one term
Antirequisite(s): THTRFLM 1T03

IARTS 2AD3 - ACTING AS DEVISING I

Students receive studio training in voice and body, and explore how the performer's creative process reflects and challenges the norms that structure contemporary social relationships.
Two studios; one term
Prerequisite(s): Registration in a program in Theatre and Film Studies or IARTS, or permission of the program
Co-requisite(s): WHMIS 1A00 if not already completed; successful

completion of WHMIS is required prior to studio work
Cross-list(s): THTRFLM 2AA3

IARTS 2AS3 - PERFORMANCE, ART AND VISUAL CULTURE IN EAST AND SOUTH ASIA

an introduction to aspects of the history of the arts and performance in South and East Asia from antiquity to modern times, highlighting the impact of cultural exchange and diversity.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ARTHIST 2Z03
Offered on a rotational basis.

IARTS 2BB3 - DESIGNING FOR DEVISED PERFORMANCE

Students work in studio to learn basic techniques for using visual and sound design as a basis for creating performance pieces.
Two two-hour studios; one term
Prerequisite(s): One of IARTS 1T03, THTRFLM 1T03, MMEDIA 1A03 or MEDIAART 1A03 and registration in Level II or above of any program
Cross-list(s): THTRFLM 2BB3

IARTS 2CC3 - PERFORMANCE, ART, AND VISUAL CULTURE IN CANADA

An introduction to the history and contemporary practice of performance and visual culture in Northern Turtle Island/Canada from multiple perspectives including exploration of Indigenous performance and art, analysis of the Northern Turtle Island/Canadian theatre and arts economy and arts institutions, with critical reflection on performances and visual culture.
Three hours; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ARTHIST 3B03, THTRFLM 2CP3
Cross-list(s): THTRFLM 2CC3

IARTS 2CD3 - CONTEMPORARY APPROACHES TO DRAWING PRACTICES

This course provides insight into the varied functions of drawing including expressive purpose, communication, information organization, idea synthesis and drawing as a form of thinking. A variety of media and hybrid approaches are included.
Three hour studio; one term
Prerequisite(s): One of ART 1OS3, ART 1MI3, IARTS 1BD3; and registration in any iArts program; and WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work. Students in any IARTS program without ART 1OS3, ART 1MI3, IARTS 1BD3 can consult the department.
Antirequisite(s): ART 2DG3

IARTS 2CP3 - INTRODUCTION TO CRITICAL CURATORIAL PERSPECTIVES

An introduction to the theory, practice, and ethics of curating in galleries, museums, artist-run centres and community arts organizations. Emphasis will be on anti-racist, decoloniality, and anti-oppressive practices, ethics, and contexts. Students will learn specialized knowledge, resources, and methodologies and examine professional and academic responsibilities within curatorial work. Some foundational scholarship on the history of modern museums will be introduced to ground the critical analysis and applications.
Three hours; one term
Prerequisite(s): One of ARTHIST 1PA3, IARTS 1PA3 or IARTS 1PB3

IARTS 2DE3 - DEVISED PERFORMANCE PROCESSES

Devised performance is collectively created work that responds to the world we live in and the social issues we face. Students learn foundational workshop practices for the devising of live performances, integrating design experimentation, acting exercises, and games.

- two-hour studios; one term

Prerequisite(s): IARTS 1T03 or THTRFLM 1T03; and registration in Level II or above of any program.
Antirequisite(s): THTRFLM 3G03
Cross-list(s): THTRFLM 2DP3

IARTS 2DP3 - DIGITAL PRACTICES

This course is a comprehensive hands-on introduction to digital media production in the context of contemporary artistic and creative practice. Students will develop fundamental technical and conceptual skills in digital photography, audio, and video. Limited access to take-home equipment will be available, but students are encouraged to provide their own DSLR cameras with manual control and video functionality. No previous background required.
Three-hour studio
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ART 2DP3, MEDIAART /MMEDIA 2A06, MEDIAART/ MMEDIA 2B06

IARTS 2EP3 - 3D AND EXPANDED PRACTICES

This course develops spatial and sensory processes through critical spatial, material and methodological investigations, site responsive work, interactive and sensorial explorations, time-based and digitally mediated fabrication processes.
Three hour studio; one term
Prerequisite(s): One of IARTS 1SS3, IARTS 1T03, THTRFLM 1T03; and registration in Level II or above of any iARTS program; and WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work Students in any IARTS program without IARTS 1SS3, IARTS 1T03, THTRFLM 1T03 can consult the department
Antirequisite(s): ART 2SC3

IARTS 2ER3 - ENVIRONMENTALLY RESPONSIBLE ART

This course focuses on environmentally sustainable studio production with a comprehensive approach that promotes understanding of how materials are manufactured, why they are selected, how they are used and implications of disposal. A student-centered approach will determine media use and concepts.
Three hours; one term Offered on a rotational basis.
Prerequisite(s): Credit or registration in WHMIS 1A00 (successful completion of WHMIS is required prior to studio work) and registration in Level II or above of any program. Recommended for students pursuing a Minor in Sustainability.
Antirequisite(s): ART 2ER3

IARTS 2FA3 - FILM ANALYSIS

An introduction to an interrelated set of approaches to film study, all of which are defined by their attention to the filmic text and which provide students with a grasp of the fundamentals of film analysis.
Two lectures, plus one weekly film screening; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): THTRFLM 2FA3, ARTHIST 2FA3

IARTS 2ME3 - PERFORMANCE, ART, AND VISUAL CULTURE IN THE MIDDLE EAST

An introduction to aspects of the history of the arts and visual cultures in the Middle East, with special attention to religious and cultural diversities and with an emphasis on intercultural transmissions.
Three hours (lectures and tutorial); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ARTHIST 2Y03
Offered on a rotational basis

IARTS 2MM3 - MOVIES AND ME

An examination of popular film as a social practice, considering both how mainstream movies take up social issues and how audiences interact with films and film culture.
Two hour lecture, one film screening; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): THTRFLM 2MM3

IARTS 2OP3 - ORGANIZING PERFORMANCE SPACE

Course runs in conjunction with the School's mainstage production. Students develop fundamental skills and awareness of the theatrical production process through experiential learning as assistant designers and stage managers.
Two-hour lecture and one-hour tutorial
Prerequisite(s): One of IARTS 1T03, THTRFLM 1T03; and registration in level II of an iArts or Media Arts program
Antirequisite(s): THTRFLM 3S06, THTRFLM 3OP6 A/B, IARTS 3MP6
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work.

IARTS 2PC3 - PERSPECTIVES C: ARTS IN THE COMMUNITY

Exploring historical and contemporary case studies of arts-based research in the community, this course combines hands-on creative practice with research and analysis to provide students with skills to critically evaluate and effectively design community-based arts projects.
Two-hours lecture 1-hour tutorial
Prerequisite(s): Registration in Level II or above of any program; and one of ARTHIST 1PA3, ENGLISH 2CC3, GENDRST 1A03, IARTS 1PA3, IARTS 1PB3, INDIGST 1A03, INDIGST 1AA3, PEACJUST 2CS3

IARTS 2PD3 - PERSPECTIVES D: ARTS ACROSS DISCIPLINES

Exploring historical and contemporary examples of interdisciplinary projects, this course combines hands-on creative practice with research and analysis of case studies in Arts and Microbiology, Arts and Engineering, Arts and Neuroscience, Arts and the Health Sciences and Arts and the Life Sciences.
Two-hours lecture 1-hour tutorial
Prerequisite(s): Registration in Level II or above of any program; and one of ARTHIST 1PA3, ENGLISH 2CC3, GENDRST 1A03, IARTS 1PA3, IARTS 1PB3, INDIGST 1A03, INDIGST 1AA3, PEACJUST 2CS3

IARTS 2PM3 - CONTEMPORARY APPROACHES TO PRINT MEDIA

This course develops techniques and aesthetic tactics of print media utilizing relief intaglio, planographic process such as: wood cut collagraph, image transfers, embossing, photo lithography.
Prerequisite(s): One of IARTS 1BD3, ART 1OS3, ART 1MI3 and registration in any iARTS program; Students in any IARTS program without IARTS 1BD3, ART 1OS3, ART 1MI3 can consult the department.
Antirequisite(s): ART 2PM3

IARTS 2PP3 - CONTEMPORARY APPROACHES TO PAINTING PRACTICES

This course develops pictorial thought processes through the vocabulary of painting. Balanced emphasis is placed on expanding conceptual and practical knowledge utilizing a variety of pigments, mediums, supports, tools, alternative and hybrid approaches.
Prerequisite(s): One of IARTS 1BD3, ART 1OS3, ART 1MI3; and registration in any iArts program; and WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work; Students in any IARTS program without IARTS 1BD3, ART 1OS3, ART 1MI3 can consult the department.
Antirequisite(s): ART 2PG3

IARTS 2RP3 - PROJECT PRODUCTION 2

Building on the project research they conducted in IARTS 2RR3, students will work individually and in groups to produce a small-scale performance or exhibition.
Three hours studio
Prerequisite(s): Registration in Level II of the IARTS BFA program, and completion of IARTS 2RR3

IARTS 2RR3 - PROJECT DEVELOPMENT 2

Building on strategies introduced in IARTS 1RR3 and IARTS 1RP3, this intermediary course teaches students how to arrive at concepts and criticality in the arts through an ongoing cyclical process of exploring resources, making and devising, and critically evaluating.
Three hours studio
Prerequisite(s): Registration in Level II of the IARTS BFA program

IARTS 2SP3 - CONTEMPORARY APPROACHES TO SCULPTURE PRACTICES

This course develops spatial thought processes, expanding conceptual and practical knowledge through critical investigations in mould making, casting, metal fabrication, woodworking, and the integration of methods and materials in relationship to space.
Three hours studio
Prerequisite(s): IARTS 1SS3; or ART 1DM3; and registration in any iArts program; and WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work. Students in any IARTS program without IARTS 1SS3, ART 1DM3 can consult the department.
Antirequisite(s): ART 2SC3

IARTS 2US3 - UNDERSTANDING SPATIAL DYNAMICS AND TIME IN THE ARTS

This course examines some of the premises of how humans interact with the arts in different times and spaces - such as places of worship, learning, work, transportation, rest, leisure, healing, sports, entertainment and so on - by examining examples selected from worldwide cultures at different times.
Offered on a rotational basis.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above

IARTS 3AA3 - MODERNIST THEATRE AND DRAMA IN EUROPE

This course studies representative dramas and theatre productions that highlight the diversity of plays on the 20th century stage.

Two hour lecture, two hour film-screening; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): THTRFLM 3AA3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3AD3 - ACTING AS DEVISING II

Students work in studio to extend their physical, vocal, and conceptual devising skills, developing performances in a diversity of forms including: physical theatre, spoken word, and performance art.
Three hour studio; one term
Prerequisite(s): Registration in Level III or above of any iArts program; or registration in any Theatre & Film Studies program; or one of IARTS 1CR3, 2DE3, 2AD3; or permission of instructor
Antirequisite(s): THTRFLM 3WW3, THTRFLM 3XX3

IARTS 3BA3 - BOOK ARTS AND ZINES

This course integrates traditional techniques with contemporary concepts and applications of the artist book. Hand-made, imported and found paper will be utilized in a variety of formats responding to student-centered concepts through sustainable practices, collaboration and exchange.
Three hour studio; one term
Prerequisite(s): One of IARTS 1BD3, ART 1OS3 or ART 1MI3 and registration in Level II or above of any program; or permission of the instructor
Antirequisite(s): ART 3BA3

IARTS 3CE3 - CONCENTRATED STUDY CERAMICS

Focused on contemporary ceramics, this course fuses traditional techniques and alternative methods, from hand building to new technologies. Students explore ceramic history and processes related to industry, design, culture and society. A student-centered approach will determine concepts.
Three hour studio; one term
Prerequisite(s): IARTS 1SS3 and registration in Level II or above of any iArts program; or permission of the instructor
Antirequisite(s): ART 3CC3
Students completing an Interdisciplinary Minor in Archaeology may be given special permission to register in this course if space is available.
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3CH3 - CINEMA HISTORY FROM WWII

An exploration of narrative film from 1941 to the present day, incorporating a study of a variety of narrative cinema styles. Theoretical issues will include questions of cinema's relationship to other art forms, narrative, genre and authorship.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CMST 3XX3
Cross-list(s): ARTHIST 3XX3, THTRFLM 3L03

IARTS 3CW3 - COLOURS OF THE WORLD

The experience of colour is fundamental to living in our world. This course examines some aspects of the social, economic, political and cultural production and use of colours in different cultures.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): ARTHIST 3Q03
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3DA3 - ARTS AND SPACES FOR DWELLING AND ACTIVITIES

This course opens up the possibilities of studying aspects of all kinds of dwellings for all kinds of activities such as spaces for worship, residences, entertainment, health facilities and transportation hubs.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3EA3 - SOCIAL PRACTICE AND COMMUNITY-ENGAGED ART

Students will explore and develop an understanding of social practice and community-engaged art working with diverse publics including: large public performances, pedagogical work with K-12 students in schools, walking and place-based projects, and activist oriented long-term engagements. Social practice refers to artwork created through social interaction and that aims to create social and/or political change through collaboration with communities. In this interdisciplinary class students will be engaged in concept discussions, and hands-on activities, and writing exercises while considering the ethical and political dimensions of working with diverse communities from feminist, queer, anti-racist and anti-colonial frameworks. Guest lectures and presentations will examine the depth and breadth of social practice. The course will culminate in a group project(s) for the McMaster community.
Three hours; one term
Prerequisite(s): Registration in level III or above of any program
Antirequisite(s): ART 3EA3

IARTS 3EC3 - EARLY CINEMA HISTORY

An introduction to the history of narrative film from its beginnings to the Second World War. It focuses on narrative cinema's development from aesthetic, social, technological and economic perspectives while also touching on a selected number of issues in film theory.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2FL3, THTRFLM 2FF3
Cross-list(s): ARTHIST 3FL3, THTRFLM 3FF3

IARTS 3F03 - CONCENTRATED STUDY FOUNDRY

This course offers an in-depth investigation of foundry practices, location and impact of method and material in history, industry and culture and society. Students will learn and apply metal casting processes focused on lost-wax in bronze and sand-casting in aluminum to student-centered concepts and personal artistic practice.
Three hour studio; one term
Prerequisite(s): IARTS 1SS3 and registration in Level II or above of any iArts program; or permission of the instructor
Antirequisite(s): ART 3CF3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3FI3 - FASHION AND IDENTITY

This course examines aspects of the history of fashion and identity throughout the ages and across cultures, addressing issues related to changes in dress and their representation and the construction of identities in the broader social, political, economic and cultural context.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2R03

IARTS 3IA3 - INDIGENOUS ART AND VISUAL CULTURE IN CANADA

- survey of visual art production by Indigenous Canadian communities since c. 1960 including: painting, sculpture, installation, film/video, performance and hip hop. The course focuses on Indigenous (First Nations, Mis and Inuit) artistic practices and examines how those are framed in the context of museums in the 21st century.

Three hour lecture; one term
Prerequisite(s): One of IARTS 1PA3, IARTS 1PB3, INDIGST 1A03, INDIGST 1AA3, INDIGST 1B03 and registration in Level II or above of any program; or registration in Level III or above of any Art History program; or permission of the instructor.
Cross-list(s): ARTHIST 3BB3, INDIGST 3F03

IARTS 3ID3 - INTEGRATED MEDIA AND MATERIALITY: INSTALLATION AND PERFORMANCE

This course investigates points of intersection between installation, performance, stage design, time-based media, kinetics, and digital technologies.
Three hour studio; one term
Prerequisite(s): Registration in Level II or above of any iArts, or Media Arts program; or one of: IARTS 1BD3, 1SS3; or permission of the instructor
Antirequisite(s): ART 3ID3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3IM3 - TRANSDISCIPLINARY AND HYBRID STUDIO PRACTICES

Students investigate where print, textiles, drawing and paint media interweave to create hybrid practices within the visual and performance arts.
Three hour studio; one term
Prerequisite(s): Registration in Level II or above of any iArts program; or one of IARTS 1BD3, 1SS3; or permission of instructor
Antirequisite(s): ART 3IM3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3IN3 - CONCENTRATED STUDY INTAGLIO

Students will have the opportunity to try photo etching, aquatint, hard and soft ground for hand drawing and material impressions. This course explores intaglio processes that use traditional concepts in combination with alternative applications that have a safer impact on the environment and artist.
Three hour studio; one term
Prerequisite(s): IARTS 2PM3 and registration in Level II or above of any iArts program; or permission of instructor
Antirequisite(s): ART 3CI3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3LI3 - CONCENTRATED STUDY LITHOGRAPHY

This course explores various aspects of lithography through hand-drawn images, multiple registration, photo image transfers on to stone, and Computer-to-Plate photo lithography, using safer alternatives to traditional materials.
Three hour studio; one term
Prerequisite(s): IARTS 2PM3 and registration in Level II or above of any iArts program; or permission of instructor.
Antirequisite(s): ART 3CL3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3MP6 - DEVISED THEATRE PRODUCTION

Students will form the core artistic team for the School's November Major Production. This course provides intensive experiential learning to students in a selected aspect of production.
Eight hours (including two two-hour studios, one four-hour rehearsal), plus production hours; one term
Prerequisite(s): Registration in Level II or above of any iArts program; or registration in Level II or above of any Theatre & Film Studies or Media Arts program; or one of IARTS 2DE3, 2AD3 or 2BB3 ; or permission of the instructor
Cross-list(s): THTRFLM 3S06

IARTS 3ND3 - NEW DIRECTION IN PAINTING AND DRAWING

This course explores new directions and technologies that expand definitions of painting and drawing by incorporating digital media, installations, urban interventions, and other alternative spatial and material approaches.
Three hour studio; one term
Prerequisite(s): Registration in Level II or above any iArts program; or IARTS 1BD3, IARTS 2CD3 or IARTS 2PP3; or permission of the instructor
Antirequisite(s): ART 3PD3

IARTS 3OE3 - FIELD WORK: ON-SITE EXPLORATIONS

This course investigates environments on and off campus to explore how visual, aural, and haptic data collection and place can inform artistic research and creative production. Practices explored may include drawing, performance, fibre arts, sound, video, and mixed-media work. This course may be offered as a concentrated week-long session (e.g. camping excursion). Extra cost will apply.
One term. Consult the School of the Arts for details.
Prerequisite(s): Registration in Level II or above of any program and credit for registration in WHMIS 1A00
Antirequisite(s): ART 3FW3
Offered during the Spring/Summer term only.

IARTS 3PE3 - PERSPECTIVES E: KEY ISSUES OF EQUITY, DIVERSITY, AND INCLUSION IN THE ARTS

Examining arts projects that challenge systemic societal barriers, this course provides students with a working-knowledge of anti-oppression strategies in the arts. Students will learn skills in arts-based research, field work and research-creation.
Three hour lecture; one term
Prerequisite(s): One of IARTS 1PA3 or 1PB3, and registration in Level II or above of any program.

IARTS 3QA3 - DOCUMENTARY, POLITICS AND SOCIAL CHANGE

Critical approaches to the social function of nonfiction film, performance, and media-based practices. Topics may include the ethics and representational politics of documentary film and/or theatre, the role of documentary in witnessing injustice, and the potential for non-fiction practices to contribute to social change.
Three hours lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): THTRFLM 3QA3

IARTS 3RC6 A/B - COLLABORATIVE PROJECT DEVELOPMENT AND PRODUCTION

This course focuses on research-creation through collaboration. Working collectively over two terms, students will integrate theory and practice through research and production of arts- based projects, gaining skills in collective decision-making, leadership and project management.
Three hour studio; two terms
Prerequisite(s): Registration in Level III or above of the Honours Integrated Arts (iArts) BFA program

IARTS 3RR3 - 'CRIPPING' PERFORMANCE: DEAF, MAD AND DISABLED PERFORMANCE IN CANADA

This course will explore the history and culture of disabled, Mad and Deaf theatre and performance. Delving in Canada's rich 45 year history of disabled, Deaf and Mad theatre, the course will consider intersectionality, access and interdependence as core tenets of this milieu. This course is rooted in understandings of disability justice and will touch on the intermingling of disabled activism with performance and the current push for changes in the Canadian theatre landscape for Deaf, Mad and disabled creators.
Three hours; one term
Prerequisite(s): Registration in level II or above of any program
Cross-list(s): THTRFLM 3RR3, GENDRST 3RR3

IARTS 3SD3 - SCRIPTING DEVISED PERFORMANCE

- practical study of writing for devised theatre. Students will learn techniques for structuring and scripting performance that apply to a variety of different approaches to devised theatre creation.

Three hour studio; one term
Prerequisite(s): Registration in Level II or above of any iArts, Theatre & Film Studies, or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3; or permission of the instructor
Cross-list(s): THTRFLM 3SD3

IARTS 3SP6 A/B - STAGE DESIGN IN ACTION

Students develop performance pieces through set design, use of lights, sound, projections, and the manipulation of objects, and support the work of upper level iArts thesis projects.
Two Studios plus practicum work (includes evenings and weekends as determined by production schedules); two terms
Prerequisite(s): Registration in Level II or above in any iArts, Theatre & Film Studies, or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3, 3MP6; or permission of the instructor
Cross-list(s): THTRFLM 3OP6 A/B
Not to be taken concurrently with THTRFLM 4A06 A/B.

IARTS 3SR3 - INTERCULTURAL ARTS ALONG THE SILK ROAD

An examination of how both textual and material resources reveal the pluralistic achievements in the arts by peoples of different cultures and worldviews along the Silk Road at different times, and how the deeply embedded practices inform today's cultural production in Eurasia.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program.
Cross-list(s): ARTHIST 3Z03
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 3TB3 - DEVISED THEATRE PRODUCTION: RESEARCH AND DEVELOPMENT

Students will learn research, workshop and planning processes of public performance for a devised theatre production. This preparatory work leads to the main stage departmental production produced in the Fall term by IARTS 3MP6/THTRFLM 3S06.
Two three-hour studios; one term
Prerequisite(s): Registration in Level II or above of any iArts, Theatre & Film Studies or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3; or 3MP6; or permission of the instructor
Cross-list(s): THTRFLM 3PS3
This course may be repeated to a maximum of 6 units.
Offered during the Spring/Summer term only.

IARTS 3VS3 - VISUAL STORYTELLING

This course examines the theories underlying the visual aesthetics of cinema and theatre. These are analyzed alongside narrative structure and put into practice by students in projects.
Three hours lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): THTRFLM 3VS3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4AD3 - ACTING AS DEVISING III

An advanced study of the actors' role in the devising process that builds on physical, vocal, and workshop techniques taught in Acting and Devising I and II. Students are required to produce a short but substantial piece of devised theatre either on their own or in collaboration with other students in the class.
Two two-hour studios; one term
Prerequisite(s): IARTS 3AD3 and registration in Level III or above of any iArts program; or THTRFLM 3SD3 and registration in Level III or above of an Honours program in Theatre & Film Studies
First offered in 2025/2026.

IARTS 4AE3 - ART, CLIMATE, JUSTICE AND THE ENVIRONMENT

This seminar will enable students to launch a focused research project and presentation, both written and in person exploring climate justice, Land based arts practices and environmental change. We will explore the impact of colonial practices on the environment and the arts. We will consider environmental studies and the work of artists engaging at the intersection of climate justice and futurist studies. We will consider the role of creative practice in pushing for a response to urgent climate demands.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or above of any program
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4AP3 - CONTEMPORARY ART PRACTICES OF INTERVENTION, PERFORMANCE, AND CONCEPTUAL ART

Students will explore and develop an understanding of how 20th century provocations of Dadaism, Fluxus, and Feminist art impact and resonate with contemporary art practices in the 21st century. The course will also examine how the canon of Euro-Western art erased and de-valued work by Indigenous, Black, and Artists of Colour. Departing from a chronological approach to studying art history, the course is structured around issues and/or concepts that dynamically intersect historical and contemporary practices. The course is designed as an interdisciplinary arts-based seminar course, involving readings, lectures, and class discussions, but also field trips, arts-based activities, and

collaborative experiential learning.
Three hours; one term
Prerequisite(s): Registration in Level III or above in any program
Antirequisite(s): ART 4AP3
Cross-list(s): ARTHIST 4AP3

IARTS 4C06 A/B - THESIS PROJECT

Students create and produce an arts-based project of their own devising, either alone or in collaboration with other students.
Three hour studio; two terms
Prerequisite(s): Registration in Level IV of any Honours program in iArts (B.A.)
Departmental permission required.
First offered in 2025/2026.

IARTS 4C12 A/B - PROJECT CAPSTONE THESIS

In this advanced research-creation course, students will research, manage, create and produce a major arts-based thesis project of their own devising, either alone or in collaboration with other students.
Two-three hour Studio; two terms
Prerequisite(s): Registration in Level IV Honours iArts (B.F.A.)
Departmental permission required.
First offered in 2025/2026.

IARTS 4CE3 - CONCENTRATED STUDY CERAMICS

This course is an advanced study of contemporary ceramics. Students will build on concepts and techniques taught in Level III, working independently to fuse traditional techniques and contemporary concepts and hone their skills in ceramics.
Three hour studio; one term
Prerequisite(s): IARTS 3CE3 and registration in Level III or above of any iArts program; or permission of the instructor.
Antirequisite(s): ART 4CC3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4CS6 A/B - CRITICAL CURATORIAL STUDIES

This course focuses in greater detail on curatorial practices and the shifting role of the curator within today's art institutions. Students will delve into the work of selected artists, curators, and art institutions with an emphasis on the conceptual and philosophical underpinnings of their projects. The experiential component will lead to a professionally curated exhibition and/or community-based curatorial project.
Three hours; two terms
Prerequisite(s): IARTS 2CP3, and registration in Level III or above
This course is intended for those completing the Concurrent Certificate in Curatorial Studies.

IARTS 4D03 - THEATRE, SOCIETY AND EARLY CINEMA

- study of the relationship between theatre and film, organized by topics that have been the focus of recent scholarship.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or above of any iArts, Honours Theatre & Film Studies, or Honours Art History program
Cross-list(s): THTRFLM 4D03

IARTS 4DM3 - ARTS AND DIASPORIC MIGRATION

This course investigates the relationship between an artist's ethnic, cultural and geographic place and sites of creative practice. In this seminar students will create a culminating research project and presentation on specific topics of diasporic migration related to the arts and the course content.
Two hour seminar; one term
Prerequisite(s): Registration in Level III or above of any program
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4F03 - CONCENTRATED STUDY FOUNDRY

This course is an advanced study of contemporary foundry practice. Students will build on concepts and techniques and taught in Level III, working independently to fuse traditional techniques and contemporary concepts and hone their skill in metal casting.
Three hour studio; one term
Prerequisite(s): IARTS 3FO3 and registration in Level III or above of any iArts program; or permission of the instructor
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4IN3 - CONCENTRATED STUDY INTAGLIO

This course is an in-depth concentration on intaglio processes exploring traditional and alternative approaches of etching. Students will build on techniques and process taught in Level III, working independently to fuse traditional techniques and contemporary concepts and hone their skills in etching.
Three hour studio; one term
Prerequisite(s): IARTS 3IN3 and registration in Level III or above of any iArts program.
Antirequisite(s): ART 4CI3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4LI3 - CONCENTRATED STUDY LITHOGRAPHY

This course offers an in-depth exploration of traditional lithography processes and incorporates safer alternatives than the traditional use of Volatile Organic Compounds. Students will build on techniques and processes taught in Level III, working independently to fuse traditional techniques and contemporary concepts and hone their skills in lithography.
Three hour studio; one term
Prerequisite(s): IARTS 3LI3 and registration in Level III or above of any iArts program; or permission of the instructor
Antirequisite(s): ART 4CL3
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4PF3 - PERSPECTIVES F: SPECIAL TOPICS IN ARTIST RESEARCH

This course will contextualize special topics or pressing issues that frame artists' research. Guided by readings and in-class discussion, students will choose a specific research topic, and conduct research culminating in a major research project.
Three hour seminar; one term
Prerequisite(s): Registration in Level IV of any iArts program
First offered in 2025/2026.

IARTS 4QT3 - QUEER AND TRANS ART IN THE 20TH AND 21ST CENTURIES

This course examines the historical trajectory of queer and trans artistic practices and representation throughout the 20th century up until the present. From famous to lesser-known figures and artistic movements, the course looks critically at individual artists lives and works, as well as examining important exhibitions, performance, and moments in queer and trans art history. After providing historical context, the course will move into critically examining contemporary queer and trans art practices over the past 30 years, with a large

focus on artists living and working today. The course will include lectures, field trips to archives, galleries, and museum, and guest speakers ranging from artists, historians, and curators.
Three hours; one term
Prerequisite(s): Registration in Level III or above of any program or permission of the School of the Arts
Offered on a rotational basis. Consult the Master Timetable for offerings.

IARTS 4SD3 - SCRIPTING DEVISED PERFORMANCE

Continuing the practical study of the structural qualities and social impact of different dramatic forms, and focusing on the detailed development of dialogue and sequences of action.
Three hour studio; one term
Prerequisite(s): IARTS 3SD3 and registration in Level III or above of any iArts program; or THTRFLM 3SD3 and registration in Level III or above of a Honours Theatre and Film Studies program
First offered in 2025/2026.

IARTS 4Z03 - THE TEXTILE ARTS: HISTORY AND PRACTICE

This seminar will critically examine issues related to changes in the art and technology of textile-making and ornamentation of various cultures at different time periods: visuality, materiality, function, power, wealth, usage, taste, distribution, and especially, gender.
Three hour seminar; one term
Prerequisite(s): Registration in Level III or above in any program
Cross-list(s): ARTHIST 4Z03
Offered on a rotational basis. Consult the Master Timetable for offerings.

Integrated Biomedical Engineering and Health Sciences (IBEHS)

IBEHS 1EE0 - INTRODUCTION TO CAREER PLANNING & EMPLOYMENT

Introduction to career readiness and job search, self-assessment, career planning and decision-making, networking, industry research, cover letter and resume writing, interviewing skills and work place professionalism.
Prerequisite(s): Registration in any Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Cross-list(s): ENGINEER 1EE0
Not open to students in their final level.

IBEHS 1EP6 A/B - ENTREPRENEURSHIP IN BIOMEDICAL INNOVATION: FROM BENCH TO MARKET

Project-based integrated learning course using advancements in the biomedical field to explore cellular and molecular mechanisms underlying human health and pathology, and to follow the development of healthcare solutions from lab to market. Focus on the synthesis of key concepts in cellular and molecular biology with clinical developments and business perspectives. The course will develop critical thinking, teamwork and project management skills.
One lecture (2 hours), alternating lab and tutorial (three hours); both terms
Prerequisite(s): Registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program

IBEHS 1HS0 - HEALTH SCREENING AND CLINICAL SAFETY TRAINING

Online health screening and clinical safety training for non-health professional students. This course must be completed prior to entering a clinical setting for students enrolled in courses which include clinical placements or interaction with patients in a clinical setting or as research subjects.
This course is evaluated on a Complete/Fail basis.
Web modules
Prerequisite(s): Registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
This course must be completed prior to the start of the first course for all courses for which it is required. Students who fail the module will be required to repeat it and will not be permitted in any course where IBEHS 1HS0 is a requirement until the module has been successfully completed.

IBEHS 1P10 A/B - HEALTH SOLUTIONS DESIGN PROJECTS I: INTRODUCTION TO ENGINEERING FUNDAMENTALS AND DESIGN

Project-based integrated learning course that introduces a range of foundational (i.e., cornerstone) topics in engineering, including engineering design and communication, computation, graphic design, materials and the engineering profession. Topics are applied through a series of integrated team-based design projects in simulated healthcare environments.
Three lectures, one lab (three hours), one tutorial (two hours); both terms
Prerequisite(s): Registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): ENGINEER 1C03, 1D04, 1P03, 1P13 A/B, MATLS 1M03

IBEHS 2EC0 - IBEHS WORK TERM

Minimum of 12 weeks of full-time employment in a professional environment.
First or second term
Prerequisite(s): Registration in any Integrated Biomedical Engineering and Health Sciences (IBEHS) Co-op program, IBEHS 1EE0, and permission from the Engineering Co-Op and Career Services.
Cross-list(s): ENGINEER 2EC0
Not open to students in their final level.

IBEHS 2EE3 - FROM IDEA TO INNOVATION

This course introduces the entrepreneurial process with a focus on how to start new health technology and life sciences companies. Through lectures, guest speakers and interactive tutorials, this course will help students assess the commercial potential of an idea and learn how to create a viable business offering. The course leads students through problem identification, solution determination, and establishing product and market fit.
Two lectures, one tutorial (one hour); winter term
Antirequisite(s): IBEHS 3EE6 A/B, 4E06 A/B

IBEHS 2EH3 - INNOVATING CARE: NAVIGATING CANADA'S HEALTHCARE SYSTEM

This course explores the Canadian healthcare system and is designed for future healthcare innovators aiming to improve care delivery. Students will learn about the system's structure, policies, and funding, while gaining insights into the roles of key stakeholders-patients, providers, payers, and policymakers. Emphasis is placed on the impact of technology across medical subspecialties and the challenges and regulations surrounding healthcare innovation.
Three lectures; fall term
Prerequisite(s): Registration in level II or above in any Integrated Biomedical Engineering and Health Sciences (IBEHS) program or permission of the instructor
Antirequisite(s): BIOMEDDC 2C03

IBEHS 2PA2 - HEALTH SOLUTIONS DESIGN PROJECTS II-A: LAB SKILLS IN GENETIC ENGINEERING

The first of two genetic engineering courses in the design and innovation sequence. The course emphasizes fundamentals of molecular biology and genetic engineering supported by wet lab experiments. Problem solving and design approaches are discussed and implemented.
Two lectures, one lab every other week (three hours); first term
Prerequisite(s): IBEHS 1P10 A/B; and registration in Level II of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Antirequisite(s): IBEHS 2P03

IBEHS 2PB2 - HEALTH SOLUTIONS DESIGN PROJECTS II-B: PROJECT IN GENETIC ENGINEERING

The second of two genetic engineering courses in the design and innovative sequence. The course reinforces fundamentals of genetic engineering through an engineering design perspective. Students work in multidisciplinary groups to develop solutions to health problems with a genetic basis.
One lecture, one tutorial (three hours); second term
Prerequisite(s): IBEHS 2PA2; and registration in level II or above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Antirequisite(s): IBEHS 2P03

IBEHS 3A03 - BIOMEDICAL SIGNALS AND SYSTEMS

Linear systems, signals, input-output relations of linear systems; discrete and continuous time systems; transfer functions, Fourier transforms, Laplace transforms; sampling theory; stability.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): MATH 2Z03 and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): SFWRENG 3MX3, ELECENG 3TP3, ENGPHYS 3W04

IBEHS 3E03 - FUNDAMENTALS OF BUSINESS STRATEGY

This course exposes students to the key business management skills and strategies needed to start a successful enterprise in Canada. Topics covered include: Start-up Financing, Marketing, Forecasting, Intellectual Property and Budgeting.
Antirequisite(s): IBEHS 4E06 A/B, 3EE6 A/B

IBEHS 3EE3 - PROJECT MANAGEMENT

This course introduces the fundamentals of project management. Through the use of modern project management tools and strategies, students will learn how to plan, develop and execute on a project effectively. The course covers project planning and selection strategies, project-based organizational culture, time and cost estimates, risk management, measurement and evaluation, agile project management and proper project closure.
Two lectures, one tutorial (one hour); winter term

IBEHS 3H03 - RESEARCH PROJECT

- special course of study to be arranged by mutual consent of a supervisor and the student, to carry out experiments, research and/or theoretical investigations. Students may consider this course to advance a project conceived in the Health Solutions Design Projects courses.

One term
Prerequisite(s): Registration in Level III of any Integrated Biomedical Engineering and Health Sciences (IBEHS) program and permission of the program
Antirequisite(s): IBEHS 3I06 A/B S

IBEHS 3I06 A/B S - RESEARCH PROJECT

- special course of study to be arranged by mutual consent of a supervisor and the student, to carry out experiments, research and/or theoretical investigations. Students may consider this course to advance a project conceived in the Health Solutions Design Projects courses.

Two terms
Prerequisite(s): Registration in Level III or above of any Integrated Biomedical Engineering and Health Sciences (IBEHS) program and permission of the program.
Antirequisite(s): CHEMENG 4Y04 A/B, CIVENG 4Z04, COMPENG 4OH4, COMPENG 4OJ4, COMPENG 4OK4, ELECENG 4OH4, ELECENG 4OJ4, ELECENG 4OK4, ENGPHYS 3H04 A/B, ENGPHYS 4H04 A/B, IBEHS 3H03, MATLS 4KA3, MATLS 4KB3, MATLS 4K06, MECHENG 4X04 A/B, HTHSCI 3H03, HTHSCI 3H06 A/B, HTHSCI 3BM6 A/B, HTHSCI 4B06 A/B S, HTHSCI 4D03

IBEHS 3P04 - HEALTH SOLUTIONS DESIGN PROJECTS III: ECONOMIC ANALYSIS AND RISK MANAGEMENT

Working in groups, students approach an open-ended design problem; feasibility and viability of a design solution are evaluated based on verification, assessment of risk, and economic analysis; topics related to risk management and engineering economics (time value of money, cash flow analysis, comparison methods) are introduced; oral and written communication is emphasized in the context of biomedical engineering activities.
Two lectures, one tutorial (two hours); second term
Prerequisite(s): IBEHS 2P03, or IBEHS 2PA2 and IBEHS 2PB2, and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program

IBEHS 3S03 - STATISTICAL METHODS IN BIOMEDICAL ENGINEERING

Probability theory, random variables, random processes, statistical inference, regression, correlation, error analysis, and experimental design.
Three lectures, one tutorial (one hour); offered in both terms
Prerequisite(s): Registration in Level III or above of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): IBEHS 4C03, STATS 3J04, STATS 3Y03, MATLS 3J03, HTHSCI 2GG3

IBEHS 4A03 - BIOMEDICAL CONTROL SYSTEMS

Modelling of control systems in the continuous-time domain; representations; model linearization; performance of control systems in time and frequency; stability; control design. Particular emphasis will be given to biomedical applications.
Three lectures, one tutorial every other week (two hours); second term
Prerequisite(s): IBEHS 3A03 and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): ELECENG 3CL4, MECHENG 4R03, CHEMENG 3P04, SFWRENG 3DX4, MECHTRON 3DX4

IBEHS 4B03 - BIOMECHANICS

An introduction of engineering principles applied to biomechanics problems including cellular biomechanics, hemodynamics, circulatory system, respiratory system, muscles and movement and skeletal biomechanics.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): Registration in Level III or above of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Cross-list(s): MECHENG 4BB3

IBEHS 4D03 - INTRODUCTION TO MEDICAL IMAGING

Through this introductory course, students will learn methods of how medical images are formed, and will gain knowledge of the Fourier transform and its applications in medical imaging. Basic understanding of the sources of noise and artifacts in the different modalities will also be attained, along with an understanding of the limits to the achievable resolution. Imaging modalities that will be covered include ultrasound, x-rays, computed tomography and magnetic resonance imaging.
Two lectures, one lab (three hours) every other week, one tutorial (two hours) every other week; second term
Prerequisite(s): IBEHS 3A03 and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): MEDPHYS 4D03

IBEHS 4E09 A/B S - HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP THESIS

This course provides an opportunity for students to integrate and apply learning from the previous three years of the program. Projects and proposals from Health and Entrepreneurship courses will achieve maturity and will be examined by faculty members and members of the business, engineering and health communities outside the university. The final focus will be on quality entrepreneurship with the potential for high impact.
Both terms
Prerequisite(s): Registration in Level IV of the Health, Engineering Science and Entrepreneurship Specialization of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Antirequisite(s): IBEHS 5E15 A/B S

IBEHS 4EE6 A/B - INNOVATORS IN SCRUBS

This course will integrate design thinking, health engineering and business concepts and apply them to the process of innovating health technologies. Students will work in teams to identify and design solutions for unmet clinical needs based on exposure to real-world healthcare environments and clinical stakeholders. Emphasis will be placed on user-centred design and further development of teamwork and communication skills, adaptability and creativity.
One lecture (three hours), placement (four hours); both terms
Prerequisite(s): IBEHS 1HS0; and IBEHS 3E03 or IBEHS 3EE6 A/B or IBEHS 4E06 A/B
Antirequisite(s): HTHSCI 4IS3, IBEHS 3E06 A/B

IBEHS 4F04 - BIOMEDICAL INSTRUMENTATION AND MEASUREMENT

An introduction of engineering principles applied to the design of biomedical instrumentation including: electrodes, mechanical, chemical and other transducers; signal processing and data acquisition; safety; neuromuscular; cardiovascular, biochemical, biomechanical and other clinical instrumentation.
Three lectures; one tutorial: one lab every other week; first term
Prerequisite(s): IBEHS 3A03, and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) Program.

IBEHS 4H03 - RESEARCH PROJECT

- special course of study to be arranged by mutual consent of a supervisor and the student, to carry out experiments, research and/or theoretical investigations. Students may consider this course to advance a project conceived in the Health Solutions Design Projects courses.

One term
Prerequisite(s): IBEHS 3H03; and registration in Level III or above in the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program and permission of the program
Antirequisite(s): IBEHS 3I06 A/B S, CHEMENG 4Y04 A/B, CIVENG 4Z04, COMPENG 4OH4, COMPENG 4OJ4, COMPENG 4OK4, ELECENG 4OH4, ELECENG 4OJ4, ELECENG 4OK4, ENGPHYS 3H04 A/B S, ENGPHYS 4H04 A/B S, IBEHS 3I06 A/B S, MATLS 4K06 A/B, MECHENG 4X04 A/B, HTHSCI 3H03, HTHSCI 3H06 A/B S, HTHSCI 3BM6 A/B S, HTHSCI 4B06 A/B S

IBEHS 4M03 - BIOMATERIALS AND TISSUE ENGINEERING

Introduction to biomaterials. Includes material-tissue interactions, techniques for biomaterials testing, and characterization. Applications of biomaterials and the clinical context of their use will be introduced.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Cross-list(s): MATLS 4B03

IBEHS 4P03 - HEALTH SOLUTIONS DESIGN PROJECTS IV: DECISION MAKING AND PROJECT MANAGEMENT

Working in groups, students diagnose a problem presented to them by a community partner, propose a solution, and analyze the feasibility of that solution; topics related to consulting, project management, and decision making are introduced; engineering economic principles are reinforced.
Two lectures, one tutorial (two hours); first term
Prerequisite(s): IBEHS 3P04 and registration in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Antirequisite(s): IBEHS 4P04

IBEHS 4QZ3 - MODELLING OF BIOLOGICAL SYSTEMS

Introduction to mathematical and engineering methods for describing and predicting the behaviour of biological systems; including sensory receptors, neuromuscular and biomechanical
systems; statistical models of biological function; kinetic models of biological thermodynamics.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): IBEHS 3S03 or IBEHS 4C03 or MATLS 3J03 or HTHSCI 2GG3, and registration in Level IV and above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program or the Faculty of Engineering

IBEHS 4XC3 - EXPERIMENTAL AND COMPUTATIONAL BIOMECHANICS

Introduction to experimental and computational biomechanics including biomechanical testing concepts and application of finite element methods in simulations of biomechanical structures/systems.
Three lectures; second term
Prerequisite(s): Registration in Level IV or above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program.
Cross-list(s): MECHENG 4CC3

IBEHS 4Y03 - APPLICATIONS OF CHEMICAL ENGINEERING IN MEDICINE

Applications of chemical engineering principles to biological systems and medical problems including examples from engineered biomaterials, biomaterial-induced host body response, tissue engineering, 3D bioprinting, controlled drug delivery, and microfluidic systems.
Three lectures; second term
Prerequisite(s): CHEM 2E03; or 2OA3; registration in Level IV or above in the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program.

Cross-list(s): CHEMENG 4T03

IBEHS 5E15 A/B S - HEALTH, ENGINEERING SCIENCE AND ENTREPRENEURSHIP THESIS

This course provides an opportunity for students to integrate and apply learning from the previous four years of the program. Projects and proposals from Health and Entrepreneurship courses will achieve maturity and will be examined by faculty members and members of the business, engineering and health communities outside the university. The final focus will be on quality entrepreneurship with the potential for high impact.
Both terms
Prerequisite(s): IBEHS 4E06 A/B or IBEHS 4EE6 A/B and registration in Level V of the Health, Engineering Science and Entrepreneurship Specialization of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program

IBEHS 5P06 A/B - BIOMEDICAL CAPSTONE DESIGN PROJECT

The design process; safety; a term project composed of small teams of students including an oral presentation and written report.
Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04, registration in Level IV of the Health, Engineering Science and Entrepreneurship Specialization of the Integrated Biomedical Engineering and Health Sciences (IBEHS) program, and permission of the instructor.
Cannot be taken concurrently with any co-op work term course.

Integrated Chemical & Biomedical Engineering

CHEMBME 5P06 A/B - INTEGRATED CHEMICAL & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Chemical Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Chemical and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CIVBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Civil & Biomedical Engineering

CIVBME 5P06 A/B - INTEGRATED CIVIL & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Civil Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Civil and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Electrical & Biomedical Engineering

ELECBME 5P06 A/B - INTEGRATED ELECTRICAL & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Electrical Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Electrical and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Engineering Physics & Biomedical Engineering

EPHYSBME 5P06 A/B - INTEGRATED ENGINEERING PHYSICS & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Engineering Physics and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Engineering Physics and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, ELECBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Materials & Biomedical Engineering

MATLSBME 5P06 A/B - INTEGRATED MATERIALS & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Materials Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Materials and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B

Cannot be taken concurrently with any co-op work term course.

Integrated Mechanical & Biomedical Engineering

MECHBME 5P06 A/B - INTEGRATED MECHANICAL & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Mechanical Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Mechanical and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, SFWRBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Mechatronics & Biomedical Engineering

TRONBME 5P06 A/B - INTEGRATED MECHATRONICS & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Mechatronics Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Mechatronics and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, SFWRBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

Integrated Science

Courses in Integrated Science are administered by the School of Interdisciplinary Science (SIS).
A.N. Bourns Science Building, Room C501, ext. 21181
Email: sis@mcmaster.ca
https://sis.mcmaster.ca/undergraduate/isci/

Notes

1. Within Integrated Science courses, there is a strong emphasis on inquiry-based learning and students will be involved in individual and team research projects in field and laboratory settings. Students will also develop scientific literacy skills through study of scientific writing and through writing practice.
2. ISCI 1A24 A/B covers some of the content from the following Level I areas of study: Calculus, Introductory Biology and Life Sciences, Introductory Chemistry, Introductory Earth & Environmental Science, Introductory Physics, and Introduction to Psychology. Students are advised to refer to individual course listings to determine when ISCI 1A24 A/B serves as an appropriate requisite.
3. ISCI 2A18 A/B covers some of the content from the following Level II areas of study: Introductory Neuroscience, Ecology, Calculus, Nucleic Acids and Proteins, History of the Earth, and Thermodynamics. Students are advised to refer to individual course listings to determine when ISCI 2A18 A/B serves as an appropriate requisite.
4. Some Level III and/or IV research methodology/project courses, and Level IV independent study, inquiry, literature review, and thesis courses may not be open to students in an Honours Integrated Science program. Students are advised to refer to individual course listings for appropriate exclusions.
5. All students completing a concentration are strongly encouraged to meet with the academic program advisor in the department in which they are completing the concentration to discuss program requirements and course selections.
6. Students are strongly encouraged to check prerequisites for upper-level courses. The prerequisites should be considered when selecting courses.

Courses

ISCI 1A24 A/B - INTEGRATED SCIENCE I

Integrates learning of essential knowledge and skills from the fundamental scientific disciplines (biology, chemistry, mathematics, physics, Earth science and psychology) in the context of pertinent topics and projects. Interdisciplinary teams of instructors will teach and linkages between discipline areas will be emphasized partly through study of 'thematic modules'. One mandatory one-day field trip will be held.
Integrated lectures, labs, tutorials, field trips, discussions; two terms
Prerequisite(s): Registration in Honours Integrated Science I
Co-requisite(s): BIOSAFE 1BS0 (or HTHSCI 1BS0), WHMIS 1A00 if not already completed. Both requirements must be completed prior to the first lab.

ISCI 2A18 A/B - INTEGRATED SCIENCE II

Integrates learning of biochemistry, biology, chemistry, Earth science, mathematics, neuroscience and physics. Students will participate in individual and team research projects in field and laboratory settings and will further develop skills in research methodology, ethics, and science literacy.
Integrated lectures, labs, tutorials, field trips, discussions; two terms
Prerequisite(s): ISCI 1A24 A/B and registration in Level II of an Honours Integrated Science program

ISCI 3A12 A/B - INTEGRATED SCIENCE III

Interdisciplinary research projects and development of scientific and literacy skills (including data analysis, inquiry/scientific communication and leadership). Students will participate in individual and team research projects in field and laboratory settings. Up to three mandatory one-day field trips will be held.
Integrated lectures, labs, tutorials, field trips, discussions; two terms
Prerequisite(s): ISCI 2A18 A/B and registration in Level III of an Honours Integrated Science program

ISCI 4A12 A/B - INTEGRATED SCIENCE IV

Individual thesis project (equivalent to 9 units) consisting of directed study of at least one research problem through experiment, study design, interrogation of published materials, field inquiry, and/or data analysis; plus, accompanying seminar component (equivalent to 3 units) aimed at developing research, professional, communication, and interpersonal skills.
Seminars (three hours), independent thesis work; two terms
Prerequisite(s): ISCI 3A12 A/B and registration in Level IV of an Honours Integrated Science (B.Sc.) program

ISCI 4ZF0 - INTEGRATED SCIENCE FIELD WORK

Administrative requirement for field work corresponding with ISCI 4A12 A/B.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): Registration in Level III or above of an Honours Integrated Science program; and permission of the instructor
Students must register in ISCI 4A12 A/B in the same or subsequent session as ISCI 4ZF0.

Integrated Software & Biomedical Engineering

SFWRBME 5P06 A/B - INTEGRATED SOFTWARE & BIOMEDICAL ENGINEERING CAPSTONE DESIGN PROJECT

- multidisciplinary engineering design project involving design and synthesis that reinforces concepts from both Software Engineering and Biomedical Engineering.

Two lectures; both terms
Prerequisite(s): IBEHS 4P03 or 4P04 and registration in Level V of the Software and Biomedical Engineering program; or permission of the instructor.
Antirequisite(s): IBEHS 5P06 A/B
Cross-list(s): CHEMBME 5P06 A/B, CIVBME 5P06 A/B, ELECBME 5P06 A/B, EPHYSBME 5P06 A/B, MATLSBME 5P06 A/B, MECHBME 5P06 A/B, TRONBME 5P06 A/B
Cannot be taken concurrently with any co-op work term course.

International Engagement

INTENG 2A03 A/B S - INTERNATIONAL ENGAGEMENT AT HOME

This course recognizes a local volunteer experience (a minimum of 100 hours) which promotes a deeper understanding of cross-cultural issues and linguistic diversity in the Canadian context. Students participate in defining learning goals and experiences.
Graded on a Pass/Fail basis.
Prerequisite(s): Registration in Level II or above
Students must contact the Humanities Academic Advising Office, CNH-107, for details on the application process.
Permission of the Associate Dean of the Faculty of Humanities, or delegate, is required.

INTENG 3A03 - INTERNATIONAL ENGAGEMENT CAPSTONE

Students will integrate and reflect upon aspects of their experiences within the Certificate in International Engagement, culminating in a final project (digital portfolio) and presentation (digital/poster). This course is to be completed under the supervision of an appropriate faculty member.
Graded on a Pass/Fail basis.
One term
Prerequisite(s): 3 units of INTENG 2A03 A/B S or XCH credit
Students must contact the Humanities Academic Advising Office, CNH-107, for details on the application process.
Permission of the Associate Dean of the Faculty of Humanities, or delegate, is required.

IRH (Integrated Rehabilitation and Humanities)

IRH 2CS3 - COMMUNICATION SKILLS IN REHABILITATION AND HUMANITIES

This course is designed to introduce students to the essential knowledge and practical skills required to communicate effectively with clients, colleagues, and healthcare professionals in a health and rehabilitation setting. Students will develop their verbal, nonverbal, and written communication skills through practical application with standardized clients, guest lecturers, and peer partnerships. Students will have the opportunity to practice their communication skills and receive feedback from peers and faculty.
Three hours
Prerequisite(s): Registration in Level II of the Integrated Rehabilitation and Humanities program

IRH 2HI3 - REHABILITATION AND HUMANITIES INQUIRY I

This core inquiry course will introduce students to a variety of rehabilitation perspectives with the aim of discussing and debating different viewpoints of health, disability, and functioning to acquire a range of skills, knowledge, and abilities. This course will facilitate the development of life-long and self-directed learning in the context of addressing several rehabilitation and humanities issues.
Three hours
Prerequisite(s): Registration in Level II of the Integrated Rehabilitation and Humanities program

IRH 2RM3 - EVIDENCE-BASED REHABILITATION AND MEASUREMENT THEORY FOR REHABILITATION

This course will introduce the knowledge, skills, and application of evidence-based research and measurement theory, as it applies to rehabilitation and the humanities, including the history and evolving definition of evidence-based practice. Theories and frameworks for translating emerging evidence to practice and policy will be discussed, as well as the influence of evidence-based practice and theory on health, well-being, and participation.
Three hours
Prerequisite(s): Registration in Level II of the Integrated Rehabilitation and Humanities program

IRH 2ST3 - INTRODUCTION TO STATISTICS FOR REHABILITATION SCIENCE

This course will introduce basic statistical concepts as they apply to rehabilitation science. Students will learn how to summarize data, make inferences, and interpret statistical results. Emphasis will be placed on the practical application of statistics to clinical scenarios and relevant research from the field of rehabilitation science.
Three hours
Prerequisite(s): IRH 2RM3 and registration in Level II of the Integrated Rehabilitation and Humanities program
Antirequisite(s): Not open to students with credit or registration in ARTSSCI 2R03, COMMERCE 2QA3, ECON 2B03, HTHSCI 2G03 or 2GG3, PNB 2XE3, STATS 2B03, 2D03, or 2MB3

IRH 3EF3 - EXPERIENTIAL-FOCUSED PRACTICUM

This course will include supervised, practical experience in an employment-related field of study. The site could be a long-term care facility, rehabilitation centre, hospital, community, or private business. The experiential-focused

practicum will be 3 units and may be completed over one or two terms. Minimum of 60 hours of placement work.
Prerequisite(s): Registration in Level III or above in the Integrated Rehabilitation and Humanities program
Antirequisite(s): HTHSCI 3MR6 A/B

IRH 3EP3 A/B S - EXPERIENTIAL-FOCUSED PRACTICUM

This course will include supervised, practical experience in an employment-related field of study. The site could be a long-term care facility, rehabilitation centre, hospital, community, or private business. The experiential-focused practicum will be 3 units and may be completed over one or two terms. Minimum of 60 hours of placement work.
Prerequisite(s): Registration in Level III or above in the Integrated Rehabilitation and Humanities program.
Antirequisite(s): IRH 3EF3, HTHSCI 3MR6 A/B

IRH 3HI3 - REHABILITATION AND HUMANITIES INQUIRY II

This second-level core inquiry course is designed to further develop students' critical thinking, problem-solving, and self-directed learning skills. Building on the foundational concepts introduced in IRH 2RI3, this course will allow students to explore more complex scenarios through a rehabilitation and humanities lens. Through small-group tutorials and peer collaboration, students will enhance their abilities to investigate, analyze, and synthesize information concerning various viewpoints of health, disability, and function.
Three hours
Prerequisite(s): Registration in Level III or above of the Integrated Rehabilitation and Humanities program; IRH 2HI3

IRH 3TR3 - SELECTED TOPICS IN REHABILITATION AND HUMANITIES

This selected topics in rehabilitation course is designed to allow for the exploration of leading-edge issues in emerging and developing areas of rehabilitation science. The specific topics will be developed in response to the needs identified by faculty together with interests from students.
Three hours
Prerequisite(s): Registration in Level III or above in the Integrated Rehabilitation and Humanities program
Antirequisite(s): HTHSCI 4D03

IRH 3UD3 - UNDERSTANDING DISABILITY

This course provides a broad overview of definitions and paradigms of impairment, dysfunction, and disability. Attention is given to the historical and cultural development of concepts and categories of disability, critical disability theory, recent policies focused on equity, diversity, inclusion (EDI), as well as Indigenous reconciliation. Communication skills will also be explored using critical theory (e.g., race, disability, gerontology), where the perceptions and corresponding implications of intersectionality, rehabilitation and health on everyday life will be examined.
Three hours
Prerequisite(s): Registration in Level III or above of the Integrated Rehabilitation and Humanities program
Antirequisite(s): HTHSCI 3DH3, HTHSCI 3RS3

IRH 4ER3 - ENTREPRENEURSHIP AND COMMERCIALIZATION IN HEALTH AND REHABILITATION

This course will focus on the development and application of strategic thinking, problem solving, and clinical understanding when it comes to entrepreneurship and commercialization in health and rehabilitation. Students will learn the business practices involved with both entrepreneurship and social entrepreneurship, as well as commercialization. Key topics that will be discussed include customer segments, intellectual property, and regulatory concepts, as well as cost structure, potential revenue streams, and marketing. They will learn how to bring an 'idea' to reality with an entrepreneurial and commercialization mindset, including building and leading a team.
Three hours
Prerequisite(s): Registration in Level IV of the Integrated Rehabilitation and Humanities program; IRH 4IR3

IRH 4HI3 - REHABILITATION AND HUMANITIES INQUIRY III

This advanced inquiry course is designed to allow students to build on their foundational inquiry courses and encourage the continued development of their critical thinking and problem-solving abilities. Students will engage in self-directed exploration, peer collaboration, and remain active participants in their education. This course will equip students with the knowledge, skills, and mindset necessary for lifelong learning and success in their chosen field of study.
Three hours
Prerequisite(s): Registration in Level IV of the Integrated Rehabilitation and Humanities program; IRH 2HI3; IRH 3HI3

IRH 4IR3 - INNOVATIONS IN REHABILITATION

This course provides students with the knowledge, skills, and abilities regarding conceptual and practical approaches to identify, design, and develop innovations in rehabilitation. This course will cover evidence-informed ways to identify opportunities for innovation, including how technology alongside the design of products and services that can support those living with different challenges to optimize function.
Three hours
Prerequisite(s): Registration in Level IV of the Integrated Rehabilitation and Humanities program

IRH 4RT6 - RESEARCH THESIS PROJECT

This course involves research under the supervision of a faculty member. This research experience will provide an understanding of clinical (rehabilitation) research. The undergraduate research course could include a review of the literature, data collection and/or analysis, as well as preparing presentations and other modes of knowledge translation.
Thesis
Prerequisite(s): Registration in Level IV of the Integrated Rehabilitation and Humanities program; IRH 2RM3; IRH 2ST3
Antirequisite(s): HTHSCI 4A09 A/B S; 4A12 A/B S; 4A15 A/B S

Italian

Courses in Italian are administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/

Notes

1. Students should note that the Department has classified its Italian language courses under the following categories:

Introductory Level Language Course: ITALIAN 1Z06 A/B S
Intermediate Level Language Courses: ITALIAN 1A03, 1AA3, 2Z03, 2ZZ3

2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
3. Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.

4. The following course is open as an elective to students registered in Level II or above of any undergraduate program.

ITALIAN 3X03 Italy Today Through Film (Taught in English)

Courses

If no prerequisite is listed, the course is open.

ITALIAN 1A03 - INTERMEDIATE ITALIAN I

Intended for students who already have knowledge of Italian. Reviews and extends grammar and vocabulary for composition and group oral practice through short presentations. Uses Italian film and popular music to explore regional identities.

Three hours; one term

Prerequisite(s): Grade 12 U or M equivalent or other equivalent or permission of the Department

Antirequisite(s): ITALIAN 2Z03

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1AA3 - INTERMEDIATE ITALIAN II

Continues grammar and vocabulary expansion from ITALIAN 1A03. Uses Italian film and popular music to explore cultural themes. The sequel to this course is ITALIAN 3Z03.

Three hours; one term

Prerequisite(s): ITALIAN 1A03

Antirequisite(s): ITALIAN 2ZZ3

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1Z06 A/B S - BEGINNER'S INTENSIVE ITALIAN

Introduction to basic written and spoken Italian through Italian popular music and film. Students learn about current social and political issues in Italian culture. Delivered in a blended format.

Lecture and web module (three hours); two terms

Antirequisite(s): Grade 12 U or M equivalent

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2Z03 - INTERMEDIATE ITALIAN I

Intended for students who already have knowledge of Italian. Reviews and extends grammar and vocabulary for composition and group oral practice through short presentations. Uses Italian film and popular music to explore cultural themes.

Three hours; one term

Prerequisite(s): ITALIAN 1Z06 A/B

Antirequisite(s): ITALIAN 1A03

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2ZZ3 - INTERMEDIATE ITALIAN II

Continues grammar and vocabulary expansion from Italian 2Z03. Uses Italian film and popular music to explore cultural themes.

Three hours; one term

Prerequisite(s): ITALIAN 2Z03

Antirequisite(s): ITALIAN 1AA3

The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 3X03 - ITALY TODAY THROUGH FILM (TAUGHT IN ENGLISH)

- survey of modern Italian culture (post-WWII) through film. Topics may include: the development of post-war consumption, Italy's economy, gender roles and the family, immigration, the North/South relationship, the mafia, political corruption and the media.

Three hours; one term

Prerequisite(s): Registration in Level II or above

ITALIAN 4II3 A/B S - INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence.

Prerequisite(s): 6 units of Italian above Level I and permission of the Department

Japanese

Courses in Japanese language are administered by the Department of Linguistics and Languages.

Togo Salmon Hall, Room 513, ext. 24388

http://linguistics.humanities.mcmaster.ca/

For the requirements for the, please see the *Department of Religious Studies* section of this calendar.

Note

Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses

If no prerequisite is listed, the course is open.

JAPANESE 1Z06 A/B S - BEGINNER'S INTENSIVE JAPANESE

An introduction to basic spoken and written discourse skills in Japanese. Acquisition of elementary grammar, kana/kanji scripts and oral communication skills will be emphasized. Open to students with no prior background in Japanese. The sequel to this course is JAPANESE 2Z03.

Three hours (up to one hour may be offered on-line); two terms

The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 2X03 - JAPANESE ANIME (TAUGHT IN ENGLISH)

This course introduces students to Japanese popular culture and the art of Japanese animated film known as Anime. The course will situate Anime in the context of Japanese film and visual art.

Three hours; one term

JAPANESE 2Z03 - INTERMEDIATE INTENSIVE JAPANESE I

This course aims to further develop students' spoken and written discourse skills in Japanese. Acquisition of lower intermediate grammar, additional kanji scripts and oral communication skills will be emphasized. The sequel to this course is JAPANESE 2ZZ3.

Three hours (up to one hour may be offered on-line); one term

Prerequisite(s): A grade of at least B- in JAPANESE 1Z06 A/B S

Not open to students with credit in JAPANESE 2ZZ3. The Department reserves the right to place students in the course most appropriate to their abilities.

JAPANESE 2ZZ3 - INTERMEDIATE INTENSIVE JAPANESE II

This course aims to consolidate students' intermediate spoken and written discourse skills. Acquisition of higher intermediate grammar, additional kanji scripts and oral communication skills will be emphasized. The sequel to this course is JAPANESE 3Z03.
Three hours (up to one hour may be offered on-line); one term
Prerequisite(s): JAPANESE 2Z03
The Department reserves the right to place students in the course most appropriate to their abilities.

Kinesiology

Courses in Kinesiology are administered by the Department of Kinesiology.
Ivor Wynne Centre, Room 219C, ext. 24462
http://www.science.mcmaster.ca/kinesiology

Department Notes

1. Kinesiology students may not register in Level III or IV Kinesiology courses until all appropriate required Level I and II Kinesiology courses have been successfully completed.
2. Not all Level III and IV Kinesiology courses are offered each year.
3. KINESIOL 1Y03 and 1YY3 (as of September 2013) are only available to Medical Radiation Sciences students.
4. KINESIOL 3B03, 3V03, 4S03 and 4SS3 are available for elective credit for students enrolled in Level III or above of a non-Kinesiology program. Space for such students is limited, and places are assigned on a first come basis.
5. KINESIOL 2G03 may be used to satisfy Health Studies course requirements for Kinesiology students pursuing a Minor in Health Studies.
6. KINESIOL 4SS3 may be used to satisfy Gerontology course requirements for Kinesiology students pursuing a Minor in Gerontology.
7. Honours Biology - Physiology Program students lacking KINESIOL 2Y03 and 2YY3 are strongly encouraged to contact the instructor of KINESIOL 2C03 or 2CC3 to discuss possible prerequisite deficiencies.
8. WHMIS 1A00, a one-hour mandatory online Introduction to Health and Safety course, must be completed prior to attendance in the first lab associated with each of KINESIOL 1A03, 1AA3, 1Y03, 1YY3, 2Y03, 2YY3.
9. *Laboratory Routine Practices*, an online module available through Mosaic (Health and Safety Training), must be completed prior to attendance in the first lab associated with each of: KINESIOL 1A03, 1AA3, 1Y03, 1YY3, 2Y03, 2YY3.

Courses

All courses are open only to Kinesiology students unless otherwise specified. (See *Notes 3 and 4* **above.)**

KINESIOL 1A03 - HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the nervous, articular, skeletal and muscular systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): Registration in Level I Honours Kinesiology
Co-requisite(s): WHMIS 1A00 if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practices, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1Y03, 2X03, 2Y03

KINESIOL 1AA3 - HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the cardiovascular, respiratory, digestive, renal, endocrine and reproductive systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): KINESIOL 1A03; and registration in Level I Honours Kinesiology
Co-requisite(s): WHMIS 1A00 if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practices, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1YY3, 2XX3, 2YY3

KINESIOL 1ED3 - EQUITY, DIVERSITY, AND INCLUSION IN PHYSICAL ACTIVITY

This course invites students to embark on a journey to enhance critical knowledge, capacity, and competency in applying equity, diversity, and inclusion principles in Kinesiology learning and practice. Employing an interdisciplinary approach, the course explores the processes and outcomes of persistent and systemic marginalization in various physical activity contexts, along with strategies for addressing these social injustices.
Lectures (three hours); one term
Prerequisite(s): Registration in Level I Honours Kinesiology.
KINESIOL 1ED3 can count towards the six units of Faculty of Science elective credit for Honours Kinesiology students who completed this course in the 2023-2024 Fall/Winter Terms.

KINESIOL 1F03 - HUMAN NUTRITION AND HEALTH

An introduction to the study of human nutrition, with an examination of the role of nutrition, and, where applicable, physical activity in the prevention and treatment of chronic diseases.
Lectures (three hours); one term
Prerequisite(s): Registration in Level I Honours Kinesiology

KINESIOL 1K03 - FOUNDATIONS IN KINESIOLOGY

Introduces students to the field of kinesiology, describing how the various sub-disciplines integrate together into a unified understanding of the study of human movement. Students will also learn how knowledge is generated, interpreted and disseminated within the field of kinesiology, and be introduced to a variety of academic/career options that are available upon graduation.
Lectures (two hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level I Honours Kinesiology

KINESIOL 1Y03 - HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the nervous, articular, skeletal and muscular systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): Registration in Level I Honours Medical Radiation Sciences
Co-requisite(s): WHMIS 1A00 if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practices, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 2X03, 2Y03

KINESIOL 1YY3 - HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the cardiovascular, respiratory, digestive, renal, endocrine and reproductive systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): KINESIOL 1Y03 and registration in Level I Honours Medical Radiation Sciences
Co-requisite(s): WHMIS 1A00 if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practice, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1AA3, 2XX3, 2YY3

KINESIOL 2A03 - BIOMECHANICS

An introduction to the analysis of human motion using fundamental mechanical principles, with a focus on inquiry and laboratory skills.
Lectures (three hours), lab (two hours); one term
Prerequisite(s): Registration in Level II of a Kinesiology program
Antirequisite(s): LIFESCI 3J03

KINESIOL 2C03 - NEUROMUSCULAR EXERCISE PHYSIOLOGY

Examination of neuromuscular function during exercise, with an emphasis on factors limiting strength, speed and power performance. Adaptations to training will also be considered, as well as mechanisms of training-induced muscle damage.
Lectures (three hours), lab (two hours); one term
Prerequisite(s): KINESIOL 1A03, 1AA3 and registration in Level II of a Kinesiology program; or both KINESIOL 2Y03 and 2YY3 (or KINESIOL 1Y03 and 1YY3); or BIOLOGY 2A03 and registration in an Honours Biology - Physiology program (See Department Note 7 above.)

KINESIOL 2CC3 - CARDIORESPIRATORY AND METABOLIC EXERCISE PHYSIOLOGY

Examination of cardiorespiratory function and metabolic regulation during exercise, with emphasis on factors limiting human performance. Adaptations to training will also be considered.
Lectures (three hours), lab (two hours); one term
Prerequisite(s): KINESIOL 1A03, 1AA3, 1F03 and registration in Level II of a Kinesiology program; or both KINESIOL 2Y03 and 2YY3 (or KINESIOL 1Y03 and 1YY3), or BIOLOGY 2A03, and registration in an Honours Biology - Physiology program (See Department Note 7 above.)

KINESIOL 2E03 - MUSCULOSKELETAL ANATOMY

Examination of anatomy with a focus on bones, joints, muscles and connective tissues of the spine and extremities. Experiential approach to functional movement analysis.
Lectures (two hours), web module (one hour), lab (two hours); one term
Prerequisite(s): KINESIOL 1A03, 1AA3 and registration in Level II of a Kinesiology program

KINESIOL 2G03 - HEALTH PSYCHOLOGY

An introduction to health psychology that examines the interplay between psychology and biology, emphasizing the complexity of maintaining health and preventing disease. Topics include sleep, stress, addictions, pain, and mental health.
Lectures (two hours); web module (one hour); one term
Prerequisite(s): Registration in Level II of a Kinesiology program

KINESIOL 2MC3 - MOTOR CONTROL AND LEARNING

Examination of the behavioral and psychological principles of motor control and motor learning for understanding motor skill acquisition.
Lectures (two hours), labs (two hours, alternating weeks); one term
Prerequisite(s): Registration in Level II of a Kinesiology program
Antirequisite(s): KINESIOL 1E03

KINESIOL 2X03 - HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the nervous, articular, skeletal and muscular systems.
Virtual lecture (one hour), web modules (three hours); one term
Prerequisite(s): Grade 12 Biology U or BIOLOGY 1P03; and registration in Level II or above
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1Y03, 2Y03
Not open to students in an Honours Kinesiology program or Honours Medical Radiation Sciences. This course does not include a laboratory component. Students planning to use this course as a requirement for post graduate program applications are encouraged to determine if a laboratory component is required prior to enrollment.

KINESIOL 2XX3 - HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the cardiovascular, lymphatic respiratory, digestive, renal endocrine and reproductive systems.
Virtual lecture, discussion and testing (one hour), web modules (three hours); one term
Prerequisite(s): KINESIOL 2X03 or 2Y03; and registration in Level II or above
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1AA3, 1YY3, 2YY3
Not open to students in an Honours Kinesiology program or an Honours Medical Radiation Sciences program This course does not include a laboratory component. Students planning to use this course as a requirement for post graduate program applications are encouraged to determine if a laboratory component is required prior to enrollment.

KINESIOL 2Y03 - HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the basic embryology and tissue development and examination of the anatomy and physiology of the nervous, articular, skeletal and muscular systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): Grade 12 Biology U or BIOLOGY 1P03; and registration in Level II or above
Co-requisite(s): WHMIS 1A00, if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practices, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1Y03, 2X03
Registration priority is given to students in a Life Sciences program.
The lecture component for this course will be offered virtually in Spring/ Summer. Labs will remain in-person. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

KINESIOL 2YY3 - HUMAN ANATOMY AND PHYSIOLOGY II

An examination of the anatomy and physiology of the cardiovascular, lymphatic respiratory, digestive, renal endocrine and reproductive systems.
Lecture (one hour), web modules (three hours), lab (two hours, alternating weeks); one term
Prerequisite(s): KINESIOL 1Y03 or 2Y03; and registration in Level II or above
Co-requisite(s): WHMIS 1A00, if not already completed, this requirement must be completed prior to the first lab. Laboratory Routine Practices, a mandatory online health and safety module, available through Mosaic, must be completed prior to the first lab.
Antirequisite(s): HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1AA3, 1YY3, 2XX3
Registration priority is given to students in a Life Sciences program.
The lecture component for this course will be offered virtually in Spring/ Summer. Labs will remain in-person. Students are encouraged to check scheduling information and the course outline to confirm the course offering details.

KINESIOL 3AA3 - BIOMECHANICS II

Study of kinematics and kinetics of human movement, including electromyography, link segment modelling, work-power-energy, fluid and tissue mechanics with applications.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2A03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3B03 - ADAPTIVE PHYSICAL ACTIVITY

An introduction to various medical conditions, systemic and social-environmental disabling factors, and the construction and experiences of disability, emphasizing self-determination, autonomy, and agency
Lectures, student-led interactive group presentations, and community engaged experiential learning (three hours); one term
Prerequisite(s): Six units from HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1AA3, 1Y03, 1YY3, 2Y03, 2YY3; and registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 3CN3 - CLINICAL NUTRITION

Building on foundational knowledge of nutritional requirements for healthy adults, this course focuses on conditions commonly encountered in clinical settings. Students will examine nutritional requirements to support health in normal physiological states (such as growth and development, pregnancy, and aging) and learn how diet may be used as an adjunctive treatment strategy to help manage chronic disease (such as type 2 diabetes, cardiovascular disease, and cancer).
Lectures (two hours), bi-weekly tutorial (one hour); one term
Prerequisite(s): KINESIOL 1F03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3E03 - NEURAL CONTROL OF HUMAN MOVEMENT

Neuromuscular control underlying human movement. Topics include basic neurophysiology, mechanisms of sensation, reflexes, voluntary movement and theories of motor control with special reference to brain function.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2MC3 (or KINESIOL 1E03) and registration in Level III or above of an Honours Kinesiology program
Cross-listed: LIFESCI 3K03

KINESIOL 3F03 - ATHLETIC TRAINING & CONDITIONING

This course focuses on fundamental principles of strength and conditioning for high performance athletes. Theory explored in the classroom and will be applied in a lab setting.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2C03, 2E03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3H03 - EXERCISE PSYCHOLOGY

Examination of the psychological antecedents and consequences of physical activity behaviour with an integrated perspective of the psychophysiological mechanisms. Emphasis will be placed on understanding concepts, principles, and theories and how these may be applied to research as well as the promotion and maintenance of physical activity.
Lectures (two hours), tutorial (one hour); one term
Prerequisite(s): KINESIOL 2G03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3HN3 - HUMAN NEUROPHYSIOLOGY

Provides an in-depth exploration of the sensorimotor cortex and spinal pathways that control movement of the upper and lower limbs. Topics will include mono and poly-synaptic reflex pathways and their modulation, electrophysiology measures as indices of nerve conduction, non-invasive brain stimulation, and electroencephalography. Emphasis placed on gaining theoretical and technical skills to perform human neurophysiology.
Lecture/lab (two hours), web module (one hour); one term
Prerequisite(s): KINESIOL 1A03, 1AA3, 1E03, 2C03 and registration in Level III or above of an Honours Kinesiology program; or for non-kinesiology students, permission of the instructor based on comparable prerequisite knowledge from non-kinesiology courses

KINESIOL 3K03 - SPORTS INJURIES

This course will focus on an understanding of mechanism of injury, and injury prevention as applied to common injuries associated with sport and physical activity. Emphasis is placed on developing fundamental injury assessment and treatment skills.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2E03 and registration in Level III or above of an Honours Kinesiology program Approximately $20.00 will be charged for supplies used in labs.

KINESIOL 3L03 - EXERCISE TESTING AND PRESCRIPTION

Emphasis on exercise testing and prescription for the healthy adult population. Field and laboratory techniques for exercise testing, interpretation, and exercise prescription are major topics. Students can apply this information to advanced fitness appraisal and prescription certifications.
Lectures (three hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2C03, 2CC3 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3N03 - ERGONOMICS I: WORKPLACE INJURY RISK ASSESSMENT

Analysis and quantification of musculoskeletal injury risks in the workplace, with an emphasis on reducing work related low back and upper extremity disorders.

Lectures (three hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2A03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3Q03 - MOTOR DEVELOPMENT ACROSS THE LIFESPAN

Introduction to motor development theories, principles and concepts covering the human life span. Topics include, early motor development during childhood, the maturation of perceptual-motor process during adolescence, the stabilization period during adulthood and changes that accompany aging.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2MC3 (or KINESIOL 1E03) and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3RM3 - RESEARCH METHODOLOGIES AND DATA ANALYSIS IN KINESIOLOGY

This course deals with the scientific research process with direct application to the field of Kinesiology. Because it is such a broad-based discipline, research initiatives in Kinesiology draw from many diverse areas including Integrative Physiology, Mechanics & Control of Movement, and Neuroscience & Behaviour. The purpose of this course is to introduce students to the ways in which researchers from these areas conduct independent research initiatives that are based on the generation of relevant research questions and the testing of specific hypotheses. Students will learn how to conduct simple, controlled empirical investigations with sound study designs and will develop the skills necessary to analyze and draw valid conclusions from these studies.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level III or above of an Honours Kinesiology program
This course is required as a prerequisite for KINESIOL 4RR6 A/B and 4RR9 A/B.

KINESIOL 3RP3 - KINESIOLOGY RESEARCH PRACTICUM

This placement course provides students in Honours Kinesiology the opportunity to explore different research laboratory experiences within the Department of Kinesiology. Students will complete a final paper related to the research laboratory experience. Students are responsible for arranging a suitable laboratory experience and supervision (from a Kinesiology faculty member). Applications are available on the Kinesiology Department website and must be submitted to the Academic Program Advisor 30 days prior to the start of the term (see Sessional Dates section of the Undergraduate Calendar). Application can be found at https://www.science.mcmaster.ca/kinesiology/undergraduate/forms.html
Lecture (one hour); one term. Normally students will spend 60 hours in the laboratory during the placement.
Prerequisite(s): Registration in Level III or above of an Honours Kinesiology program
This course cannot be repeated.

KINESIOL 3U03 - HUMAN GROWTH AND MATURATION

In depth analysis of genetic and endocrine influences on the morphological and functional development of fat, skeletal muscle and bone tissue during childhood, in the context of exercise, physical performance capacity and health.
Lecture (three hours); one term
Prerequisite(s): Registration in Level III or above of an Honours Kinesiology program
Antirequisite(s): KINESIOL 2F03
Not offered in 2025-2026.

KINESIOL 3V03 - SPORT PSYCHOLOGY

This course examines how psychological factors influence and are influenced by participation and performance in sport. Topics include: personality, motivation, arousal, attitude, perception, aggression, competition, concentration confidence and goal setting.
Lecture (three hours); one term
Prerequisite(s): Registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 3W03 - CARDIOVASCULAR PHYSIOLOGY OF EXERCISE

An examination of the integrated neural and vascular factors in regulating blood pressure and blood flow, with a focus on mechanisms underlying maintaining cardiovascular homeostasis during exercise. Emphasis is placed on adopting integrative approaches to learning in order to appreciate how several systems work together to achieve and maintain cardiovascular homeostasis.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2CC3 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3Y03 - NUTRITION FOR SPORT AND PERFORMANCE

An in-depth analysis of human nutrition and metabolism, with an emphasis on the impact of diet on human physical performance in both healthy and chronic disease states.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 1F03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 3Z03 - NEUROMUSCULAR PLASTICITY IN HEALTH AND DISEASE

This course is designed to provide students with an advanced understanding of peripheral neuromuscular biology (i.e., motor neuron, neuromuscular synapse, skeletal muscle) as it applies to exercise and select neuromuscular disorders. Emphasis will be on the cellular mechanisms that regulate neuromuscular plasticity in response to acute and chronic physical activity in healthy individuals, as well as in pre-clinical models of disease and in patients with neuromuscular disorders.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2C03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4B03 - CARDIOVASCULAR DISEASE: PATHOPHYSIOLOGY AND REHABILITATION

An examination of the pathophysiology of cardiovascular disease and evidence-based guidelines for its diagnosis, management, and rehabilitation.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2C03, 2CC3, 3W03, and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4C03 - INTEGRATIVE EXERCISE PHYSIOLOGY

- detailed analysis of the physiological factors that regulate human performance. Emphasis is placed on the integrative response to exercise including the influence of physical training and altered environmental conditions.

Lectures (two hours), lab (three hours); one term

Prerequisite(s): KINESIOL 2CC3 and registration in Level III or above of an Honours Kinesiology program; or BIOLOGY 2A03, KINESIOL 2CC3 and registration in an Honours Biology - Physiology program.

KINESIOL 4D03 - PSYCHOPHYSIOLOGY OF HEALTHY, ACTIVE LIVING

Exploration of the physiological mechanisms by which exercise, sedentary behaviours, and sleep impact aspects of brain health and function.
Lectures (two hours), tutorial (one hour); one term
Prerequisite(s): KINESIOL 3H03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4EE3 - PROFESSIONAL PLACEMENT IN KINESIOLOGY

Students take part in a supervised practical experience that links classroom knowledge to professional practice. Students may secure their own placement, subject to approval, or accept departmentally approved placements. Placements are offered in all kinesiology sub-disciplines. Applications are available on the Kinesiology Department website and must be submitted to the Academic Program Advisor 30 days prior to the start of the term (see Sessional Dates section of the Undergraduate Calendar).
Application can be found at https://www.science.mcmaster.ca/kinesiology/undergraduate/forms.html.
Placement experience must be at least 60 hours (equivalent to one day per week); lecture/presentation (one hour); one term
Prerequisite(s): Registration in Level IV of an Honours Kinesiology program; and permission of the course coordinator. This course may be taken concurrently with INSPIRE 3AR3 if the placement experience in each course is in a different setting.
This course cannot be repeated.

KINESIOL 4GG3 - CLINICAL AND APPLIED BIOMECHANICS

Examination of current research in clinical, sport, occupational, and other applications in biomechanics. Topics will relate to injury mechanisms, rehabilitation, surgery, performance and protection. The course will feature classic and cutting edge applications. The course will focus on critical evaluation of the literature.
Lecture (two hours), tutorial (two hours); one term
Prerequisite(s): KINESIOL 2A03 and registration in Level III or above of an Honours Kinesiology program
Prerequisite(s)(Effective 2026-2027): KINESIOL 2A03, 3AA3 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4H03 - PHYSICAL ACTIVITY BEHAVIOUR CHANGE

An examination of design, delivery and evaluation of interventions to promote adoption and maintenance of physical activity in individuals, groups and communities.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 2G03 and 3H03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4IE3 - INNOVATION AND ENTREPRENEURSHIP IN KINESIOLOGY

This course provides a comprehensive introduction to the principles and practices of entrepreneurship and innovation and aims to equip students with the skills, knowledge, and tools they need to launch their own start-ups or work in entrepreneurial roles within established organizations. Focus is on fitness, health, and wellness.
Lecture (three hours) (alternates biweekly between in-person and virtual); one term
Prerequisite(s): Registration in Level IV or above of an Honours Kinesiology program
Not open to students who completed KINESIOL 4UU3 in 2023-2024 Fall/Winter Terms.

KINESIOL 4J03 - FUNCTIONAL ANATOMY

- hands-on applied study of anatomy for independent learners. The focus is on palpating the structures of the osseous, articular, muscular, and supportive systems, testing these structures, and how each structure functions to support the body as a whole.

Lecture (two hours); lab (two hours); one term
Prerequisite(s): KINESIOL 3K03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4KK3 - FUNDAMENTALS OF REHABILITATION

Outlines the basic foundations of orthopaedic rehabilitation including pathophysiology, clinical biomechanics, and exercise prescription. Therapeutic modalities will be introduced. Laboratory activities complement lecture material and provide opportunity to develop professional skills.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): KINESIOL 3K03 and registration in Level III or above of an Honours Kinesiology program (Approximately $25.00 will be charged for supplies used in labs.)

KINESIOL 4PW3 - GROWING UP HEALTHY: PEDIATRIC WEIGHT MANAGEMENT

This course explores the complex and unique considerations of promoting healthy weight in children and adolescents. Students will gain an in-depth understanding of childhood growth trajectories and the physiological, environmental, social, and cultural factors influencing the development of overweight and obese individuals. Students will also examine evidence-based, multi-disciplinary approaches to weight management in the pediatric years.
Lectures (three hours); one term
Prerequisite(s): KINESIOL 3U03 (or KINESIOL 2F03) and registration in Level III or above of an Honours Kinesiology program
Not open to students who completed KINESIOL 4VV3 in 2023-2024 Fall/Winter Terms.
Offered in alternate years.
Not offered in 2026-2027.

KINESIOL 4Q03 - PEDIATRIC EXERCISE PHYSIOLOGY

Physiologic aspects of physical activity and exercise in children and adolescents in health and disease.
Lectures/seminars (two hours), labs (two hours); one term
Prerequisite(s): KINESIOL 3U03 (or KINESIOL 2F03) and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4RR6 A/B - THESIS

Independent project involving a research topic under the supervision of a faculty member in the Department of Kinesiology at McMaster University. The project involves developing a research proposal, a literature review, design of methodology, data collection and analysis, a research report appropriate to the sub-discipline, and an oral presentation. KINESIOL 4RR6 involves a research project that will require approximately 8-10 hours per week of time commitment. Students are advised to discuss the scope of the research project with their faculty supervisor. Applications are available on the Kinesiology

Department website and must be submitted to the Academic Program Advisor 30 days prior to the start of the term (see Sessional Dates section of the Undergraduate Calendar).
Application can be found at https://www.science.mcmaster.ca/kinesiology/undergraduate/forms.html.
Lecture (one hour); two terms
Prerequisite(s): KINESIOL 3RM3, STATS 2B03 and registration in Level IV of an Honours Kinesiology program with a minimum GPA of 8.5 and permission of the instructor
Antirequisite(s): KINESIOL 4RR9 A/B

KINESIOL 4RR9 A/B - THESIS

Independent project involving a research topic under the supervision of a faculty member in the Department of Kinesiology at McMaster University. The project involves developing a research proposal, a literature review, design of methodology, data collection and analysis, a research report appropriate to the sub-discipline, and an oral presentation. KINESIOL 4RR9 involves a research project that will require approximately 12-15 hours per week of time commitment. Students are advised to discuss the scope of the research project with their faculty supervisor. Applications are available on the Kinesiology Department website and must be submitted to the Academic Program Advisor 30 days prior to the start of the term (see Sessional Dates section of the Undergraduate Calendar).
Application can be found at https://www.science.mcmaster.ca/kinesiology/undergraduate/forms.html.
Lecture (one hour); two terms
Prerequisite(s): KINESIOL 3RM3, STATS 2B03 and registration in Level IV of an Honours Kinesiology program with a minimum GPA of 8.5 and permission of the instructor
Antirequisite(s): KINESIOL 4RR6 A/B

KINESIOL 4S03 - EXERCISE AS MEDICINE

Focus on the causes, symptoms, and pathophysiology of specific chronic health impairments prevalent in our society and the various benefits/risks of physical activity and exercise in these populations.
Lectures (two hours), web module (one hour); one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Science
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 4SS3 - HUMAN AGING: BIOLOGICAL AND LIFESTYLE INFLUENCES

The interrelationship between biological processes of aging and associated lifestyle factors (e.g. exercise/inactivity) will be explored in various human systems.
Three hours (lectures); one term
Prerequisite(s): Six units from HTHSCI 1D06 A/B, 1H06 A/B, 2F03, 2FF3, 2L03, 2LL3, KINESIOL 1A03, 1AA3, 1Y03, 1YY3, 2Y03, 2YY3; and registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIOL 4TT3 - NEUROREHABILITATION AND ROBOTICS

Provides a broad overview of robotics as a tool to understand emergent properties of sensorimotor behaviour and how this information can be used in neurorehabilitation. Content incorporates approaches from neuroscience, physiology, and engineering.
Lecture (three hours); one term
Prerequisite(s): Registration in in Level III or above of an Honours Kinesiology program or Level III or above of an Honours B.Sc. program in Neuroscience, Life Sciences, Psychology, Neuroscience, & Behaviour, or permission of the instructor

KINESIOL 4UU3 - SELECTED TOPICS IN KINESIOLOGY I

Topics of contemporary interest with emphasis upon current theory and research. Students are advised to contact the Department of Kinesiology, Undergraduate Office (kinug@mcmaster.ca), for descriptions of the courses offered during the current academic year.
Lectures (three hours), tutorial (one hour); one term
Prerequisite: Registration in Level IV or above of an Honours Kinesiology program
KINESIOL 4UU3 may be repeated, if on a different topic.

KINESIOL 4VV3 - SELECTED TOPICS IN KINESIOLOGY II

Topics of contemporary interest with emphasis upon current theory and research. Students are advised to contact the Department of Kinesiology, Undergraduate Office (kinug@mcmaster.ca), for descriptions of the courses offered during the current academic year.
Lectures (three hours); one term
Prerequisite: Registration in Level IV or above of an Honours Kinesiology program
KINESIOL 4VV3 may be repeated, if on a different topic.

KINESIOL 4W03 - EXPLORING MOVEMENT AND POSTURE

An exploration of fundamental topics such as gait, posture, and the evaluation of musculoskeletal function. The course is designed to help students further develop knowledge and professional skills relevant to health care and human performance.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): KINESIOL 2A03, 2E03, 3K03 and registration in Level III or above of an Honours Kinesiology program
Antirequisite(s): KINESIOL 3BB3

KINESIOL 4Y03 - COGNITIVE NEUROSCIENCE OF EXERCISE

Provides a detailed understanding of the impact that physical activity has on the structure and function of the brain, with an emphasis on cognitive outcomes.
Lecture (two hours), lab (one hour); one term
Prerequisite(s): KINESIOL 3H03 and registration in Level III or above of an Honours Kinesiology program

KINESIOL 4Z03 - SCIENTIFIC COMPUTING AND WEARABLE TECHNOLOGY

This course is designed to introduce students to computer programming as it relates to the scientific processing and use of wearable technology in kinesiology and human movement.
Lecture (two hours); lab (two hours); one term
Prerequisite(s): KINESIOL 2A03 and one of KINESIOL 3AA3 or KINESIOL 3E03; and registration in Level III or above of an Honours Kinesiology program

Korean

Courses in Korean are administered by the Department of Linguistics and Languages.

Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/
Courses

KOREAN 1Z03 - INTRODUCTORY KOREAN I

Students will become familiar with Korean alphabet learning to read and write using Korean characters and to communicate about everyday topics through dialogues, pronunciation and vocabulary exercises, grammar quizzes and role-plays.
Three hours; one term
Not open to native Korean speakers or to students with credit in Grade 12 U or M equivalent.

KOREAN 1ZZ3 - INTRODUCTORY KOREAN II

Students will expand their ability to communicate through dialogues, pronunciation and vocabulary exercises, grammar quizzes and role-plays, becoming proficient with Korean alphabet, will communicate in Korean using a growing set of expressions, and gain elementary understanding of Korean culture.
Three hours; one term
Prerequisite(s): KOREAN 1Z03
Not open to native Korean speakers or to students with credit in Grade 12 U or M equivalent.

KOREAN 2X03 - KOREAN POP-CULTURE (TAUGHT IN ENGLISH)

Introduction to Korean popular culture (Hallyu) and its various forms: such as K-Pop music, graphic novels, television dramas, film, and webtoons. The course looks at Hallyu and its popularity as a global phenomenon, analyzing its role and social and political context.
Three hours; one term

Labour Studies (See Work and Labour Studies)

Former Labour Studies (LABRST) courses are now listed as Work and Labour Studies (WORKLABR) courses. Students having credit in LABRST courses may not take the corresponding course under the WORKLABR designation.

LABRST - - (SEE WORKLABR)

Former Labour Studies (LABRSTST) courses are now listed as Work and Labour Studies (WORKLABR) courses. Students having credit in LABRST courses may not take the corresponding course under the WORKLABR designation.

Latin

Courses in Latin are administered by the Department of Greek and Roman Studies.
Togo Salmon Hall, Room 706, ext. 24311
http://classics.humanities.mcmaster.ca/
No language other than English is required for courses in Latin.
Notes

1. Students should note that the Department has classified its Latin language courses under the following categories:
   - **Introductory Level Language Courses:** LATIN 1Z03, 1ZZ3
   - **Intermediate Level Language Courses:** LATIN 2A03, 2AA3
2. The following courses are available as electives to qualified students in any program:
   - Latin Language and Literature: LATIN 1Z03, 1ZZ3, 2A03, 2AA3, 3AA3, 3B03, 3BB3
3. Students with Grade 12 Latin U should normally register in LATIN 2A03, but with special permission, may register in either LATIN 1Z03, 1ZZ3.

Courses
If no prerequisite is listed, the course is open.

LATIN 1Z03 - BEGINNER'S INTENSIVE LATIN I

- rapid introduction to the basic grammar of Classical Latin.

Lectures and tutorials (four hours); one term
Not open to graduates of Grade 12 Latin U, who must obtain special permission to register in the course.

LATIN 1ZZ3 - BEGINNER'S INTENSIVE LATIN II

This course continues the study of Latin grammar begun in LATIN 1Z03.
Four hours (lectures and tutorials); one term
Prerequisite(s): LATIN 1Z03. Students with Grade 12 Latin U must obtain special permission to register in the course.
This course, with a grade of at least C, is accepted as a prerequisite for admission to any Honours program in Greek and Roman Studies, or, with a grade of at least C-, for admission to the B.A. program in Greek and Roman Studies.

LATIN 2A03 - INTERMEDIATE LATIN I

This course continues the study of Latin grammar begun in LATIN 1Z03 and 1ZZ3 and introduces students to the reading of simple passages from Latin authors.
Three lectures; one term
Prerequisite(s): Grade 12 Latin U; or LATIN 1ZZ3 with a grade of at least C-. Students using this course as a Humanities I requirement will register for LATIN 2A03 and 2AA3.

LATIN 2AA3 - INTERMEDIATE LATIN II

- study of selected passages from Latin authors designed to further the student's proficiency in reading Latin. Attention will be given to grammar and techniques of literary criticism.

Three lectures; one term
Prerequisite(s): LATIN 2A03

LATIN 3AA3 - LATIN PROSE

Selected readings in one or more Latin prose authors.
Three lectures; one term
Prerequisite(s): LATIN 2A03, 2AA3
LATIN 3AA3 may be repeated, if on a different author/work, to a total of six units.

LATIN 3BB3 - TOPICS IN LATIN LITERATURE

Consult the Department for the topic to be offered.
Three lectures; one term
Prerequisite(s): LATIN 2A03, 2AA3
LATIN 3BB3 may be repeated, if on a different topic, to a total of six units.

LATIN 3H03 - TOPICS IN LATIN POETRY

Consult the Department for the topic to be offered.
Three lectures; one term
Prerequisite(s): Six units of Level II Latin

LATIN 3H03 may be repeated, if on a different topic, to a total of six units.

LATIN 4T03 - INDEPENDENT STUDY IN LATIN

Selected readings from Latin authors supervised by a member of the Department.
Tutorials; one term
Prerequisite(s): Six units of Level III Latin; and registration in Level III or IV of any Honours program in Classics or Greek and Roman Studies; and permission of the Department.
LATIN 4T03 may be repeated, if on a different topic, to a total of six units.

Latin American and Latinx Studies at McMaster

https://lanmu.mcmaster.ca/
latam@mcmaster.ca

LATAM 2A03 - INTRODUCTION TO LATIN AMERICAN AND LATINX STUDIES

This course serves as a broad introduction to the interdisciplinary fields of Latin American Studies and Latinx Studies. We investigate the questions 'What is Latin America?' and 'What is Latinx Studies?' through a number of lenses, including the languages, literature, cultures, societies, geographies, archaeologies, environmental issues, health care, innovations, histories, identities, migrations and diasporas of Latin America and its peoples. We use these interdisciplinary approaches to examine the intersection between race, ethnicity, identity, and migration. The course will also expose students to active Latin American Studies research by McMaster scholars and Latinx/Latin American scholars.
Lectures (three hours); one term

LATAM 3A03 - CRITICAL CONTEMPORARY ISSUES IN LATIN AMERICAN AND LATINX STUDIES

This course provides in-depth exposure to critical topics, providing an interdisciplinary framework for understanding contemporary Latin America and the Latin American Diaspora. We critically address how race, ethnicity, class, gender and sexuality, politics, geography, history, colonialism, and/or environmental science intersect within the fields of Latin American Studies and Latinx Studies. We engage different mediums including peer-reviewed articles, popular media such as music and literature, and/or community publications to critically address the complexity of race, ethnicity, and identity within Latin America, and examine how the Latin American diaspora is connected with and has shaped the landscapes and environments of Canadian society. Specific topics of the course vary by instructor, depending on the needs of the program, interests of students, and emerging contemporary issues.
Lectures (three hours); one term
Registration or completion of ABLD 3CD3 or LATAM 2A03 is strongly recommended.
Cross-list(s): ABLD 3A03

Life Sciences

Courses in Life Sciences are administered by the School of Interdisciplinary Science (SIS).
A.N. Bourns Science Building, Room C501, ext. 21181
Email: sis@mcmaster.ca
https://sis.mcmaster.ca/undergraduate/life-sciences/

Notes

1. Level IV Research Seminar topics may change from year to year. Research Seminar topics and descriptions are available on the School of Interdisciplinary Sciences (SIS) website https://www.science.mcmaster.ca/sis/undergraduate/life-sciences.html. Honours Life Sciences students must complete at least 3 units of *Knowledge Transfer/Seminar Experience (Course List E)*.
2. Students entering Level IV Honours Life Sciences (not including the Origins of Disease Specialization or the Sensory Motor Systems Specialization) must complete and submit a ballot, rank ordering their preference for enrolment in Level IV seminar offerings. Ballots will be sent directly to students in Honours Life Sciences during the Winter Term. Students wishing to take these courses must complete and submit a ballot by **the end of March**. Students will be informed of their ballot result by the end of May. Failure to submit a ballot by the stated deadline may compromise enrolment in a preferred seminar. The Life Sciences program pre-registration ballot will include all Level IV Life Sciences research seminar courses on *Course List E*. Students fulfilling *Course List E* through eligible thesis or project courses do not need to ballot.
3. Students in the Honours Life Sciences - Origins of Disease Specialization must complete LIFESCI 4CM3 or 4U03. While these courses are included in the pre-registration ballot, seats will preferentially be given to students in the Honours Life Sciences - Origins of Disease Specialization.
4. LIFESCI 4XX3 is required for the Honours Life Sciences - Sensory Motor Systems Specialization and is not included in the pre-registration ballot. Students in this Specialization are guaranteed enrolment.
5. Course planning is extremely important. Students must review and consider the requisites on Level II, III and IV courses when enrolling in the previous Levels.

Courses

If no prerequisite is listed, the course is open.

LIFESCI 1D03 - MEDICAL IMAGING PHYSICS

An introduction to the physics underlying some of the medical imaging techniques used in the diagnosis and treatment of disease. Topics include: X-ray (transmission) radiography, computed tomography, an introduction to magnetic resonance imaging (MRI), basic principles of ultrasonography, radioactivity and nuclear medicine, and a brief investigation into the biological effects of radiation.
Three lectures, one tutorial; one term
Prerequisite(s): Credit or registration in one MATH 1A03, 1LS3, 1X03 and either Grade 12 Physics U or credit or registration in one of PHYSICS 1A03, 1C03, 1V03; or credit or registration in ISCI 1A24 A/B
Antirequisite(s): LIFESCI 1E03, MEDPHYS 1E03, MEDRADSC 1C03
This course is administered by the Department of Physics and Astronomy.

LIFESCI 2A03 - RESEARCH METHODS IN LIFE SCIENCES

This course introduces students to the use and application of the scientific method in the life sciences. Students will explore different types of research studies and have an opportunity to practice hypothesis formulation, hypothesis testing, data interpretation, and scientific communication.
Lectures (two hours), tutorial (two hours); one term
Prerequisite(s): Registration in Level II or above of a Life Sciences program

LIFESCI 2BP3 - BIOPHYSICS OF THE CELL AND LIVING ORGANISMS

Some of the most exciting breakthroughs in science are made at the interface between disciplines. The course will discuss the way that biophysics techniques are used to study the structure, dynamics and function of molecules in living cells and organisms. Topics may include: solubility of macromolecules, ligand-receptor binding, protein folding, filament assembly, Brownian motion

and diffusion, bioelectromagnetism, membrane-permeability, electrophoresis. Experimental methods discussed may include: fluorescence, optical tweezers, atomic force microscopy.
Lectures (three hours); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1D03, 1V03; and one of MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B
Cross-list(s): BIOPHYS 2A03
This course is administered by the Department of Physics and Astronomy.

LIFESCI 2CC3 - FUNDAMENTALS OF NEUROSCIENCE

This course will cover foundational topics in neuroscience, including mechanisms of nerve cell signaling, synaptic transmission, neurotransmitter systems, synaptic plasticity, and nervous system development and repair. Topics will be explored through the lens of human and animal case studies.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and PSYCH 1FF3 or 1XX3
Antirequisite(s): ISCI 2A18 A/B

LIFESCI 2D03 - BEHAVIOURAL PROCESSES

An examination of the concepts that underpin animal behaviour and an illustration of how selection pressures have operated to produce the diversity of behaviour that humans and other animals share.
Lectures (three hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), 1M03 and one of PSYCH 1F03, 1FF3, 1X03, 1XX3; or ISCI 1A24 A/B
Antirequisite(s): PNB 2XC3, PSYCH 2TT3

LIFESCI 2L03 - LIVING SYSTEMS LABORATORY

Students will employ diverse experimental techniques to study real-world research questions in Life Sciences. Students will use guided inquiry to explore how basic research and model organisms are used to understand and enhance human health and well-being.
Virtual lectures (one hour), lab (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II or above of a Life Sciences or Medical Radiation Sciences program

LIFESCI 2N03 - HUMAN NUTRITION FOR LIFE SCIENCES

Basic principles of human nutrition, including the interaction between nutrients and physiological processes that impact health and disease risk.
Three hours (lectures); one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Science or the Faculty of Health Sciences or the Arts & Science program
Antirequisite(s): HTHSCI 3BB3, KINESIOL 1F03
Priority will be given to students in an Honours Life Sciences program.
Not open to students registered in a Kinesiology program.

LIFESCI 2X03 - ENVIRONMENTAL CHANGE AND HUMAN HEALTH

An examination through case-studies of the direct and indirect links between environmental change and human health. Topics may include the impacts of climate change, stratospheric ozone depletion, and globalization.
Lectures (two hours), tutorial (one hour); one term
Prerequisite(s): One of BIOLOGY 1M03, ENVIRSC 1A03, 1B03, 1C03, 1G03 or ISCI 1A24 A/B

LIFESCI 3AA3 - HUMAN PATHOPHYSIOLOGY

This course examines the normal physiology of a healthy individual through to the pathophysiological consequences of disease at the cell and tissue level, and how this can lead to greater implications between the various systems of the body. Disease management with pharmacologic agents and other lifestyle approaches will be discussed.
Lectures (three hours); one term
Prerequisite(s): One of BIOLOGY 2A03, KINESIOL 1A03, 1Y03, 2X03, 2Y03; and registration in Level III or above of any Honours program in the Faculty of Science or registration in the B.Sc. Life Sciences program. Completion of both KINESIOL 2X03 and 2XX3 or 2Y03 and 2YY3 is strongly recommended.
Antirequisite(s): HTHSCI 4K03
Priority will be given to students in an Honours Life Sciences program.

LIFESCI 3BB3 - NEUROBIOLOGY OF DISEASE

Examination of the cellular, circuit and system level abnormalities that underlie nervous system diseases. Topics may include: addiction, epilepsy, spinal cord injury, neuromuscular diseases and neurodegenerative diseases.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Credit or registration in BIOLOGY 2B03 and one of LIFESCI 2CC3 or PNB 2XB3; or ISCI 2A18 A/B
Priority will be given to students in an Honours Life Sciences program.

LIFESCI 3BM3 - IMPLANTED BIOMATERIALS

An introduction to the chemistry of implantable biomaterials (metals, ceramics, plastics, elastomers) and the methods used to characterize their physical properties. The wound healing response following insult by an implanted foreign body will be examined, in order to understand the need to control synthetic biomedical interfaces. The regulatory approval process will also be discussed.
Lectures (three hours); one term
Prerequisite(s): CHEM 1AA3 (or ISCI 1A24 A/B); and BIOLOGY 2B03 (or ISCI 2A18 A/B) or registration in an Honours Chemical Biology program; and one of CHEM 2E03, 2OB3, CHEMBIO 2OB3; or permission of the instructor
Cross-list(s): CHEMBIO 3BM3
This course is administered by the Department of Chemistry & Chemical Biology.

LIFESCI 3BP3 - MODELLING LIFE

Introduction to simulating computational models in the life sciences, including examples from molecular and cell biology, ecology and evolution. Designing models to link to experimental questions and to test scientific hypotheses.
Lectures (three hours); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1D03, 1V03; and one of MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B
Cross-list(s): BIOPHYS 3G03
This course is administered by the Department of Physics and Astronomy.

LIFESCI 3E03 - REPRODUCTIVE ENDOCRINOLOGY

An interdisciplinary approach to the examination of human reproductive behaviour through the lens of endocrinology and evolutionary biology. Science communication and how research findings are reported in the mass media are also explored.
Lectures (three hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) and 1M03, or ISCI 1A24 A/B; and one of LIFESCI 2D03, PNB 2XC3, PSYCH 2GG3
Priority will be given to students in an Honours Life Sciences program.

LIFESCI 3EP3 A/B S - LIFE SCIENCES APPLIED PLACEMENT

This placement course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement.
Students are responsible for arranging a suitable placement and supervision, and are required to submit an online application thirty days prior to the date classes begin in each term (see the Sessional Dates section of the Undergraduate Calendar). More information and the online application can be found on the School of Interdisciplinary Science (SIS) website. Normally students will complete 60 hours of placement work through the duration of the experience.
Lecture (one hour); one term
Prerequisite(s): Registration or credit in SCIENCE 2C00, registration in Level III or above of a Life Sciences program, or registration in Level III or above of an Honours Life Sciences specialization; and permission of the School of Interdisciplinary Science (SIS)
LIFESCI 3EP3 cannot be taken concurrently with any other Life Sciences placement. Students with previous credit or registration in any department- or program-based applied placement, internship or practicum course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively different for consideration.

LIFESCI 3G03 - INTRODUCTION TO EPIDEMIOLOGY

Basic principles of epidemiology, including clinical study design, measures of disease risk and mortality, diagnostic test characteristics and applications to public health.
Lectures (three hours); one term
Prerequisite(s): Registration in Level III or above of an Honours Life Sciences program
Antirequisite(s): HTHSCI 2G03
Not open to students with credit in LIFESCI 3Z03, if the topic was Introduction to Epidemiology.

LIFESCI 3J03 - HUMAN BIOMECHANICS

An introduction to mechanical principles and concepts as applied to the human musculoskeletal system.
Three hours (lectures); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1V03; and registration in Level III or above of a program in the Faculty of Science. Credit or registration in KINESIOL 2X03 or 2Y03 (or 1Y03) is strongly recommended.
Antirequisite(s): KINESIOL 2A03
Not open to students registered in a Kinesiology program.

LIFESCI 3K03 - NEURAL CONTROL OF HUMAN MOVEMENT

The control of human movement studied in detail from neurophysiological, cognitive and dynamical perspectives. Topics include basic neurophysiology, mechanisms of sensation, reflexes, voluntary movement and theories of motor control.
Three hours (lectures); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) or ISCI 1A24 A/B; and one of ISCI 2A18 A/B, LIFESCI 2CC3, PNB 2XB3, PSYCH 2F03, 2N03 (or 2D03), 2NF3; and registration in Level III or above of an Honours program in the Faculty of Science
Prerequisite(s) (Effective 2026-2027): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02) or ISCI 1A24 A/B; and BIOLOGY 2A03 or KINESIOL 2X03 or 2Y03; and one of ISCI 2A18 A/B, LIFESCI 2CC3, PNB 2XB3, PSYCH 2F03, 2N03 (or 2D03), 2NF3; and registration in Level III or above of an Honours program in the Faculty of Science
Cross-listed: KINESIOL 3E03
Not open to students registered in a Kinesiology program.
This course is administered by the Department of Kinesiology.

LIFESCI 3L03 - LABORATORY METHODS IN LIFE SCIENCES

Students develop advanced skills in experimental design, research methodologies, data analysis, and the communication of research information in the Life Sciences.
Lecture (one hour), lab (four hours); one term
Prerequisite(s): LIFESCI 2A03, 2L03 and registration in Level III or above of a Life Sciences program.

LIFESCI 3LA3 - INTRODUCTION TO DATA SCIENCE

This course will enable students to take complex datasets and distill them into meaningful information from which they can draw reasoned conclusions. The course will include data collection, curation, manipulation, visualization, and analysis.
Lab (three hours); one term
Prerequisite(s): LIFESCI 2A03, 2L03 and registration in Level III or above of an Honours Life Sciences program
Prerequisite(s) (Effective 2026-2027): LIFESCI 2L03 and STATS 2B03 and registration in Level III or above of an Honours Life Sciences program

LIFESCI 3LL3 - LIVING SYSTEMS LABORATORY PRACTICUM

Provides an opportunity to explore various areas of study within the Life Sciences in a small-group learning environment in the laboratory.
Details may be found on the School of Interdisciplinary Science (SIS) website.
Lab (three hours); one term
Prerequisite: LIFESCI 2A03, 2L03 and registration in Level III or above of an Honours Life Sciences program.
LIFESCI 3LL3 may be repeated, if on a different topic.
Some offerings may have a field/experiential component and/or be offered in a condensed term.

LIFESCI 3LX3 - APPLIED BIOSTATISTICS AND SCIENTIFIC WRITING

In this course, students will compose a unique research question, apply introductory biostatistics methods to original datasets and synthesize research findings in a scientific manuscript.
Lab (three hours); one term
Prerequisite(s): LIFESCI 2A03, 2L03, STATS 2B03 and registration in Level III or above of an Honours Life Sciences program
Antirequisite(s): LIFESCI 3LL3, if completed during 2021-2022 Fall/Winter Terms

LIFESCI 3M03 - CELLULAR DYNAMICS IN HEALTH AND DISEASE

This course examines how cells respond to a variety of biochemical and biophysical information to continuously adapt to their behaviour. In this course, students also explore cell biology techniques and model systems used to explain cellular dynamics in the context of healthy and disease states.
Lectures (three hours); one term
Prerequisite(s): LIFESCI 2A03 and BIOLOGY 2B03, or ISCI 2A18 A/B; and BIOLOGY 2C03 or LIFESCI 2G03 or MOLBIOL 2C03; and registration in Level III or above of a program in the Faculty of Science. Completion of LIFESCI 2BP3 is strongly recommended.
Antirequisite(s): MOLBIOL 3B03
Priority will be given to students in an Honours Life Sciences program.

LIFESCI 3N03 - HUMAN NUTRITIONAL TOXICOLOGY

This course mainly focuses on discussing metal toxicity in human systems at the genetic, cellular, biochemical, and physiological levels, as well as discusses the socio-economic and political parameters that impact metal concentrations in local and global environments. In addition, students examine the potential toxicity of supplements and food products.
Lectures (two hours), tutorials (two hours); one term
Prerequisite(s): One of BIOLOGY 2B03 (or ISCI 2A18 A/B), BIOCHEM 2EE3, KINESIOL 2X03, 2Y03. Completion of BIOLOGY 2C03 is recommended.
Priority will be given to students in an Honours Life Sciences (B.Sc.) program.

LIFESCI 3P03 - COMMUNICATING SCIENCE FOR PUBLIC AUDIENCES

In this course, students apply principles of inclusive science communication to engage diverse audiences with science and its applications. Students explore different audiences, purposes and venues for science communication, critique poor science communication, and create text and visuals that inform and inspire.
Lectures (two hours), virtual tutorials (two hours); one term
Prerequisite(s): LIFESCI 2AA3 or SCICOMM 2A03 and registration in Level III or above of an Honours Life Sciences program
Cross-listed: SCICOMM 3P03
Non-Life Sciences students interested in this offering should refer to SCICOMM 3P03.

LIFESCI 3PP3 - COMMUNICATING SCIENCE FOR PROFESSIONAL AUDIENCES

In this course, students practice communicating science in different formats for varied professional audiences, such as other scientists, clinicians, investors, regulatory bodies and policymakers. They also critically analyze how professional science communication can influence public perceptions of science.
Lectures (two hours), virtual tutorials (one hour); one term
Prerequisite(s): LIFESCI 2AA3 or SCICOMM 2A03 and registration in Level III or above of an Honours Life Sciences program
Antirequisite(s): ISCI 2A18 A/B
Cross-list(s): SCICOMM 3PP3
Non-Life Sciences students interested in this offering should refer to SCICOMM 3PP3.

LIFESCI 3Q03 - GLOBAL HUMAN HEALTH AND DISEASE

This course explores some of the most pressing issues in global health, from infectious disease to addiction. Students will investigate disease mechanisms as well as societal factors that threaten health and wellbeing. Students will also think critically about the important role of communication between scientists, policymakers and communities.
Lectures (three hours); one term
Prerequisite(s): Registration in Level III or above of an Honours Science program
Priority will be given to students in an Honours Life Sciences program.

LIFESCI 3RC3 - RADIOISOTOPES IN MEDICINE

- systematic study of the use of radioactive isotopes and radiotracers in the physical and life sciences, including: radioisotope production; elucidating biochemical pathways using radiotracers; diagnostic radiopharmaceuticals in cancer and mental health care; and therapeutic radioisotopes and radiopharmaceuticals.

Lectures (three hours); one term
Prerequisite(s): CHEM 1A03 (or 1E03) and 1AA3
Cross-list(s): CHEM 3RC3
This course is administered by the Department of Chemistry and Chemical Biology.

LIFESCI 3RP3 - LIFE SCIENCES RESEARCH PRACTICUM

This course provides students with an opportunity to explore potential research projects under the supervision of a McMaster University faculty member. It is recommended for those considering undertaking a Level IV thesis and may involve laboratory, field work or literature review. Students are responsible for arranging a suitable placement and supervision, and are required to submit an online application thirty days prior to the date classes begin in each term (see the Sessional Dates section of this Calendar). More information and the online application can be found on the School of Interdisciplinary Science (SIS) website. Normally students will complete 60 hours in the placement.
Lecture (one hour); one term
Prerequisite(s): Registration in Level III or above of a Life Sciences program, or registration in Level III or above of an Honours Life Sciences specialization; and permission of an academic supervisor and the School of Interdisciplinary Science (SIS).
LIFESCI 3RP3 cannot be taken concurrently with any other Life Sciences research or thesis course.

LIFESCI 3W03 - GENETIC AND EPIGENETIC DETERMINANTS OF HEALTH: ROLE IN HEALTH DISPARITY

In this course, students will be introduced to the genetic and epigenetic determinants of health. Through case studies and the recent literature, students will explore the genetic and epigenetic causes of health disparities in various groups, including Indigenous and racialized populations.
Lectures (two hours); Tutorials (two hours); one term
Prerequisite(s): BIOLOGY 2C03 or LIFESCI 2G03 or MOLBIOL 2C03; and registration in Level III or above of an Honours program in the Faculty of Science

LIFESCI 3XX3 - PEER MENTORING

This course explores the pedagogy of peer mentorship. Students apply what they learn by providing support, advice, and guidance to more junior science students. They will also have the opportunity to assess their progress as mentors and communicate their findings using various science communication strategies. Applications will be available at the beginning of March on the School of Interdisciplinary Science (SIS) website. Applications must be submitted by April 1 of the preceding academic year. Successful students will be notified by May 30.
Lectures (three hours), tutorial (two hours); one term
Prerequisite(s): Registration in Level III or above of an Honours Life Sciences program; and a GPA of at least 7.0; and permission of the instructor
Prerequisite(s) (Effective 2026-2027): SCICOMM 2A03 and registration in Level III or above of an Honours Life Sciences program; and a GPA of at least 7.0; and permission of the instructor
Not open to students with credit or registration in LIFESCI 3YY3 or PSYCH 3TT3.

LIFESCI 3Z03 - LIFE SCIENCES INQUIRY

Provides an opportunity to explore various areas of study within the Life Sciences in a small-group learning environment.
Three hours (seminar); one term
Prerequisite(s): Registration in Level III of an Honours Life Sciences program. Some topics may have additional course requisites. Details may be found on the School of Interdisciplinary Science (SIS) website.

LIFESCI 3Z03 may be repeated, if on a different topic.
Some offerings may have a field/experiential component and/or be offered in a condensed term.
LIFESCI 3Z03 may not be offered each academic year.

LIFESCI 4A03 - LIFE SCIENCES ADVANCED RESEARCH PRACTICUM

An advanced research practicum, involving laboratory or field work or literature review under the supervision of a McMaster University faculty member.
More information and the online application can be found on the School of Interdisciplinary Science (SIS) website.
Students are responsible for arranging a suitable independent study and supervision, and are required to submit an online application thirty days prior to the date classes begin in each term (see the Sessional Dates section of this Calendar). Normally students will complete 60 hours in the practicum.
Lecture (one hour); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program and permission of the supervising faculty member and the School of Interdisciplinary Science (SIS). LIFESCI 3RP3 is highly recommended.
Antirequisite(s): LIFESCI 4B09 A/B S, LIFESCI 4C12 A/B S, 4D15 A/B S
LIFESCI 4A03 cannot be taken concurrently with any other Life Sciences research or thesis course. Students with previous credit or registration in any department- or program-based independent study course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively different for consideration.

LIFESCI 4B09 A/B S - INDEPENDENT PROJECT

This course provides students an opportunity to conduct an independent research study under the supervision of a McMaster University faculty member. More information and the online application can be found on the School of Interdisciplinary Science (SIS) website. Students are responsible for arranging a suitable independent project and supervision, and are required to submit an online application thirty days prior to the date classes begin in each term (see the Sessional Dates section of this Calendar).
Lecture (one hour); two terms
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program with a minimum GPA of 7.0 and permission of the supervising faculty member and the School of Interdisciplinary Science (SIS). LIFESCI 3RP3 is highly recommended.
Antirequisite(s): LIFESCI 4A03, 4C12 A/B S, 4D15 A/B S
LIFESCI 4B09 A/B S cannot be taken concurrently with any other Life Sciences research or thesis course.
Students with previous credit or registration in any department- or program-based independent study or project course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively different for consideration.

LIFESCI 4C12 A/B S - INDEPENDENT THESIS

An independent study under the supervision of a McMaster University faculty member. More information and the online application can be found on the School of Interdisciplinary Science (SIS) website. Students are responsible for arranging a suitable thesis and supervision, and are required to submit an online application thirty days prior to the date classes begin (see the Sessional Dates section of this Calendar).
Lecture (one hour); two terms
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program with a minimum GPA of 8.0 and permission of the supervising faculty member and the School of Interdisciplinary Science (SIS). LIFESCI 3RP3 is highly recommended.
Antirequisite(s): LIFESCI 4A03, 4B09 A/B S, 4D15 A/B S
LIFESCI 4C12 A/B S cannot be taken concurrently with any other Life Sciences research or thesis course.

LIFESCI 4CM3 - FOUNDATIONS OF DISEASE STATES INQUIRY LAB

In this inquiry-based lab course, students learn and apply current techniques to study the behavioural, cellular, and molecular basis of human disease states.
Lecture (one hour), one lab or workshop (four hours); one term
Prerequisite(s): STATS 2B03, LIFESCI 3M03 and registration in Level IV or above of an Honours Life Sciences (B.Sc.) program.

LIFESCI 4D15 A/B S - INDEPENDENT THESIS

An independent study under the supervision of a McMaster University faculty member. More information and the online application can be found on the School of Interdisciplinary Science (SIS) website. Students are responsible for arranging a suitable thesis and supervision, and are required to submit an online application thirty days prior to the date classes begin (see the Sessional Dates section of this Calendar). Normally students will complete 180 hours of independent thesis work through the duration of the course.
Lecture (one hour); two terms
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program with a minimum GPA of 10.5 and permission of the supervising faculty member and the School of Interdisciplinary Science (SIS). LIFESCI 3RP3 is highly recommended.
Antirequisite(s): LIFESCI 4A03, 4B06 A/B, 4B09, 4C09 A/B, 4C12 A/B S
LIFESCI 4D15 A/B cannot be taken concurrently with any other Life Sciences research or thesis course.

LIFESCI 4DD3 - RACISM & HEALTH INEQUITIES IN SCIENCE & HEALTH CARE

In this course students will explore and discuss how racism, prejudice, and biases have shaped scientific thought and medical practice. Students will also discuss how systemic racism has impacted how racialized and marginalized groups receive health care.
Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program Preferential enrolment is done by preregistration ballot (See Department Note 2 above).
Completion of LIFESCI 3W03 is strongly recommended prior to registration in LIFESCI 4DD3.

LIFESCI 4E03 - SCIENCE & STORYTELLING

Communicating science through stories can increase the visibility and impact of developments in the field. This course will explore the role of storytelling in communicating science across various cultures and to a wide range of audiences. Students will engage with and produce different types of stories and consider how they can be leveraged to make scientific knowledge more accessible.
Seminar and discussions in small groups (three hours); one term
Prerequisite(s): LIFESCI 3P03 and registration in Level IV or above of an Honours Life Sciences program
Not open to students with credit in LIFESCI 4L03, if the Topic was Science & Storytelling.
Preferential enrolment is done by pre-registration ballot (See Department Note 2 above).

LIFESCI 4EP6 A/B S - LIFE SCIENCES ADVANCED PLACEMENT

This placement course provides students in the Life Sciences program with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement. More information and the online application can be found on the School of Interdisciplinary Science (SIS) website.
Students are responsible for arranging a suitable placement and supervision, and are required to submit an online application thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). Normally students will complete 120 hours of placement work through the duration of the experience.
Lectures (two hours); two terms
Prerequisite(s): Registration or credit in SCIENCE 2C00, registration in Level IV or above of an Honours Life Sciences program and permission of the School of Interdisciplinary Science (SIS).
LIFESCI 4EP6 A/B cannot be taken concurrently with any other Life Sciences placement.
Students with previous credit or registration in any department- or program-based applied placement, internship or practicum course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively different for consideration.

LIFESCI 4F03 - EMERGING PARADIGMS IN ENVIRONMENTAL CHANGE AND HEALTH

Advanced seminar on selected aspects of the relation between environmental change and human health.
Seminar and discussions in small groups (three hours); one term
Prerequisite(s): LIFESCI 2X03 and registration in Level IV or above of an Honours Life Sciences (B.Sc.) program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4H03 - REGENERATION: WHAT CAN WE LEARN FROM ANIMAL MODELS?

Regeneration is the process by which lost body parts are replaced or restored. There is widespread variability in the ability of organisms to regenerate. In this course we will explore, through the examination of the current scientific literature, what is known about the molecular mechanisms underlying this process and the current tools employed to explore this highly sought after ability.
Seminar and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Science program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4I03 - RESEARCH SEMINAR

Advanced seminar focusing on selected topics in an area of Life Sciences.
Seminar and discussion in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Science program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4J03 - SCIENCE COMMUNICATION IN THE MEDIA

Media coverage of scientific discoveries can shape the public opinion of science and influence policy decisions. In this course, students will take a critical look at how journalists portray science and examine the consequences of poor science communication. Students will practice translating complex concepts for diverse audiences and create different forms of science journalism, such as articles, op-eds and podcasts.
Seminar and discussions in small groups (three hours); one term
Prerequisite(s): LIFESCI 3P03 and registration in Level IV or above of an Honours Life Sciences program
Not open to students with credit in LIFESCI 4P03, if the Topic was Science Communication in the Media.
Preferential enrolment is done by pre-registration ballot (See Department Note 2 above).

LIFESCI 4L03 - OUR INVISIBLE BODY: MICROBES AND HUMAN HEALTH

This seminar course will investigate microbes (bacteria, fungi, viruses) and their role in human health. Students will review current research on the different microbial environments within the human body and explore the complex and mysterious relationship struck between ourselves and our microscopic counterparts with respect to health, well-being, and disease.
Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4M03 - RESEARCH SEMINAR

Advanced seminar focusing on selected topics in an area of Life Sciences.
Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences (B.Sc.) program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4N03 - RESEARCH SEMINAR

Advanced seminar focusing on selected topics in an area of Life Sciences.
Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences (B.Sc.) program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4O03 - RESEARCH SEMINAR

Advanced seminar focusing on selected topics in an area of Life Sciences.
Seminar and discussion in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Science program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4P03 - ANCIENT SCIENTIFIC LITERATURE

We will be investigating the origins of scientific activity - observing, measuring, and describing natural phenomena - in ancient or very early periods of cultures which are recorded via written texts. Students will discuss how language, culture, geography, and society shaped and influenced what we now call scientific endeavours.

Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Science, Honours Integrated Science, or Honours Arts and Science program.
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4Q03 - RESEARCH SEMINAR

Advanced seminar focusing on selected topics in an area of Life Sciences.
Seminars and discussions in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4U03 - MECHANISMS OF DISEASE

Students will analyze molecular and cellular research on disease pathogenesis, explore how cellular miscommunication results in disease, and investigate the design process behind targeted therapeutics.
Seminar and discussion in small groups (three hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program. Completion of LIFESCI 3M03 or MOLBIOL 3B03 is strongly recommended.
Preferential enrolment is done by preregistration ballot (See Department Note 2 *above).*

LIFESCI 4W03 - ADVANCED TOPICS IN NUTRITION

This course will extend the study of nutrition beyond the examination of macro-, and micro-nutrients to investigating topics such as dietary analysis/ planning, supplementation usage, and human health/disease management.
Seminar and discussion in small groups (three hours); one term
Prerequisite(s): LIFESCI 2N03; and registration in Level IV or above of an Honours Life Sciences program
Preferential enrolment is done by preregistration ballot (See Department Note 2 *above).*

LIFESCI 4X03 - THE BIOPSYCHOLOGY OF SEX

This course will explore topics in the scientific study of human sexuality from an anatomical, behavioural, and neuroendocrine perspective. Sample topics may include reproductive strategies, fertility, pregnancy and childbirth, sexual development, gender differences, and sexually transmitted infections.
Seminar and discussion in small groups (two hours), tutorial (one hour); one term
Prerequisite(s): LIFESCI 3E03 (or 3C03); and registration in Level IV or above of an Honours Life Sciences program
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4XX3 - THE SYNAPSE

Exploration of classical and current research on the mechanisms of synaptic transmission, with a focus on the neuromuscular junction, sensory receptors, memory formation, and the roles of synapses in disease.
Seminar and discussion in small groups (two hours), tutorial (one hour); one term
Prerequisite(s): LIFESCI 3BB3 and registration in Level IV or above of Honours Life Sciences Sensory-Motor Systems Specialization or permission of the instructor
Enrolment is guaranteed for students in Honours Life Sciences Sensory-Motor Systems Specialization. Preferential enrolment for remaining seats is done by preregistration ballot (See Department Note 2 above).

LIFESCI 4Y03 - APPLIED BIOMECHANICS

- combination of lectures and problem based learning on aspects of human movement facing the modern biomechanist. Topics and problems are taken from occupational, clinical and sport biomechanics.

Three hours (lectures, tutorials); one term
Prerequisite(s): LIFESCI 3J03, and registration in Level IV or above of an Honours Life Sciences program. Completion of KINESIOL 2X03 or 2Y03 is strongly recommended.
Cross-listed: KINESIOL 4AA3
Preferential enrolment is done by preregistration ballot (See Department Note 2 above).
Not open to students registered in a Kinesiology program. This course is administered by the Department of Kinesiology.

LIFESCI 4Z03 - ADVANCED INQUIRY IN THE LIFE SCIENCES

Offers in-depth exploration of a topic in the life sciences in the context of current societal challenges. Students will formulate questions and seek answers through critically evaluating research literature and interpreting data. They will communicate the meaning and significance of scientific findings through written, visual or oral formats in a collaborative learning environment.
Lecture (two hours), Tutorials (two hours); one term
Prerequisite(s): Registration in Level IV or above of an Honours Life Sciences program

Linguistics

Courses in Linguistics are administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/

Department Notes

1. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
2. The following are courses open as electives to students registered in Level II or above of any undergraduate program:
   - LINGUIST 2E03 - The Nature of Texts: From Slang to Formal Discourse
   - LINGUIST 2FL3 - Introduction to Forensic Linguistics
   - LINGUIST 2S03 - Language and Society
   - LINGUIST 3AS3 - Language and Communication in Autism Spectrum Disorder
3. Students with introductory linguistics may also consider the following as elective options:
   - LINGUIST 2L03 - Phonetics
   - LINGUIST 2LC3 - Historical Linguistics: Language Evolution and Change
   - LINGUIST 2LL3 - Languages of the World and Linguistic Universals
   - LINGUIST 2PS3 - Psycholinguistics
   - LINGUIST 2SY3 - Syntax
   - LINGUIST 3C03 - Child Language Acquisition
   - LINGUIST 3E03 - Teaching English as a Second Language (ESL)
   - LINGUIST 3F03 - Anatomy and Physiology for Speech, Language and Hearing
   - LINGUIST 3LA3 - Introduction to Second Language Acquisition
   - LINGUIST 3PG3 - Introduction to Programming for Linguistics

Courses

If no prerequisite is listed, the course is open.

LINGUIST 1A03 - INTRODUCTION TO LINGUISTICS: SPEAKING, SIGNING AND HEARING

An introduction to language science, focusing how speakers and signers use the body to produce and perceive language, and the systematic similarities between signed and spoken languages.
Three hours (lecture, web module); one term
LINGUIST 1A03 and 1AA3 prepare students for further study in Linguistics and Cognitive Science of Language.

LINGUIST 1AA3 - INTRODUCTION TO LINGUISTICS: WORDS, SENTENCES AND MEANING

- further introduction to the scientific study of language. The course focuses on how the mind organizes words into sentences and assigns meanings to words and sentences, concentrating on elements that are universal to all human languages.

Three hours (lecture, web module); one term
LINGUIST 1A03 and 1AA3 prepare students for further study in Linguistics and Cognitive Science of Language.

LINGUIST 1E03 - INTRODUCTION TO ENGLISH LINGUISTICS I

This course introduces students to the study of the linguistic structure of contemporary English, particularly the distinctive sounds of English and how they are organized (phonetics and phonology), and the analysis of the structure of words (morphology) and their meaning in modern English.
Three hours (lecture), one hour (tutorial); one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program
Antirequisite(s): LINGUIST 1Z03

LINGUIST 1EE3 - INTRODUCTION TO ENGLISH LINGUISTICS II

This course explores the linguistic structure of contemporary English, focusing on the analysis of sentence structure (syntax), the meaning of words (lexical semantics) and the interaction of sentence structure, meaning and language use (pragmatics).
Three hours (lecture), one hour (tutorial); one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program
Antirequisite(s): LINGUIST 1ZZ3

LINGUIST 1Z03 - STRUCTURE OF MODERN ENGLISH I

This course introduces students to the description and transcription of sounds in contemporary English, to the rules governing pronunciation, and to the study of word formation and meaning in contemporary English.
Three hours; one term
Antirequisite(s): LINGUIST 1E03

LINGUIST 1ZZ3 - STRUCTURE OF MODERN ENGLISH II

This course examines the structure of contemporary English sentences, and how sentences are used to build larger meaningful units of written and spoken communication.
Three hours; one term
Antirequisite(s): LINGUIST 1EE3

LINGUIST 2D03 - RESEARCH METHODS

An introduction to qualitative and quantitative approaches to research in linguistics, including topics such as research ethics, principles of data gathering and analysis, and fundamentals of statistical analysis and inference, including ANOVA.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in Linguistics or Cognitive Science of Language; or registration in the Diploma in Indigenous Language Revitalization
Antirequisite(s): ENVSOCTY 3MA3, HLTHAGE 2A03, POLSCI 2NN3, POLSCI 3N06 A/B, SOCIOL 2Z03, SOCIOL 3H06 A/B
Not open to students with credit in PSYCH 2RA3 or equivalent.

LINGUIST 2DD3 - STATISTICS FOR LANGUAGE RESEARCH

The course explores the use and analysis of quantitative data in empirical linguistic research using the statistical software package R. The covered techniques include descriptive and inferential statistics, ANOVA, and regression.
Three hours (lectures and tutorials); one term
Prerequisite(s): LINGUIST 2D03
Antirequisite(s): ECON 2B03, ENVSOCTY 3MB3, PNB 2XE3, POLSCI 3N06 A/B, POLSCI 3NN3, PSYCH 2RA3, SOCSCI 2J03, SOCIOL 3H06 A/B, STATS 2B03
Students registered in a Combined Honours program with a program in the Faculty of Social Sciences should consult an academic advisor to confirm which courses satisfy their statistics requirements.

LINGUIST 2E03 - THE NATURE OF TEXTS: FROM SLANG TO FORMAL DISCOURSE

This course introduces students to the field of discourse analysis and investigates a variety of styles and registers from the conversational to the literary and from the journalistic to the academic.
Three hours; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): CMST 2E03

LINGUIST 2FL3 - INTRODUCTION TO FORENSIC LINGUISTICS

An introduction to the discipline of language and the law. Through a consideration of several famous trials and cases, topics covered include: speaker/voice identification, the language of police interrogations, courtroom language, forensic document investigation, the nature of legal language, the linguist as expert witness.
Three hours; one term
Prerequisite(s): Registration in Level II or above

LINGUIST 2L03 - PHONETICS

- study of the sounds of language, human articulatory capabilities and speech production, human auditory and speech perception (ear and brain) and phonetic transcription.

Three hours (lectures and tutorial); one term
Prerequisite(s): LINGUIST 1A03

LINGUIST 2LC3 - HISTORICAL LINGUISTICS: LANGUAGE EVOLUTION AND CHANGE

An examination of key concepts in language change including: grammatical change (e.g. phonological change), comparative and internal reconstruction, socio-historical considerations (language contact and variation), the birth and

death of languages.
Three hours; one term
Prerequisite(s): LINGUIST 1AA3
Antirequisite(s): LINGUIST 2AA3

LINGUIST 2LL3 - LANGUAGES OF THE WORLD AND LINGUISTIC UNIVERSALS

The study of diversity in the languages of the world, language universals, and the parameters of cross-linguistic analysis of grammatical systems.
Three hours; one term
Prerequisite(s): LINGUIST 1A03 and 1AA3; or registration in the Diploma in Indigenous Language Revitalization

LINGUIST 2PH3 - PHONOLOGY

- study of the patterns of distinctive sounds in the world's languages.

Three hours; one term
Prerequisite(s): LINGUIST 2L03

LINGUIST 2PS3 - PSYCHOLINGUISTICS

Examines evidence from behavioural experiments to study how the human mind understands sounds, words, and sentences. The class involves team-based projects; regular attendance is vital.
Three hours; one term
Prerequisite(s): LINGUIST 1A03 and 1AA3; or registration in the Diploma in Indigenous Language Revitalization

LINGUIST 2RP3 A/B S - INDIVIDUAL PRACTICUM IN INDIGENOUS LANGUAGE REVITALIZATION

In this Experiential Learning course, students learn hands-on skills either by working on a research project (e.g., running experiments, conducting fieldwork, reviewing literature) or on a pedagogical project with a focus on Indigenous language revitalization. Students can collaborate on a faculty member's research project or propose a project to be supervised by a faculty member or jointly by an Indigenous community leader and a faculty member.
Prerequisite(s): Registration in the Diploma in Indigenous Language Revitalization or registration in Level II or above of a program in Linguistics with a minimum cumulative Grade Point Average of 9.0 and permission of the Department.

LINGUIST 2S03 - LANGUAGE AND SOCIETY

An introduction to sociolinguistics covering such topics as linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.
Three hours; one term
Prerequisite(s): Registration in Level II or above; or registration in the Diploma in Indigenous Language Revitalization
Antirequisite(s): CMST 3G03, IBH 1AC3, LINGUIST 3X03, PEACEST 2LS3
Cross-list(s): PEACJUST 2LS3
This course is administered by the Department of Linguistics and Languages.

LINGUIST 2SL3 - INTRODUCTION TO AMERICAN SIGN LANGUAGE

This course introduces students to concepts related to people, places and things within the immediate environment, as well as the basic values and norms of the Deaf culture. Students will learn how to conduct simple, everyday conversations and will gain basic numeracy skills.
Three hours; one term
Not open to students with credit in ASL 102 from the Canadian Hearing Society or equivalent.

LINGUIST 2SY3 - SYNTAX

The study of sentence structure in many languages. The emphasis is on using empirical data to test theoretical proposals.
Three hours (lectures and tutorial); one term
Prerequisite(s): LINGUIST 1AA3

LINGUIST 3AA3 - APPLIED LINGUISTICS

The course provides students a contrast to formal linguistics. Incorporating both sociocultural and cognitive perspectives, the course explores how linguistics contributes to real-world issues. Students will learn about the fundamental themes, tools, and participants of applied linguistics through a survey of specialist areas such as: language teaching and education, literacy and language disorders; language variation; language policy and planning; lexicography; multilingualism; translation.
Three hours; one term
Prerequisite(s): LINGUIST 1A03, 1E03, or 1Z03; and LINGUIST 1AA3, 1EE3, or 1ZZ3; and registration in Level III or above
Antirequisite(s): LINGUIST 4AA3

LINGUIST 3AS3 - LANGUAGE AND COMMUNICATION IN AUTISM SPECTRUM DISORDER

Students will learn about Autism Spectrum Disorder and theories put forth to explain it, with a focus on language and social impairments. Conflicting views on language deficits in ASD will be explored and current research into language abilities in ASD will be introduced.
Cross-list(s): INSPIRE 3AS3
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HUMBEHV 2A06 A/B
Not open to students with credit in INSPIRE 3EL3 if the topic was Language and Communication in Autism Spectrum Disorder.

LINGUIST 3C03 - CHILD LANGUAGE ACQUISITION

Language behaviour and development in children, from birth to school age. The course examines how data from children's language acquisition can inform linguistic theory.
Three hours; one term
Prerequisite(s): LINGUIST 1A03; and one of LINGUIST 1AA3, PNB 2XA3 or PSYCH 2H03
Cross-list(s): PSYCH 3C03
This course is administered by the Department of Linguistics and Languages.

LINGUIST 3DS3 - ASL & DEAF STUDIES

This course develops an understanding of the concept of Deaf people and users of American Sign Language (ASL). We then focus on the complexities and varieties of Deaf experiences. Students will engage with the course material through multi-disciplinary approaches in order to gain a critical appreciation of Deaf lives and an understanding of the importance of ASL within historical, political, and global contexts.
Three hours; one term
Prerequisite(s): Registration in Level III or above

LINGUIST 3E03 - TEACHING ENGLISH AS A SECOND LANGUAGE (ESL)

- survey of methods for teaching English as a Second or Other Language, including Canadian Language Benchmarks and worldwide standards.

Three hours; one term
Prerequisite(s): LINGUIST 1A03 or 1Z03; and 1AA3 or 1ZZ3
Antirequisite(s): LINGUIST 4E03

LINGUIST 3F03 - ANATOMY AND PHYSIOLOGY FOR SPEECH, LANGUAGE AND HEARING

Anatomy and physiology of human speech production and hearing. Systems for speech production (lungs, glottis, vocal tract, jaw, lips) and perception (outer/middle/inner ear, auditory processing) and anatomy of brain areas for speech perception.
Three hours; one term
Prerequisite(s): LINGUIST 1A03

LINGUIST 3II3 - SEMANTICS

The study of patterns of meaning in language; a critical survey of theories and issues.
Three hours; one term
Prerequisite(s): LINGUIST 2SY3

LINGUIST 3LA3 - INTRODUCTION TO SECOND LANGUAGE ACQUISITION

The course introduces the students to major theories in second language acquisition through readings and problem-based assignments. The objective is to learn about theories as well as practise using them as a basis for generating ideas for both practical applications and research.
Three hours; one term
Prerequisite(s): LINGUIST 1AA3 and registration in Level II or above

LINGUIST 3M03 - MORPHOLOGY

The study of word formation in the languages of the world; a critical survey of current theories and issues.
Three hours; one term
Prerequisite(s): LINGUIST 2SY3 and 2PH3

LINGUIST 3NL3 - COGNITIVE NEUROSCIENCE OF LANGUAGE

- survey of the current scientific literature dealing with brain function related to language processes in typical and special populations.

Three hours; one term
Prerequisite(s): Registration in Level III or IV of a program in Linguistics, Cognitive Science of Language, Honours or Combined Honours Psychology, Neuroscience & Behaviour program or an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program
Antirequisite(s): LINGUIST 4F03, PSYCH 4L03
Cross-list(s): PSYCH 3NL3

LINGUIST 3P03 - PRAGMATICS

- discussion of the problems confronting the linguist in the study of text and discourse at the level beyond the sentence. The course will deal with the interaction between grammar and situational factors.

Three hours; one term
Prerequisite(s): LINGUIST 1AA3 or FRENCH 2H03
Antirequisite(s): CMST 3V03

LINGUIST 3PG3 - INTRODUCTION TO PROGRAMMING FOR LINGUISTICS

An introduction to the fundamental principles of computing and developing programming skills using simple examples from programming languages/environments such as Matlab, Praat, Python, or R. The course applies practical examples from different core areas of Linguistics.
Three hours; one term
Prerequisite(s): Three units of LINGUIST 1A03, 1E03 or 1Z03; and three units of LINGUIST 1AA3, 1EE3 or 1ZZ3

LINGUIST 3RP3 A/B S - INDIVIDUAL RESEARCH PRACTICUM

In this Experiential Learning course, students learn hands-on linguistic research skills (e.g., running experiments, conducting interviews, reviewing literature) by collaborating in a faculty member's research project. Consult the department website for instructions on requesting permission for this course.
Prerequisite(s): LINGUIST 2D03 and registration in Level III or IV of Honours Linguistics or Honours Cognitive Science of Language; or registration in the Diploma in Indigenous Language Revitalization; and permission of the Department.

LINGUIST 3SL3 - INTERMEDIATE AMERICAN SIGN LANGUAGE

Expands students vocabulary and grammar for communication in American Sign Language. Further explores the attributes of Deaf culture.
Three hours; one term
Prerequisite(s): LINGUIST 2SL3 or equivalent
Not open to students with credit in ASL 104 from the Canadian Hearing Society or equivalent.

LINGUIST 3WC3 - WRITING ABOUT SCIENCE

Students will learn how to read and write primary research articles and abstracts as well as how to conduct a critical review of current research.
Three hours; One term
Prerequisite(s): Registration in Level II or above

LINGUIST 4AS3 - TOPICS IN ADVANCED SEMANTICS

This course examines advanced issues in formal semantics, seeking to evaluate the current formal semantics theory and to address the data that fall beyond the basic theory introduced in LINGUIST 3II3.
Seminar (three hours); one term
Prerequisite(s): LINGUIST 3II3 and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4BP3 - BILINGUAL PHONOLOGY

This course examines theories of acquisition and production of bilingual phonology in populations of early bilinguals, late bilinguals, and heritage bilinguals. This course exposes students to recent findings in the literature of bilingual phonology and prepares them to conduct independent research in populations of bilingual speakers.
Three hours; one term
Prerequisite(s): LINGUIST 2L03 and 2PH3; and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4D03 - COMPUTERS AND LINGUISTIC ANALYSIS

This course studies the applications of computer technology to language processing, including corpus research, parsers and machine translation.

Lecture and lab (three hours); one term
Prerequisite(s): LINGUIST 2DD3 and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4EL3 - LABORATORY IN EXPERIMENTAL LINGUISTICS

Experimental methods used to study language processing or acquisition. Students write a report of their findings and present a poster at the departments Student Research Day.
Two hours plus lab work; one term
Prerequisite(s): LINGUIST 2D03 and LINGUIST 2PS3; and one of 3C03, 3LA3, LINGUIST 3NL3 or 4F03 and registration in Level IV of a program in Linguistics or Cognitive Science of Language **Antirequisite(s):** LINGUIST 3PS3

LINGUIST 4G03 - LANGUAGE, SEX AND GENDER

This course investigates how patterns of language behaviour interact with social categories of gender and sexuality, and how speakers use language to express their gender and sexual identities.
Three hours; one term
Prerequisite(s): LINGUIST 2S03; and registration in Level IV of a program in Linguistics or Cognitive Science of Language, or permission of the department for students pursuing a minor in Gender Studies

LINGUIST 4HL3 - HERITAGE LANGUAGES IN THE HAMILTON DIASPORA

In this experiential, problem-based learning course, students will engage with community partners to study linguistic aspects of identity formation among immigrants to the Hamilton region. Students will use interviews, historical archives and other ethnographic and sociolinguistic tools to explore and document linguistic and cultural diversity in Hamilton.
Seminar (two hours) plus off-campus fieldwork; one term
Prerequisite(s): Registration in Level IV of a program in Linguistics or Cognitive Science of Language or permission of the department

LINGUIST 4II3 A/B S - INDEPENDENT STUDY

The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area where the student has already demonstrated competence. Consult the department website for instructions on requesting permission for this course.
Prerequisite(s): 18 units of Linguistics above Level I and permission of the Department
Antirequisite(s):LINGUIST 4Y06 A/B

LINGUIST 4LB3 - ADVANCED PHONETICS AND PHONOLOGY

This course examines advanced issues in phonetics and phonology, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is data oriented, with material taken from several languages.
Three hours; one term
Prerequisite(s): LINGUIST 2L03 and 2PH3; and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4LC3 - ADVANCED SYNTAX AND ITS INTERFACES

This course examines advanced issues in syntax with a special focus on syntax interfaces (morphology, semantics). The course exposes students to the current theory of syntax. The course is data oriented, with material taken from several languages.
Three hours; one term
Prerequisite(s): LINGUIST 2SY3 and LINGUIST 3M03; and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4LX3 - THE STRUCTURE OF X

This course will offer the student an opportunity to examine one or more languages in detail in order to apply in a realistic setting abstract principles and techniques learned in topical courses. Methods of elicitation and recording will also be taught.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4NN3 - LABORATORY IN COGNITIVE NEUROSCIENCE OF LANGUAGE

Cognitive neuroscience methods used to study language. Hands-on experience using electrophysiological methods and EEG/ERP analysis techniques. Students write a report of their findings and present a poster at the departments Student Research Day.
Seminar (two hours) plus lab work; one term
Prerequisite(s): LINGUIST 2D03, LINGUIST 2PS3, and LINGUIST 3NL3 and registration in Level IV of a program in Linguistics or Cognitive Science of Language.
Antirequisite(s): LINGUIST 3N03

LINGUIST 4PL3 - ADVANCED PROGRAMMING FOR LINGUISTICS

An advanced experiential study of natural language processing applications using programming languages/environments such as Matlab, Praat, Python or R. Topics might include word categorization and tagging, text classification, or speech analysis and synthesis.
Three hours; one term
Prerequisite(s): LINGUIST 3PG3 and registration in Level III or IV of a program in Linguistics or Cognitive Science of Language.
Antirequisite(s): LINGUIST 3PL3

LINGUIST 4R03 - CROSS-CULTURAL COMMUNICATION

Students will explore the links between language and culture and learn skills necessary to be intermediaries between cultures. Topics include: communication between genders, the cognitive role of metaphor, language and perception, emotions across cultures, culture and advertising, body language and cultural stereotyping.
Seminar (two hours); one term
Prerequisite(s): Registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4SL3 - SLP PRACTICUM

In this Experiential Learning course, students complete at least 36 hours observing and working under the supervision of a registered Speech-Language Pathologist and complete a Learning Portfolio documenting their experience. Consult the department website for instructions on requesting permission for this course.
One term
Prerequisite(s): Registration in Level IV of the Honours Cognitive Science of Language program with a Grade Point Average of 9.0; and permission of the Department

LINGUIST 4SS3 - SEMINAR IN SOCIOLINGUISTICS

Topics may include pidgins & creoles, language and gender, language variation & change, or others.
Seminar (two hours); one term
Prerequisite(s): LINGUIST 2S03, or 3X03; and registration in Level IV of a program in Linguistics or Cognitive Science of Language
Not open to students with credit in LINGUIST 4M03;if the topic is Pidgins & Creoles. Consult the Department for the topic each year.

LINGUIST 4TP3 - TEACHING PRACTICUM FOR LINGUISTS

In this Experiential Learning course, students complete at least 36 hours observing and practice teaching under the supervision of a Linguistics instructor. Students will complete a Learning Portfolio documenting their experience. Practice teaching topics will be offered in TESL or Linguistics on rotation. Consult the department website for topic and instructions on requesting permission for this course.
Three units; One term
Prerequisite(s): Registration in Level IV of a program in Linguistics with a minimum cumulative Grade Point Average of 9.0 and permission of the Department.
Antirequisite(s): LINGUIST 4TE3

LINGUIST 4XX3 - TOPICS IN LINGUISTIC THEORY

Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite(s): LINGUIST 2PH3 and 2SY3; and registration in Level IV of a program in Linguistics or Cognitive Science of Language

LINGUIST 4Y06 A/B - HONOURS THESIS

Students conduct an individual research project under the supervision of a Department of Linguistics and Languages faculty member or associate member. A written paper and a presentation at the Department's Student Research Day are required. Consult the department website for instructions on requesting permission for this course.
Prerequisite(s): LINGUIST 2D03; and registration in Level IV of a program in Linguistics or Cognitive Science of Language with a Grade Point Average of at least 9.0; and permission of the Department
Antirequisite(s): LINGUIST 4II3 A/B S

STEP 1SP0 - SUMMER TRANSITION ENGLISH PREP

Manufacturing Technology

Courses in Manufacturing Engineering Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca

MANTECH 3LS3 - QUALITY CONTROL AND ASSURANCE METHODS

Formerly MANTECH 4LS3
Detail understanding of Six sigma, Kaizen, KANBAN, supply chain and outsourcing. Concepts on planning, measurement, control, improvement of quality, analysis of variation and sampling techniques.
Three lectures; one term
Prerequisite(s): ENGTECH 3MA3 and registration in the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 4ST3, GENTECH 3LS3

MANTECH 3MF3 - MICRO MANUFACTURING AND FABRICATION

Joining, welding, casting, forming, grinding, abrasive waterjet, ultrasonic machining, grinding, laser processes, micro-scale cutting, chemical etching, polishing, electric discharge machining, lithographic process, ion beam technology, inspection.
Three lectures; one term
Prerequisite(s): ENGTECH 3SP3 and registration in the Manufacturing Engineering Technology Co-op program
Cross-list(s): MECHENG 3C03
This course is administered by the Department of Mechanical Engineering.

MANTECH 4FM3 - CIM AND FLEXIBLE MANUFACTURING

Facility layout; cellular manufacturing; flexible manufacturing systems; programmable logic controllers (PLCs); computer-aided process control; quality control and inspection principles; inspection technologies; coordinate measuring machines (CMM).
Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, MANTECH 3MF3 and registration in the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 3FM3

MANTECH 4MM3 - DESIGN AND MANUFACTURING OF MACHINE ELEMENTS

Theory and methodology related to conceptual design; simple design factor; variable loads; stress concentrations; bolted joints; shaft and bearing design; characterization of manufacturing in design.
Three lectures; one term
Prerequisite(s): ENGTECH 3ET0, ENGTECH 4FA3, and registration in the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 4MT3

MANTECH 4PD3 - SENIOR ENGINEERING DESIGN PROJECT

- design project involving integration of materials science, manufacturing process and applied mechanics concepts gained from previous courses. The project involves failure analysis, proposal of possible solutions, and design process concept analysis. Projects should have a research component that involves review of published academic journals.

Three lectures, one term
Prerequisite(s): ENGTECH 3ET0, MANTECH 4MM3, MANTECH 3MF3 and registration in the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 4DA3

MANTECH 4PM3 - PRODUCTION MANAGEMENT

Identification of technical, economic, social, characteristics in the production system; forecasting techniques; inventory models; aggregate planning of production; materials requirements planning; scheduling; sequencing; production control.
Three lectures; one term
Prerequisite(s): MANTECH 3LS3 or 4LS3 and registration in the Manufacturing Engineering Technology Co-op program

MANTECH 4RM3 - ROBOT MECHANICS AND MECHATRONICS

Basic robot categories; robot components; mobility/constraint analysis; workspace analysis; manipulator kinematics and motion trajectories; non-

redundant and redundant sensing/actuation of manipulators; manipulator statics; singularities; manipulator dynamics.
Three lectures; one term
Prerequisite(s): ENGTECH 3CT3 or 4CT3 and registration in the Manufacturing Engineering Technology Co-op program
Antirequisite(s): MANTECH 4MC3, AUTOTECH 4CI3

Materials

Courses in the Materials Engineering program are administered by the Department of Materials Science and Engineering.
John Hodgins Engineering Building, Room 357, ext. 24293
https://www.eng.mcmaster.ca/materials

Courses

If no prerequisite is listed, the course is open.

Department Note

All Materials Science & Engineering courses are open to students registered in the Materials Engineering program, subject to prerequisite requirements. Prior permission of the department may be necessary for students from other Engineering departments and other faculties.

MATLS 2A04 - INTRODUCTION TO MATERIALS ENGINEERING

Crystallography, phase diagrams, phase transformations, Miller indices, slip systems and the basis of plastic deformation, biomaterials, tools for materials analysis, metallography, introduction to microstructure/property relations.
Two lectures, one tutorial (two hours), one lab (three hours), first term
Prerequisite(s): Registration in Level II or above in any Materials Engineering
Antirequisite(s): MATLS 2H04, MATLS 2X03

MATLS 2B03 - INTRODUCTION TO THE THERMODYNAMICS OF MATERIALS

First and Second Laws. Reversible and irreversible processes. State functions, variables, relations among them. The Third Law. Thermodynamics of reactions. Unary systems. Real gases. Electrochemistry.
Two lectures, one lab (two hours every other week), two tutorials; first term
Prerequisite(s): CHEM 1A03 or CHEM 1E03; and registration in Level II or above in any Materials Engineering
Antirequisite(s): ENGPHYS 2H04, PHYSICS 2H04

MATLS 2D03 - THERMODYNAMICS OF ALLOYS AND PHASE DIAGRAMS

Configurational entropy. Molar Gibbs energies. Activities, chemical potentials. Raoult's and Henry's Laws. Regular solutions. Eutectic, peritectic, other types of phase diagrams. Phase rule. Multicomponent solutions.
Two lectures, one lab (two hours every other week), two tutorials; second term
Prerequisite(s): CHEM 1A03 or 1E03; and MATLS 2B03; and Registration in Level II or above in any Materials Engineering

MATLS 2Q03 - ELECTRONIC PROPERTIES OF MATERIALS

An introduction to the electronic structure and properties of materials: electrons and their behaviour in vacuum and in a crystal lattice, electronic structure of elements, crystal bonding, free electron theory of metals and band structure of solids, electrical and thermal properties of solids.
Three lectures; one lab (three hours every other week); second term
Prerequisite(s): Registration in Level II or above in any Materials Engineering
Antirequisite(s): MATLS 2Q04

MATLS 3B03 - MANUFACTURING ENGINEERING OF MULTIFUNCTIONAL AND BIOMEDICAL MATERIALS

Surface science and technology related to the preparation of fine particles of minerals, metals and ceramics for industrial production. Application of electrochemistry for diverse materials processing, such as electrometallurgy, thin film production and anodizing.
Three lectures; second term
Prerequisite(s): MATLS 2D03; and Registration in Level II or above in any Materials Engineering

MATLS 3C03 - APPLIED THERMODYNAMICS

Gaseous systems. Phase rule. Systems with gas phase and pure condensed phases. Ellingham diagram. Predominance diagrams. Systems with gas phase and condensed solutions. Pourbaix diagrams. Thermodynamics of multi-component systems.
Two lectures, one lab (three hours every other week), two tutorials; first term
Prerequisite(s): MATLS 2D03; and Registration in Level II or above in any Materials Engineering

MATLS 3E04 - MASS TRANSFER

Phenomenological and mechanistic approaches to steady and non-steady state diffusion, boundary conditions, mechanisms of diffusion, Arrhenius behaviour, gas-solid reactions, precipitate growth and dissolution, plate and spherical geometries, plane front solidification, diffusion in concentrated alloys, the Kirkendall effect, the interdiffusion coefficient, diffusion couples with intermediate phases, mass transport with convection, transient diffusion in fluids, the mass transfer coefficient.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): MATLS 2D03 and MATH 2ZZ3; and Registration in Level II or above in Materials Engineering; and permission of the department
This course is being phased out.

MATLS 3F03 - HIGH-TEMPERATURE MATERIALS PRODUCTION

Fundamentals of processing, building on a knowledge of heat and mass transfer. High temperature processing of materials, focusing on heat sources, solid state processing of powders and liquid state processing, high temperature production routes for most important metals.
Three lectures, one tutorial; second term
Prerequisite(s): MATLS 2D03; and Registration in Level II or above in any Materials Engineering

MATLS 3J03 - STATISTICAL METHODS FOR MATERIALS ENGINEERS

Introduction to probability. Linear and non-linear regression analysis, multi-response estimation, design of experiments including factorial and optimal design, statistical process control. Emphasis on analysis of industrial problems.
Three lectures, one tutorial; first term
Prerequisite(s): Registration in Level III and above of any Materials Engineering, or Level II and above of any Chemical Engineering
Antirequisite(s): STATS 3Y03

MATLS 3LP3 - APPLICATIONS OF TRANSPORT PHENOMENA IN MATERIALS ENGINEERING

Real-world applications of heat and mass transfer. Concepts are applied through case studies, simulations, and hands-on projects, utilizing industrially relevant software and modelling techniques-problem-solving, solution development, and optimizing heat and mass transfer systems in engineering

contexts.
Two lectures, one tutorial (two hours); second term
Prerequisite(s): MATLS 3TP4
Antirequisite(s): CHEMENG 3T06, CHEMENG 3A04, MATLS 3E04, MECHENG 3R03, ENGPHYS 3004, MECHENG 4J03, CHEMENG 3M04

MATLS 3M03 - MECHANICAL BEHAVIOUR OF MATERIALS

Elastic and Plastic Deformation of Materials. Strengthening Methods. Fracture Mechanisms. Fatigue and Creep failure.
Three lectures, one lab (one hour) every other week; second term
Prerequisite(s): ENGINEER 2P04 or CIVENG 2P04 and registration in any Materials Engineering; or MECHENG 2P04 and Registration in any Mechanical Engineering; or permission of the department

MATLS 3MF3 - MATERIALS FABRICATION

Processing methods for a wide range of materials, primarily metals but including ceramics and plastics. The analytical basis for understanding and optimizing materials processes.
Three lectures; one term
Prerequisite(s): MATLS 3M03 or registration in Level IV or above in any Civil Engineering; or permission of the department
Antirequisite(s): ENGINEER 4J03, ENGINEER 3MF3

MATLS 3Q03 - MATERIALS FOR ELECTRONIC APPLICATIONS

Fundamental properties of materials used in electronic applications, operation of devices and fabrication methods of electronic circuits and packaging. Includes description of dielectric, magnetic and optoelectronic properties.
Three lectures; one term
Prerequisite(s): One of MATLS 2Q03, 2Q04, ENGPHYS 2QM3; or permission of the department
Antirequisite(s): ENGPHYS 3PN4

MATLS 3T04 - PHASE TRANSFORMATIONS

Molar Gibbs energy diagrams. Fundamentals of diffusion. Curved interfaces, Gibbs-Thomson effect. Grain growth, Zener pinning. Homogeneous and heterogeneous nucleation. Solidification. Scheil formalism. Constitutional supercooling. Eutectic growth. Coarsening. Recovery, recrystallization. Spinodal decomposition. Eutectoid, massive, order-disorder and martensitic transformations.
Three lectures, one lab (three hours); second term
Prerequisite(s): MATLS 2A04 or 2H04 and 2D03; and Registration in Level II or above of any Materials Engineering

MATLS 3TP4 - FUNDAMENTALS OF TRANSPORT PHENOMENA IN MATERIALS ENGINEERING

Fundamental principles of heat and mass transfer, focusing on the underlying physics and mathematical descriptions governing conduction, convection, radiation and diffusion. Students will develop analytical solutions as applied to materials applications.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): MATLS 2D03 and MATH 2ZZ3; and Registration in Level II or above in any Materials Engineering
Antirequisite(s): CHEMENG 3T06, CHEMENG 3A04, MATLS 3E04, MECHENG 3R03, ENGPHYS 3004, MECHENG 4J03, CHEMENG 3M04

MATLS 4B03 - BIOMATERIALS AND TISSUE ENGINEERING

Introduction to biomaterials. Includes material?tissue interactions, techniques for biomaterials testing, and characterization. Applications of biomaterials and the clinical context of their use will be introduced.
Three lectures; one term
Prerequisite(s): Registration in Level III or above in any Materials Engineering; or Registration in Level IV or above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Cross list(s): IBEHS 4M03

MATLS 4C03 - MODERN IRON AND STEELMAKING

Theory and practice of iron making. New processes for reduced energy consumption and pollution. Thermodynamics and kinetics of steelmaking. Steel refining. Casting, including new near net shape technologies. Specialty steelmaking.
Three lectures; one term
Prerequisite(s): Registration in Level III or above in any Materials Engineering; or permission of the department
Co-requisite(s): MATLS 3F03
Offered on an irregular rotation basis.

MATLS 4D03 - CORROSION AND ITS CONTROL

Thermodynamics, electrochemistry, electrified interface, electrode potential, Faradays Law, Butler-Volmer equation, activation polarization, concentration polarization, mixed potential theory, passivity, rate measurement techniques, galvanic corrosion, stress corrosion cracking, intergranular corrosion, materials selection, cathodic protection, anodic protection, inhibitors/biocides.
Three lectures; one term
Prerequisite(s): Registration in Level III above in any Materials Engineering; or permission of the department
Offered on an irregular rotation basis.

MATLS 4EX1 A/B S - ENGINEERING REPORT FOR EXCHANGE STUDENTS

Exchange students prepare a written report and make an oral presentation on an engineering problem encountered during their summer work experience. Written and oral communications and substantive context are assessed.
One seminar/lecture; one term
Prerequisite(s): Permission of the instructor
Antirequisite(s): ENGINEER 4K01 A/B-S

MATLS 4FF3 - SYNTHESIS, APPLICATIONS AND ENVIRONMENTAL IMPACT OF NANOMATERIALS

Synthesis routes for nanomaterials, bottom-up and top-down approaches, green chemistry methods, properties of materials: carbon nanotubes, nanoparticles, quantum dots. Environmental and health impact of nanomaterials.
Three lectures; one term
Prerequisite(s): Registration in Level III or above in any Materials Engineering, Engineering Physics or Chemistry; or permission of the department.
Offered on an irregular rotation basis.

MATLS 4G03 - CHARACTERIZATION OF NANOMATERIALS

Interaction of electrons and photons with matter. Imaging methods with electron microscopy, scanning probe techniques, x-ray photoelectron spectroscopy and X-ray absorption analysis with high spatial resolution.
Three lectures; one term

Prerequisite(s): Registration in Level III or above in any Materials Engineering, Chemical Engineering, Engineering Physics or Honours Chemistry; or permission of the department
Offered on an irregular rotation basis.

MATLS 4H03 - X-RAY ANALYSIS AND FUNCTIONAL PROPERTIES OF POLYCRYSTALLINE AND THIN FILM MATERIALS

X-ray analysis of bulk polycrystalline materials and thin films. Deposition and fabrication techniques, surfaces, growth mechanisms, epitaxy, kinetic effects in thin films, structure-property relationships and defects of thin films. Materials for packaging.
Two lectures; one tutorial (three hours); one term
Prerequisite(s): Registration in Level III or above of any Materials Engineering; or permission of the department
Offered on an irregular rotation basis.

MATLS 4I03 - SUSTAINABLE MANUFACTURING PROCESSES

Sustainable development, ingenuity gap, materials cycles, Eco-Efficiency, Environmental Impact parameters, introduction and computational structure of life cycle analysis, waste treatment and recycling technologies, impact of sustainable practice, stakeholder strategies.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): Registration in Level III or above of any Materials Engineering or Chemical Engineering; or permission of the department

MATLS 4K06 A/B - SENIOR RESEARCH PROJECT

Several written and oral reports are required in each term. The written thesis is defended orally.
Nine unscheduled hours each week; both terms
Prerequisite(s): Registration in Level IV or above in any Materials Engineering and a GPA of at least 8.0 and permission of the department
Antirequisite(s): MATLS 4KA3, MATLS 4KB3, IBEHS 3I06 A/B, IBEHS 4H03

MATLS 4LA2 - HEAT-TREATABLE AL ALLOYS

- sequence of experiments to simulate industrial production of an Al-Mg-Si alloy. Accompanying lectures illustrate the engineering principles that underpin the industrial process.

One lecture, one lab (three hours); one term
Prerequisite(s): Registration in the final level of any Materials Engineering
Antirequisite(s): MATLS 4L02, MATLS 4L04

MATLS 4LB2 - SYNTHESIS AND CHARACTERIZATION OF BIOMEDICAL COATINGS

- sequence of experiments to investigate surface modification of biomaterials involving electrodeposition, electrospinning, polymer coatings and relevant biological characterization methods.

One lecture, one lab (three hours); one term
Prerequisite(s): Registration in the final level of any Materials Engineering or final level of any Integrated Biomedical Engineering and Health Sciences program
Antirequisite(s): MATLS 4L02, MATLS 4L04

MATLS 4LF2 - SYNTHESIS, PROPERTIES AND APPLICATION OF THIN FILMS

- sequence of experiments to investigate and study a wide range of thin film growth methods and applications including vacuum deposition, electrodeposition, spin coating, sol gel, and sacrificial oxidation.

One lecture, one lab (three hours); one term
Prerequisite(s): Registration in the final Level of any Materials Engineering
Antirequisite(s): MATLS 4L02, MATLS 4L04

MATLS 4LS2 - PHYSICAL METALLURGY OF STEELS

- sequence of experiments to simulate industrial thermal-mechanical processing of low-carbon, low alloy steels. Accompanying lectures illustrate the engineering principles that underpin the industrial process.

One lecture, one lab (three hours); one term
Prerequisite(s): Registration in the final Level of any Materials Engineering
Antirequisite(s): MATLS 4L02, MATLS 4L04

MATLS 4ML3 - APPLICATIONS OF MACHINE LEARNING TO MATERIALS AND CHEMICAL ENGINEERING

Materials and chemical engineering applications of machine learning with topics in: Bias, neural networks, deep learning and learning theory. Classification, supervised learning, unsupervised learning, generative networks, reinforcement learning.
Three lectures; one term
Prerequisite(s): MATLS 3J03
Offered on an irregular rotation basis.

MATLS 4MS4 - MATERIALS SELECTION IN DESIGN

Materials indices, materials selection charts, materials selection and design with mechanical and thermo-mechanical constraints, design of hybrid materials, sustainable materials selection and design.
Four lectures, one tutorial; first term
Prerequisite(s): One of ENGINEER 2P04, MECHENG 2P04, CIVENG 2P04 and one of CHEMENG 3A04, MECHENG 3R03, MATLS 3LP3; or registration in Level IV or above in any Civil Engineering; or permission of the department
Antirequisite(s): ENGINEER 4T04

MATLS 4NN3 - COMPUTATIONAL MODELLING IN MATERIALS ENGINEERING AT THE NANO-SCALE

Microscopic insight to the structure of functional materials used in photovoltaics, light generation, piezoelectronics and origin of their properties from atomic-scale simulations.
Three lectures; one term
Prerequisite(s): Registration in Level III or above in any Materials Engineering or Engineering Physics; or permission of the department
Offered on an irregular rotation basis.

MATLS 4NP3 - COMPUTATIONAL MODELLING IN MATERIALS ENGINEERING AT THE PROCESS-SCALE

Applications of heat transfer, mass transfer, and fluid flow conservation equations to industrial materials processes in metals and polymers; scaling analysis; finite element analysis.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): One of MATLS 3TP4, CHEMENG 2O04, CHEMENG 3A04; or permission of the department
Offered on an irregular rotation basis.

MATLS 4P03 - PROPERTIES OF POLYMERIC MATERIALS

Structure of amorphous and crystalline polymeric materials; mechanical, electrical and optical properties, and their modification through processing.
Three lectures; one term
Prerequisite(s): Registration in Level III or above of any Materials

Engineering; or permission of the department
Open to Level III and IV students registered in a program in the Faculty of Science or Engineering with permission of the department.
Offered on an irregular rotation basis.

MATLS 4Q03 - MATERIALS FOR SENSORS IN BIG DATA AND AI SYSTEMS

Sensors and sensing materials for big data and artificial intelligence systems. Discussion of the theory, design and fabrication of chemical, thermal, electrical, magnetic and optical sensors.
Three lectures; one term
Prerequisite(s): MATLS 2Q03 or 2Q04 or ENGPHYS 3PN4
Offered on an irregular rotation basis.

MATLS 4T03 - PROPERTIES AND PROCESSING OF COMPOSITES

Intrinsic properties of matrix materials and fibres; mechanics and thermodynamics of interfaces; mechanical properties and fabrication of engineering composites.
Three lectures; one term
Prerequisite(s): MATLS 3M03; or permission of the department
Offered on an irregular rotation basis.

MATLS 4Y03 - ADVANCED BIOMATERIALS: APPLICATIONS AND CHARACTERIZATION

Advanced applications of biomaterials including nanobiomaterials, drug delivery, regenerative medicine, microfluidics, biosensing, immunomodulatory materials.
Three lectures; one term
Prerequisite(s): MATLS 4B03 and registration in Level III or above in any Materials Engineering; or Registration in Level IV or above in the Integrated Biomedical Engineering and Health Sciences (IBEHS) program
Offered on an irregular rotation basis.

MATLS 4Z06 A/B - MATERIALS ENGINEERING CAPSTONE

Projects, in cooperation with either Industry or a Faculty member, focusing on materials or materials processing design, including economic and sustainability analysis. Student teams are assessed on oral and written reports.
Two lectures, two labs (three hours each); both terms
Prerequisite(s): Registration in the final year of any Materials Engineering
Cannot be taken concurrently with any co-op work term course.

Mathematics

Courses in Mathematics are administered by the Department of Mathematics and Statistics.
Hamilton Hall, Room 218, ext. 27034
http://www.math.mcmaster.ca/

Department Notes

1. Course codes ending with ***** indicate that the course is not necessarily offered every session; consult the Chair of the Department or the Associate Dean of Science (Academic).
2. Courses in Mathematics and Statistics are not open to students registered in the Bachelor of Technology (B.Tech.) program.

Courses

If no prerequisite is listed, the course is open.
See also courses in *Statistics.*

MATH 1A03 - CALCULUS FOR SCIENCE I

For students in science: geared towards applications, with attention to underlying concepts. Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration.
Three lectures, one tutorial; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03, MATH 1MM3
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1LS3, 1N03, 1X03, 1Z04, 1ZA3
Not open to students who have achieved a grade of at least B- in MATH 1M03. Not open to students in Mathematics and Statistics I or an Engineering program or with credit or registration in ISCI 1A24 A/B.

MATH 1AA3 - CALCULUS FOR SCIENCE II

For students in science: additional techniques of integration, applications of definite integrals, differential equations, polar coordinates, parametrized curves. Sequences, infinite series, power series. Partial derivatives, double integrals.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1A03, 1LS3, 1X03, 1ZA3; or a grade of at least B- in MATH 1M03
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1LT3, 1XX3, 1ZB3
Not open to students in Mathematics and Statistics I or with credit or registration in ISCI 1A24 A/B.

MATH 1B03 - LINEAR ALGEBRA I

Vector spaces given by solutions to linear systems. Linear independence, dimension. Determinants. Eigenvalues, eigenvectors and diagonalisation. Complex numbers.
Three lectures, one tutorial; one term
Prerequisite(s): Grade 12 Calculus and Vectors U or MATH 1F03
Antirequisite(s): MATH 1ZC3
Not open to students registered in an Engineering program.

MATH 1C03 - INTRODUCTION TO MATHEMATICAL REASONING

Inquiry into the ideas and methods of advanced mathematics. Material will include topics selected from algebra, calculus, discrete math, geometry and number theory.
Three lectures, one tutorial; one term
Prerequisite(s): Grade 12 Calculus and Vectors U or MATH 1F03

MATH 1F03 - INTRODUCTION TO CALCULUS AND ANALYTIC GEOMETRY

- first course in the techniques of the differential calculus including exponential, logarithmic and trigonometric functions. An introduction to vector geometry.

Three lectures, one tutorial; one term
Prerequisite(s): Grade 12 Advanced Functions U or MATH 1K03
Not open to students with credit in Grade 12 Calculus and Vectors U; or credit or registration in MATH 1A03, 1LS3, 1M03, 1ZA3.

MATH 1K03 - ADVANCED FUNCTIONS

Properties of polynomial, rational, exponential and logarithmic functions.
Three lectures, one tutorial; one term
Prerequisite(s): MCR3U (or equivalent)
Normally not open to students who have completed Grade 12 Calculus and Vectors U, Grade 12 Advanced Functions U; or credit or registration in MATH 1A03, 1F03, 1LS3, 1M03, 1MM3, 1ZA3.

MATH 1LS3 - CALCULUS FOR THE LIFE SCIENCES I

Topics from differential and integral calculus, differential equations, discrete-time dynamical systems, chosen for their relevance to the life sciences.
Three lectures, one tutorial; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03, MATH 1MM3
Antirequisite(s): MATH 1A03
Not open to students with credit or registration in ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1M03, 1N03, 1X03, 1Z04, 1ZA3.

MATH 1LT3 - CALCULUS FOR THE LIFE SCIENCES II

Analysis of autonomous differential equations; differential calculus of functions of several variables; introduction to probability as application of calculus and statistics. All topics chosen for their relevance to the life sciences.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1A03, 1LS3; or a grade of at least B- in MATH 1M03
Antirequisite(s): MATH 1AA3
Not open to students with credit or registration in ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1XX3, 1ZB3.

MATH 1MM3 - APPLIED CALCULUS

Integral calculus of polynomial, rational, exponential and logarithmic functions. Optimization problems. Applications in Sciences, Social Sciences and Business.
Three lectures, one tutorial; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03
Students considering upper year mathematics courses should take MATH 1A03 or MATH 1LS3.
Not open to students with credit or registration in ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1A03, 1LS3, 1M03, 1N03, 1X03, 1Z04, 1ZA3.

MATH 1MP3 - INTRODUCTION TO MATHEMATICAL SCIENTIFIC COMPUTATION

Introduction to mathematical problem-solving using computational methods. Introduction to a programming language; good scientific programming practices.
Three lectures, one lab; one term
Prerequisite(s): Credit or registration in one of MATH 1A03, 1LS3, 1X03 (or ISCI 1A24 A/B); and registration in a program in the Faculty of Science
Antirequisite(s): COMPSCI 1MD3 and ENGINEER 1D04

MATH 1X03 - CALCULUS FOR MATH AND STATS I

Algebraic, geometric and numeric approaches to calculus, development of mathematical thinking, intuition and theoretical foundations. Functions: limits, continuity, derivatives, applications. Antiderivative, definite integral, integration techniques.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level I Mathematics and Statistics
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1N03, 1Z04, 1ZA3
Not open to students with credit or registration in ISCI 1A24 A/B.

MATH 1XA3 - PROOFS IN CALCULUS

Looks behind the scenes of calculus, by discussing notions and ideas needed to prove the theorems encountered in MATH 1X03 and MATH 1XX3.
Three lectures; one term
Prerequisite(s): Registration in Level I Mathematics and Statistics
Co-requisite(s): MATH 1X03 and 1XX3

MATH 1XX3 - CALCULUS FOR MATH AND STATS II

For students in mathematics and statistics. Additional techniques of integration, applications of definite integrals, polar coordinates, parametrized curves. Sequences, infinite series, power series. Partial derivatives, double integrals.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 1X03 and registration in Level I Mathematics and Statistics
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1AA3, 1LT3, 1NN3, 1ZB3, 1ZZ5
Not open to students with credit or registration in ISCI 1A24 A/B.

MATH 1ZA3 - ENGINEERING MATHEMATICS I

Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration, with applications.
Three lectures, one tutorial, one lab; one term
Prerequisite(s): Registration in a program in Engineering
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1N03, 1NN3, 1X03, 1Z04
Not open to students with credit or registration in ISCI 1A24 A/B.

MATH 1ZB3 - ENGINEERING MATHEMATICS II-A

Techniques of integration, applications of definite integrals, differential equations, polar coordinates, parametrized curves. Sequences, infinite series, power series. Partial derivatives.
Three lectures, one tutorial, one lab; one term
Prerequisite(s): MATH 1ZA3
Antirequisite(s): ARTSSCI 1D06 A/B, MATH 1AA3, 1LT3, 1N03, 1NN3, 1XX3, 1ZZ5
Not open to students with credit or registration in ISCI 1A24 A/B.

MATH 1ZC3 - ENGINEERING MATHEMATICS II-B

Vector spaces given by solutions to linear systems. Linear independence, dimension. Determinants. Eigenvalues, eigenvectors and diagonalisation. Complex numbers.
Three lectures, one tutorial, one lab; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03, or credit or registration in MATH 1ZA3
Antirequisite(s): MATH 1B03, 1ZZ5

MATH 2C03 - INTRODUCTION TO DIFFERENTIAL EQUATIONS

First order ordinary differential equations and higher order linear ordinary differential equations including Laplace transforms and series solutions.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1NN3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; and one of MATH 1B03, 1ZC3
Antirequisite(s): ENGINEER 2Z03, MATH 2M03, 2M06, 2P04, 2Z03

MATH 2ET3* - THEORY AND PRACTICE OF TEACHING MATHEMATICS

This course is designed to give a maximum of 20 students practical experience with teaching mathematics in various contexts. The course is also an introduction to mathematics writing and development of communication skills relevant to mathematics.
Applications must be submitted to the instructor by May 1 of the preceding year, with selection for placements announced by September 9.
Two lectures, one practicum; one term
Prerequisite(s): Six units from MATH 1A03, 1AA3, 1LS3, 1LT3, 1X03, 1XX3,

1ZA3, 1ZB3 with a grade of at least A- in each, or ARTSSCI 1D06 A/B with a grade of A-, or ISCI 1A24 A/B (with a grade of at least A- in the Math component); and permission of the course instructor

MATH 2FM3 - INTRODUCTION TO MATHEMATICAL FINANCE

Nominal and effective rates of interest and discount, forces of interest and discount, compound interest, annuities certain; amortization, sinking funds, bonds, security evaluation, determination of yields.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1A03, 1LS3, 1M03, 1N03, 1X03, 1Z04, 1ZA3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; or a grade of at least B- in MATH 1MM3
Antirequisite(s): MATH 2K03

MATH 2LA3 - APPLICATIONS OF LINEAR ALGEBRA

This course focuses on applications of linear algebra. Topics include linear programming, applications of matrix decomposition theorems, examples from data science, singular value decomposition and applications to compression.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1NN3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; and one of MATH 1B03, 1ZC3, 1ZZ5

MATH 2MC3 - MULTIVARIABLE CALCULUS

Multiple integration, line and surface integrals and applications. The classical integration theorems of Green, Gauss and Stokes.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; and credit or registration in one of MATH 1B03, 1ZC3
Students who have completed MATH 1LS3 and 1LT3 should contact the Department of Mathematics and Statistics to discuss the recommended independent learning required to be successful in MATH 2MC3.
Not open to students with credit or registration in MATH 2XA3, 2XB3, or ISCI 2A18 A/B.
Not open to students with credit in MATH 2X03, 2XX3, 2XB3, 2ZZ3.

MATH 2R03 - THEORY OF LINEAR ALGEBRA

Abstract vector spaces. Linear transformations. Inner product spaces. Spectral theorems. Orthogonal bases, other topics.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1NN3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; and one of MATH 1B03, 1ZC3, 1ZZ5

MATH 2UU3 - NUMBERS FOR LIFE

Principles of quantitative reasoning, problem-solving and critical thinking, discussed in contexts related to, and relevant for, our daily lives, our society and the environment we live in. Content delivered through lecture and class discussion in an engaging and non-threatening way. Course develops core competencies often referred to as numeracy, or numeric literacy.
Three lectures; one term
Not open to students registered in any Honours program in Mathematics and Statistics.

MATH 2XA3 - VECTOR CALCULUS I

An introduction to vector calculus, with an emphasis on proofs. Simple topology of R^n. Limits and continuity. Partial derivatives. Differentiability and continuous differentiability. Matrix chain rule. Curves and paths in R^n. Higher derivatives. Taylor approximation in R^n. Lagrange multipliers. Implicit and Inverse Function Theorems. Space curves, arc length, tangent, normal, curvature. Vector fields, flow lines, curl, divergence. Double integrals.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1XX3, 1ZB3, ARTSSCI 1D06 A/B, ISCI 1A24 A/B; and credit or registration in one of MATH 1B03, 1ZC3
Students who have completed MATH 1LS3 and 1LT3 should contact the Department of Mathematics and Statistics to discuss the recommended independent learning required to be successful in MATH 2XA3.
Not open to students with credit or registration in MATH 2MC3, 2XB3, or ISCI 2A18 A/B.
Not open to students with credit in MATH 2X03, 2XX3, 2XB3, 2ZZ3.

MATH 2XB3 - VECTOR CALCULUS II

Further topics in vector calculus, with an emphasis on proofs. Change of variables. Jacobians. Polar coordinates. Triple integrals. Spherical and cylindrical coordinates. Line integrals. Scalar, vector fields, gradients. Parametrized surfaces. Surface integrals. Green's Theorem. Gauss' Divergence Theorem. Stokes' Theorem. Harmonic functions. Differential forms. Sequences of real numbers; limits, monotone sequences, Cauchy sequences. Series of real numbers. Absolute convergence. Alternating series.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), 2ZZ3 or credit or registration in ISCI 2A18 A/B
Not open to students with credit in MATH 2XX3.

MATH 2Z03 - ENGINEERING MATHEMATICS III

Ordinary differential equations, Laplace transforms, introduction to partial differential equations, applications.
Three lectures, one tutorial, one lab (two hours) every other week; one term
Prerequisite(s): MATH 1ZB3
Antirequisite(s): ENGINEER 2Z03, MATH 2C03, 2M03, 2P04

MATH 2ZZ3 - ENGINEERING MATHEMATICS IV

Fourier series, vector calculus, line and surface integrals, integral theorems, applications.
Three lectures, one tutorial, one lab (two hours) every other week; one term
Prerequisite(s): MATH 1ZB3; and MATH 1ZC3 or MATH 1ZZ5
Antirequisite(s): ENGINEER 2ZZ3, MATH 2MC3

MATH 3A03 - REAL ANALYSIS I

Metric spaces, continuity, completeness, compactness, uniform convergence.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 1XA3 with a grade of at least B+ or MATH 3IA3; or permission of the instructor

MATH 3B03 - GEOMETRY

Selected topics from: affine and projective geometry, Euclidean, spherical and hyperbolic geometry, differential geometry of curves and surfaces.
Three lectures; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03) or ISCI 2A18 A/B; and one of MATH 2R03 or a grade of at least B in MATH 2LA3

MATH 3C03 - MATHEMATICAL PHYSICS I

Eigenvalue problems, Fourier transforms, special functions, spherical harmonics, partial differential equations, boundary value problems.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), 2ZZ3, ISCI 2A18 A/B; and one of MATH 2C03, 2Z03. PHYSICS 2E03 is recommended.
Not open to students with credit or registration in MATH 3FF3.

MATH 3CF3 - THEORY OF COMPLEX FUNCTIONS

Definitions, proofs, and the geometry of complex functions. Complex numbers, polar representation, stereographic projection and the point at infinity. Complex functions, powers, roots, exponential, logarithm and their mapping properties, analytic functions, conformal mappings, fractional linear transformations. Integrals, contours, independence of path, harmonic conjugates, maximum principle, Cauchy and Morera Theorems, Cauchy Integral Formula. Series, power series, manipulations of series, analytic continuation, isolated singularities, Laurent series. Residues, integrals of rational functions, branch points, improper integrals. Logarithmic integrals, argument principle, Rouch Theorem, winding numbers.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 1C03 and 2XB3 (or MATH 2XX3); or permission of the instructor
Not open to students with credit in MATH 3X03.

MATH 3CV3 - BASIC COMPLEX VARIABLES

Computational aspects of complex variables and applications. Complex numbers, polar exponential notation, the complex plane. Complex functions, limits, derivatives and analytic functions. Definite integrals, contour integrals, antiderivatives. Cauchys Theorem. Cauchys Integral Formula. Liouvilles Theorem. Convergence of series, geometric series, Taylor series, Laurent series, integration and differentiation of series. Residue theorem, poles and zeros, plus applications.
Three lectures, one tutorial; one term
Prerequisite(s): One of MATH 2MC3, 2XB3 (or MATH 2X03), or ISCI 2A18 A/B; and MATH 1C03
Not open to students with credit or registration in MATH 3CF3.
Not open to students with credit in MATH 3X03.

MATH 3CY3* - CRYPTOGRAPHY

Introduction to cryptosystems used in modern security systems: elementary number theory, primality testing and factorization, discrete logarithm, SRA cryptosystems, elliptic curve cryptosystems. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): MATH 2LA3 or MATH 2R03

MATH 3D03 - MATHEMATICAL PHYSICS II

Functions of a complex variable, contour integrals, probability and statistics.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 3C03
Not open to students with credit or registration in MATH 3CF3, 3CV3, 3X03 or to students registered in Honours Mathematics and Physics.

MATH 3DC3* - DISCRETE DYNAMICAL SYSTEMS AND CHAOS

Iteration of functions: orbits, graphical analysis, fixed and periodic points, stability, bifurcations, chaos, fractals, Julia sets. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), 2ZZ3, or ISCI 2A18 A/B

MATH 3ET3 A/B S - MATHEMATICS TEACHING PLACEMENT

This course is intended to help students explore teaching as a profession and integrate academics with a community, volunteer or professional experience. The student will complete an academic component in addition to the placement. This course includes a scientific communication component. Students are responsible to arrange a suitable placement and supervision, and are required to submit an application to the Science Career and Cooperative Education (SCCE@mcmaster.ca) 30 days prior to registration. A minimum of 60 hours of placement work involving teaching and/or tutoring is required through the duration of the experience; the course may be completed over one or two terms.
Prerequisite(s): Registration in Level III or above in an Honours program in Mathematics and Statistics; and permission of the Department of Mathematics and Statistics. MATH 2ET3* is recommended.

- *maximum of three units of MATH 3ET3 A/B S may be used toward the Mathematics and Statistics requirements of the degree.*

With permission, MATH 3ET3 A/B S may be repeated, to a total of six units, if the placement is deemed sufficiently different from the first experience.

MATH 3F03 - ORDINARY DIFFERENTIAL EQUATIONS

Systems of ordinary differential equations, autonomous systems in the plane, phase portraits, linear systems, stability, Lyapunov's method, Poincare-Bendixson theorem, applications.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 1C03, 2C03; and ISCI 2A18 A/B (or MATH 2X03) or MATH 2XB3 (or MATH 2XX3); and either credit or registration in MATH 2R03 or a grade of at least B in MATH 2LA3
Prerequisite(s) (Effective 2026-2027): MATH 1C03, 2C03; and MATH 2XB3 (or MATH 2XX3); and either credit or registration in MATH 2R03 or a grade of at least B in MATH 2LA3

MATH 3FF3 - PARTIAL DIFFERENTIAL EQUATIONS

First order equations, well-posedness, characteristics, wave equation, heat equation, Laplace equation, boundary conditions, Fourier series, applications.
Three lectures; one term
Prerequisite(s): MATH 2C03; and one of MATH 2R03 or a grade of at least B in MATH 2LA3; and MATH 2XB3 (or MATH 2XX3)

MATH 3FM3 - MATHEMATICS OF FINANCE

Introduction to finance in discrete time: Options and forwards, efficient markets and the no arbitrage condition, binomial asset pricing model, portfolio strategies, stochastic processes, conditional expectation, martingales, optimal portfolio selection, exotic options.
Three lectures, one tutorial; one term
Prerequisite(s): One of ISCI 2A18 A/B, MATH 2MC3, 2XA3 (or MATH 2X03); and STATS 2D03
Antirequisite(s): MATH 4K03

MATH 3G03* - PROBLEM SOLVING

- course designed to illustrate the principles of mathematical problem solving. This course includes a scientific communication component. Maximum enrolment is 20 students.

Three lectures; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), or ISCI 2A18 A/B; and MATH 2LA3 or MATH 2R03

MATH 3GR3 - ABSTRACT ALGEBRA

An introduction to groups and rings, with an emphasis on concrete examples. Topics include: groups, subgroups, normal subgroups, quotient groups, group homomorphisms, First Isomorphism Theorem for groups, symmetric and alternating groups, rings, subrings, ideals, quotient rings, ring homomorphisms, and the First Isomorphism Theorem for rings.

Three lectures, one tutorial; one term
Prerequisite(s): MATH 1C03, and one of MATH 2R03 or a grade of at least B in MATH 2LA3

MATH 3H03* - NUMBER THEORY

Selected topics from: congruence and residues, continued fractions, approximation of irrationals, arithmetic in selected quadratic number fields. Diophantine equations, partitions, geometry of numbers, quadratic reciprocity.
Three lectures; one term
Prerequisite(s): Credit in at least 12 units of Mathematics or Statistics Level II or above

MATH 3I03 - PARTIAL DIFFERENTIAL EQUATIONS FOR ENGINEERING

Topics in partial differential equations of interest to mechanical, material and ceramic engineering, including the wave equation, the heat diffusion equation and Laplace equation, in various co-ordinate systems.
Three lectures, one tutorial; first term
Prerequisite(s): One of MATH 2M03, 2P04, 2ZZ3 or registration in Level III or IV of a program in the Department of Materials Science and Engineering

MATH 3IA3 - INTRODUCTION TO ANALYSIS

Sequences and series of numbers. Proofs of theorems about continuity; differentiability, Riemann integration.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 1C03, one of MATH 2MC3, 2XA3 (or MATH 2X03) or ISCI 2A18 A/B and either MATH 2LA3 or 2R03; or registration in Level III or above of an Honours program in Mathematics and Statistics; or permission of the instructor
Not open to students with credit or registration in MATH 3A03.

MATH 3MB3 - INTRODUCTION TO MODELLING

Introduction to computational modelling using software such as R or MATLAB. Analytical modelling using algebra and calculus. The development and analysis of models will be illustrated with examples selected from biology, medicine, chemistry, physics, economics, or other areas of natural or social sciences. This course includes a scientific communication component.
Three lectures, one lab; one term
Prerequisite(s): One of MATH 2C03, 2Z03; and one of MATH 1B03, 1ZC3

MATH 3NA3 - NUMERICAL LINEAR ALGEBRA

Conditioning and numerical stability, rounding and truncation errors, convergence rates, linear and nonlinear systems of equations, eigenvalue problems, least squares, QR and singular-value decomposition, optimization.
Three lectures; one term
Prerequisite(s): MATH 2LA3 or MATH 2R03; and one of MATH 1MP3, COMPSCI 1MD3, DATASCI 2G03, PHYSICS 2G03

MATH 3QC3* - INTRODUCTION TO QUANTUM COMPUTING

Postulates of quantum mechanics for finite dimensional systems; information on quantum bits, logical operations and quantum gates; quantum parallelism and complexity theory; examples of quantum algorithms. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): MATH 2R03 or a grade of at least B in MATH 2LA3

MATH 3T03 - INQUIRY IN TOPOLOGY

Size and shape in topology and analysis, compactness, connectedness, limit sets, theory of dimension, fractals and self-similarity.
Three lectures; one term
Prerequisite(s): MATH 1C03, and one of MATH 2MC3, 2XA3 (or MATH 2X03), or ISCI 2A18 A/B

MATH 3TP3* - TRUTH AND PROVABILITY

The goal is to inquire into Gödel's proof of incompleteness; in any sufficiently powerful axiom system there will be statements which are true but not provable.
Three lectures; one term
Prerequisite(s): MATH 1C03

MATH 3U03* - COMBINATORICS

Inversion formulae, systems of distinct representatives, block designs and other configurations; other topics. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), or ISCI 2A18 A/B; and MATH 2LA3 or MATH 2R03
Antirequisite(s): MATH 4C03

MATH 3V03* - GRAPH THEORY

Graphs, trees, bipartite graphs, connectivity, graph colouring, matrix representations, applications. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): One of MATH 2MC3, 2XA3 (or MATH 2X03), or ISCI 2A18 A/B; and MATH 2LA3 or MATH 2R03

MATH 3X03 - COMPLEX ANALYSIS I

Analytic functions, Cauchy's theorem, Cauchy's integral formula, residues, zeroes of analytic functions; Laurent series, the maximum principle.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 2LA3 or MATH 2R03; and MATH 2XX3

MATH 3Z03* - INQUIRY: HISTORY OF MATHEMATICS

An introduction to the history of mathematics, including interaction with other phases of culture, with special emphasis on the past three centuries. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): Completion of at least 6 units of Level II Mathematics or Statistics courses, excluding MATH 2FM3, (or MATH 2K03), 2L03, 2UU3.

MATH 4A03 - REAL ANALYSIS II

Selected topics from: spaces of continuous functions, functions of several variables, inverse and implicit function theorems. Lebesgue integration. Fourier series.
Three lectures; one term
Prerequisite(s): MATH 3A03
Antirequisite(s): MATH 3AA3

MATH 4AT3* - TOPICS IN ANALYSIS

Precise topics will vary; consult the department for current information. Possible topics include: functional analysis, measure theory, harmonic analysis, calculus of variations, theory of distributions.

Three lectures; one term
Prerequisite(s): Permission of the instructor
MATH 4AT3 may be repeated, if on a different topic.

MATH 4B03* - CALCULUS ON MANIFOLDS

Review of multivariable calculus, basic properties of manifolds, differential forms, Stokes' theorem, de Rham cohomology and applications.
Three lectures; one term
Prerequisite(s): One of MATH 3A03, 3B03, 3C03

MATH 4BT3* - TOPICS IN GEOMETRY

Precise topics will vary; consult the department for current information.
Possible topics include: differential geometry, riemannian metrics, connections, curvature, geodesics, topological and analytic properties of Riemannian manifolds.
Three lectures; one term
Prerequisite(s): Permission of the instructor
MATH 4BT3 may be repeated, if on a different topic.

MATH 4E03* - GALOIS THEORY

An introduction to Galois Theory. Topics include: field extensions, splitting fields, normality and separability, Galois extensions, finite fields, solvability by radicals, cyclic extensions, cyclotomic extensions, algebraic closure, classical constructions, computations of Galois groups.
Three lectures; one term
Prerequisite(s): MATH 3E03 or 3GR3

MATH 4ET3* - TOPICS IN ALGEBRA

Precise topics will vary; consult the department for current information.
Possible topics include: algebraic geometry, algebraic number theory, computational commutative algebra.
Three lectures; one term
Prerequisite(s): Permission of the instructor
MATH 4ET3 may be repeated, if on a different topic.

MATH 4FM3 - FINANCIAL MARKETS AND DERIVATIVES

Modelling of options, futures, interest rate securities and other financial derivatives in continuous time using Brownian motion and stochastic calculus. Topics include risk-neutral pricing, the Black-Scholes framework, dynamic hedging, volatility and risk. This course includes a scientific communication component.
Three lectures, one tutorial; one term
Prerequisite(s): MATH 3FM3 and registration in Level IV or V of an Honours Actuarial and Financial Mathematics program

MATH 4FT3* - TOPICS IN DIFFERENTIAL EQUATIONS

Topics to be selected from the theory of ordinary differential equations, bifurcation and stability, and partial differential equations.
Three lectures; one term
Prerequisite(s): Permission of the instructor
MATH 4FT3 may be repeated, if on a different topic.

MATH 4GR3 - GROUPS AND RINGS

Further topics in group theory and ring theory. Topics include: direct products, Fundamental Theorem of Finite Abelian Groups, Sylow Theorems, free groups, group presentations, fields and integral domains, special integral domains (Euclidean, principal ideal, unique factorization), fields of fractions of integral domains, polynomial rings in many variables, and additional topics at the discretion of the instructor (e.g., Groebner bases, algebraic coding theory).
Three lectures; one term
Prerequisite(s): MATH 3E03 or 3GR3

MATH 4L03* - INTRODUCTION TO MATHEMATICAL LOGIC

First order logic, deduction systems, completeness and compactness theorems, model theory.
Three lectures; one term
Prerequisite(s): MATH 3E03 or 3GR3

MATH 4LT3* - TOPICS IN LOGIC

Precise topics will vary; consult the department for current information.
Possible topics include: axiomatic set theory, computability theory, model theory or proof theory.
Three lectures; one term
Prerequisite(s): Permission of the instructor
MATH 4LT3 may be repeated, if on a different topic.

MATH 4MB3 - MATHEMATICAL BIOLOGY

Population dynamics: models of discrete and continuous growth; competition and predation; epidemic models. Other topics selected by instructor.
Three lectures; one term
Prerequisite(s): MATH 3F03
Antirequisite(s): MATH 3N03

MATH 4NA3* - NUMERICAL METHODS FOR DIFFERENTIAL EQUATIONS

Interpolation and approximation, numerical differentiation and integration, numerical methods for ODEs: initial-value and boundary-value problems, finite-difference methods for PDEs, selected advanced numerical methods.
Three lectures; one term
Prerequisite(s): MATH 2C03; and MATH 3NA3 or 3Q03
Antirequisite(s): MATH 3Q03

MATH 4P06 A/B S - SENIOR RESEARCH PROJECT

- project in pure or applied mathematics to be carried out under the supervision of a faculty member from the Department of Mathematics and Statistics. A written report and oral presentation will be required. This course includes a scientific communication component.

One occasional tutorial; two terms
Prerequisite(s): Registration in Level IV of any Honours Mathematics and Statistics program; and a GPA of at least 9.0; and permission of the Chair of the Department
Not open to students with credit or registration in PHYSICS 4P06 A/B, STATS 4T06 A/B or ISCI 4A12 A/B.

MATH 4TT3* - TOPICS IN TOPOLOGY

Precise topics will vary; consult the department for current information.
Possible topics include: fundamental group and covering spaces, cell complexes and homology theory, theory of knots, links, and braids.
Three lectures; one term
Prerequisite(s): Permission of the instructor
Antirequisite(s): MATH 4T03
MATH 4TT3 may be repeated, if on a different topic.

MATH 4W03 - READING IN MATHEMATICS

Directed reading in areas of mathematics of interest to the student and the instructor. This course includes a scientific communication component.
Prerequisite(s): GPA of at least a 7.0 and permission of the Chair of the Department
MATH 4W03 may be repeated, if on a different topic.

MATH 4WW3 - READING IN MATHEMATICS II

Directed reading in areas of mathematics of interest to the student and the instructor. This course includes a scientific communication component.
Prerequisite(s): GPA of at least 7.0 and permission of the Chair of the Department
MATH 4WW3 may be repeated, if on a different topic.

MATH 4X03* - COMPLEX ANALYSIS II

Conformal maps, analytic continuation, harmonic functions, the Riemann mapping theorem, Riemann surfaces.
Three lectures; one term
Prerequisite(s): MATH 3X03

MATH 5GT3 - GRADUATE LEVEL TOPICS IN MATHEMATICS

Undergraduate students may seek permission to enrol in selected graduate level offerings. Refer to the Graduate Calendar for course information.
Prerequisite(s): Permission of the Department of Mathematics and Statistics
Undergraduate students will be required to meet all academic obligations of the graduate-level course offering. Not all graduate courses are offered each year.
MATH 5GT3 may be repeated, if on a different graduate level topic.

McMaster English Language Development

Department of Linguistics and Languages (Faculty of Humanities)
(+1) 905-525-9140 Ext. 24388
Email: meld@mcmaster.ca
Web: https://meld.humanities.mcmaster.ca/diploma/

Note

All MELD courses require enrolment in the McMaster English Language Development Diploma program.

Courses

MELD 1M00 - MENTORSHIP LAB 1

Compulsory weekly mentorship meetings aimed at promoting cultural awareness.
One hour; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1MM0 - MENTORSHIP LAB 2

Compulsory weekly mentorship meetings aimed at promoting cultural awareness.
One hour; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1Q03 - CRITICAL AND ANALYTIC READING

In this course students develop their critical reading and reasoning skills by engaging, summarizing, analyzing, and reflecting on texts representing a variety of academic disciplines. The course emphasizes vocabulary building strategies (vocabulary in context) to communicate information clearly in different academic writing tasks.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1QQ3 - GRAMMAR, STRUCTURE AND UNIVERSITY WRITING

This course focuses on using appropriate language (grammar, vocabulary, style), structure, and source attribution for writing in common post-secondary genres, while developing the critical thinking skills necessary for academic success. Attention will also be paid to less formal modes of online communication, such as email writing.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1R03 - AURAL COMMUNICATION AND ACADEMIC CULTURE

This is an intensive course that focuses on the listening and note-taking strategies needed for aural and oral success in university, that also introduces students to problem-based learning. Aural skills are enhanced through exposure to a variety of academic lectures, discussions, debates and podcasts.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1RR3 - ORAL COMMUNICATION FOR ACADEMIC AND SOCIAL INTERACTIONS

In this course students are introduced to the fundamentals of oral communication, including listening, for communicating successfully in university contexts, through inquiry-based learning activities and discussions. Pronunciation sessions will reinforce speech production and overall fluency.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1S03 - CRITICAL READING, RESEARCH AND ACADEMIC VOCABULARY

This course further develops students' analytical reading and critical thinking skills. Students will engage, analyze, synthesize, evaluate, and reflect on more challenging scholarly texts from a range of disciplines. The course strengthens students' contextual vocabulary knowledge to enable effective and accurate written academic communication.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1SS3 - ACADEMIC WRITING, REPORTING AND RESEARCH

This course focuses on the development of research, reading, and composition skills to craft an academic report. Language (grammar, vocabulary, style), structure, source attribution, and critical thinking skills are further developed.
Two hours lecture; two hours tutorial; two hours lab; one term

Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1T03 - CROSS-CULTURAL PERSPECTIVES ON LANGUAGE AND LANGUAGE LEARNING

In this course students will explore the relationships between language, culture and society and how those relationships affect English language learning and communication in English. Students will further develop their critical listening and note-taking skills through lectures and inquiry-based learning scenarios.
Two hours lecture; two hours tutorial; two hours lab; one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

MELD 1TT3 - ORAL COMMUNICATION FOR ACADEMIC DISCOURSE

In this course students will learn to apply effective oral communication strategies to a variety of higher education contexts, including case-study presentations and formal discussions. Cultural awareness, aural skills, and advanced features of pronunciation will also be reinforced.
One lecture (two hours), one tutorial (two hours), one lab (two hours); one term
Prerequisite(s): Registration in the McMaster English Language Development Diploma (MELD) program

Mechanical Engineering

Courses in Mechanical Engineering are administered by the Department of Mechanical Engineering.
John Hodgins Engineering Building, Room 310A, ext. 24294
http://eng.mcmaster.ca/mech

Department Note

Enrolment in Mechanical Engineering courses by students in programs other than those administered by the Department may be restricted.

Courses

If no prerequisite is listed, the course is open.

MECHENG 2B03 - MECHANICAL ENGINEERING MEASUREMENTS

Static and dynamic characteristics of instruments, statistical analysis of measurement errors, variable conversion elements and signal amplification. Metrology, measurement of strain and force, pressure, flow, temperature and power.
Two lectures, one lab (three hours every other week); second term
Prerequisite(s): Registration in Level II of any Mechanical Engineering program
Antirequisite(s): MECHENG 2BA3

MECHENG 2BA3 - MECHANICAL ENGINEERING MEASUREMENTS

Static and dynamic characteristics of instruments, statistical analysis of measurement errors, variable conversion elements and signal amplification. Metrology, measurement of strain and force, pressure, flow, temperature and power.
Two lectures, one lab (three hours every other week); second term
Prerequisite(s): Registration in Level II of any Mechatronics Engineering program
Antirequisite(s): MECHENG 2B03

MECHENG 2C04 - MECHANICAL ENGINEERING DESIGN PROJECT I

Design/Build/Test projects involving synthesis, modelling, and analysis, including technical drawings and CAD.
Two lectures, one lab (two hours); first term
Prerequisite(s): Registration in Level II of any Mechanical Engineering program

MECHENG 2D03 - MECHANICAL ENGINEERING DESIGN ELEMENTS

Design synthesis, fundamental principles of standard design elements, mechanical and fluid power elements, component specification and optimization.
Three lectures, one tutorial; first term
Prerequisite(s): Registration in Level II of any Mechanical Engineering program
Antirequisite(s): MECHENG 2DA3

MECHENG 2DA3 - MECHANICAL ENGINEERING DESIGN ELEMENTS

Design synthesis, fundamental principles of standard design elements, mechanical and fluid power elements, component specification and optimization.
Three lectures, one tutorial; second term
Prerequisite(s): Registration in Level III of any Mechatronics Engineering program
Antirequisite(s): MECHENG 2D03

MECHENG 2P04 - STATICS AND MECHANICS OF MATERIALS

Principles of statics. Internal forces, shear and bending moment diagrams, stress and strain, elastic behavior of simple members under axial force, torsion, bending and transverse shear.
Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term
Prerequisite(s): PHYSICS 1D03 and registration in Level II of any Mechanical Engineering program
Antirequisite(s): CIVENG 2P04, ENGINEER 2P04, ENGPHYS 2P04

MECHENG 2Q04 - ENGINEERING MECHANICS: KINETICS AND DYNAMICS

Kinematics and dynamics of particles and rigid bodies. Analysis of planar mechanisms. Displacement, velocity and acceleration analysis methods. Motion with respect to a rotating frame reference. Work, energy and momentum principles.
Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term
Prerequisite(s): Registration in Level II of any Mechanical Engineering program
Antirequisite(s): CIVENG 2Q03, 2Q04, ENGINEER 2Q04, ENGPHYS 2CD4, MECHENG 2QA4

MECHENG 2W04 - THERMODYNAMICS

Introduction to the principles of thermodynamics, and applications in engineering. Basic concepts: energy systems, properties of pure substances, entropy. Laws of thermodynamics, power and refrigeration cycles.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): Registration in Level II of any Mechanical Engineering

program
Antirequisite(s): ENGINEER 2H03, ENGPHYS 2NE3

MECHENG 3A03 - ENGINEERING MECHANICS

Analysis of columns under centric and eccentric loading; Symmetrical and unsymmetrical bending analysis under centric and eccentric loading; Shearing stresses and shear flow in non-thin wall and thin wall members, longitudinal shear of beam members; 2D and 3D Mohr circle and theories of failure; Principal stresses under combined loading, design of transmission shaft; Design of structures under combined loading using 3D Mohr circle with ductile yield criteria.
Three lectures, one tutorial; second term
Prerequisite(s): ENGINEER 2P04 or MECHENG 2P04 and registration in any Mechanical Engineering program
Antirequisite(s): CIVENG 2C04

MECHENG 3C03 - MANUFACTURING ENGINEERING

- general introduction, encompassing the wide field of activities from iron and steel making through casting, rolling, forging, to cold forming, metal cutting, welding, bonding, electrical machining, surface treatment, mechanical handling, assembly, cleaning, packaging.

Three lectures; first term
Prerequisite(s): Registration in any Mechanical Engineering, Chemical Engineering or Materials Science and Engineering program
Antirequisite(s): MANTECH 3MF3

MECHENG 3E03 - MECHANICAL ENGINEERING DESIGN THEORY

3-D stress transformation, curved beams, thick walled pressure vessels, analysis and design of interference fits, rotating disks and rings, thermal stresses, eccentric column buckling, contact stresses, shaft design and analysis, fatigue design and analysis, bolted and welded joints, machine elements.
Three lectures, one tutorial; first term
Prerequisite(s): MECHENG 2Q04 or 2QA4, and MECHENG 3A03
Antirequisite(s): MECHENG 3E04, 3E05

MECHENG 3F04 - MODELLING AND NUMERICAL SOLUTIONS

An introductory course in numerical analysis covering such topics as numerical differentiation, integration, curve-fitting and the solution of differential equations and systems of linear and non-linear equations.
Four lectures; second term
Prerequisite(s): Registration in any Mechanical Engineering program
Antirequisite(s): CIVENG 2E03, COMPENG 3SK3

MECHENG 3M03 A/B - COMPOSITE LABORATORY I

Laboratory exercises in fluid mechanics, thermodynamics, solid mechanics, and machining processes.
One lab (three hours); both terms
Prerequisite(s): Registration in any Mechanical Engineering program
Antirequisite(s): MECHENG 3M02

MECHENG 3O04 - FLUID MECHANICS

Fluid properties and statics, conservation laws, applications of the continuity, momentum and energy equations, dimensional analysis and similarity, boundary layer flow, internal and external flows.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): Both MATH 2Z03 and MATH 2ZZ3; and registration in any Mechanical Engineering program
Antirequisite(s): CIVENG 2O04, CHEMENG 2O04, ENGPHYS 3O04

MECHENG 3R03 - HEAT TRANSFER

Application of the laws of conduction, convection and radiation to problems in heat transfer. Steady and transient conduction in solids. Laminar and turbulent convection. Radiation heat transfer processes. Boiling and condensation heat transfer.
Three lectures, one tutorial; second term
Prerequisite(s): MATH 2Z03 and MATH 3I03; and MECHENG 2W04 or ENGPHYS 2NE3; and MECHENG 3O04

MECHENG 4AA3 - AERODYNAMICS

Forces and moments associated with flow around airfoils and bodies. Finite wings. Potential flow and introduction to panel methods. Thin airfoil theory and symmetric and cambered airfoils. Introduction to aircraft stability and aeroelasticity.
Three lectures; one term
Prerequisite(s): MECHENG 3O04, CHEMENG 2O04, 3O04, or ENGPHYS 3O04; and MECHENG 4S03

MECHENG 4AI3 - APPLIED ARTIFICIAL INTELLIGENCE

This course covers the principles of modern Artificial Intelligence (AI) in a practical, hands-on way. Students will build practical, real-world AI-powered applications across a diverse range of sectors, including autonomous vehicles, business analytics, energy systems, financial technologies, and healthcare. Concepts such as Generative AI (GenAI), Natural Language Processing (NLP), Deep Learning (DL), recommendation engines, and computer vision will be covered.
Three lectures, one term
Prerequisite(s): Registration in Level IV or above of any Engineering program
Antirequisite(s): COMPSCI 4AL3 and SFWRENG 4AL3

MECHENG 4B03 - TOPICS IN PRODUCT DEVELOPMENT

Case studies using modern product development methods, value engineering, product specification, rapid product development, lean design and continuous improvement. Product liability and robust design.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering or Mechatronics Engineering program

MECHENG 4BB3 - BIOMECHANICS

Application of mechanical engineering principles to biomechanics problems including cellular biomechanics, hemodynamics, circulatory system, respiratory system, muscles and movement and skeletal biomechanics.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level III or above of any Engineering program
Cross-list(s): IBEHS 4B03

MECHENG 4BF3 - BIOFLUID MECHANICS

The objective is to learn blood flow mechanics through the circulatory system and its subsystems. The course examines mechanics of circulation, mechanobiology and biomechanics of different components of circulatory system, in-vivo and in-vitro techniques and their medical applications.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level IV or above of any Engineering program or Integrated Biomedical Engineering and Health Sciences (IBEHS) program

MECHENG 4C03 - PRODUCTION SYSTEMS ENGINEERING

Analytical tools to evaluate and design production systems to meet specified performance metrics. Quantitative and qualitative evaluation of production cells, flexible manufacturing systems and production lines.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering program or permission of the Department

MECHENG 4CC3 - EXPERIMENTAL AND COMPUTATIONAL BIOMECHANICS

Introduction to experimental and computational biomechanics including biomechanical testing concepts and application of finite element methods in simulations of biomechanical structures/systems.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of any Engineering program.
Cross-list: IBEHS 4XC3

MECHENG 4D03 - MANUFACTURING PROCESSES (METAL REMOVAL)

Fundamentals of metal removing processes, including mechanics and tribological aspects of material removal. Application of theory to the practice of machining processes such as turning, milling, drilling and grinding.
Three lectures; one term
Prerequisite(s): MECHENG 3C03 and registration in any Level IV or above of any Mechanical Engineering program

MECHENG 4DD3 - INTRODUCTION TO SURFACE ENGINEERING IN MANUFACTURING

Fundamentals of surface engineering in manufacturing including surface properties; surface characterization: different techniques and instruments; surface engineering techniques (conversion and deposition methods); thin coatings used in manufacturing: deposition methods, properties, selection, evaluation and applications.
Three lectures, one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering program or permission of the Department

MECHENG 4E03 - MICROELECTROMECHANICAL SYSTEMS (MEMS)

Introduction, microfabrication and micromachining fundamentals, scaling effects, mechanics and transduction at microscale, actuation and sensing methods - Electrostatic, piezoelectric, thermal, electromagnetic, resonant, tunneling and microfluidic techniques. Capacitative sensors, resonators, lab on chip devices, microfluidic devices, micromirrors, assembly techniques for MEMS, microsystem packaging.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering, Engineering Physics or Integrated Biomedical Engineering and Health Sciences (IBEHS) program or permission of the Department

MECHENG 4ES3 - ENERGY STORAGE

An overview of energy storage from the nanosecond scale to the seasonal scale. Concepts such as energy density, specific energy, thermodynamic losses, and cycle efficiency. Topics will include mechanical, thermal, electrochemical, and chemical energy storage.
Three lectures; one term
Prerequisite(s): one of MECHENG 2W04, ENGPHYS 2CD4, CHEMENG 3D04 or MATLS 2B03; and one of MECHENG 3O04, ENGPHYS 3O04, CIVENG 2O04 or CHEMENG 2O04

MECHENG 4FM3 - ADVANCED INSTRUMENTATION AND SENSING FOR THERMO-FLUIDS

The theory and practice of experimental analysis of fluid mechanics problems. Modern and traditional experimental facilities and techniques for thermo-fluids sensing and visualization, planning of laboratory experiments, data acquisition, analysis of experimental results and uncertainty estimation
Three lectures, one lab (one hour); one term
Prerequisite(s): MECHENG 3O04 or CIVENG 2O04

MECHENG 4H03 - MECHATRONICS

Integration of mechanical engineering with electronics and computer control. Sensors, actuators (including pneumatic and hydraulic), modelling using building block and state space methods, model-based control, programming of PLCs with practical demonstrations.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): IBEHS 4A03, MECHENG 4R03, MECHTRON 3DX4, ELECENG 3CL4 or SFWRENG 3DX4 and registration in any Mechanical Engineering, Mechatronics Engineering or Electrical Engineering program

MECHENG 4I03 - NOISE ANALYSIS AND CONTROL

Acoustic quantities; noise measurements and analysis; noise standards; sound generation, propagation, absorption, transmission; acoustic materials; noise control techniques; case studies.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering program or permission of the Department

MECHENG 4J03 - INTRODUCTION TO COMPUTATIONAL FLUID MECHANICS AND HEAT TRANSFER

Computational Methods for Fluid Mechanics and Heat Transfer covering: concepts of modelling and numerical analysis, governing equations of thermo-fluid problems, finite difference discretization methods. Use of commercial computational software for solving thermo-fluid problems.
Three lectures, one tutorial; one term
Prerequisite(s): MECHENG 3O04 or 4S03, and MECHENG 3F04 or ENGPHYS 2CE4, or permission of the Department

MECHENG 4K03 - ROBOTICS

Fundamental theory and practical applications of robotic manipulators and mobile robots. Equations of motion, robot dynamics and statics, motion planning, introduction to machine vision, basics of robot programming.
Three lectures; one term
Prerequisite(s): ENGINEER 2Q04 or MECHENG 2Q04 or 2QA4 or ENGPHYS 2CD4 and registration in Level IV or above of any Mechanical Engineering or Mechatronics Engineering or Engineering Physics program

MECHENG 4M06 A/B - MECHANICAL ENGINEERING CAPSTONE DESIGN PROJECT

- major mechanical project including quantitative design analysis, optimization, validation and/or testing to be completed under the supervision or co-supervision of a faculty member holding an appointment in the Department of Mechanical Engineering.

Lectures, one capstone project; both terms. Cannot be taken concurrently with any co-op work term course.
Prerequisite(s): MECHENG 3E03; MECHENG 3R03; and registration in Level IV Mechanical Engineering, Level V Mechanical Engineering and Management,

or Level V Mechanical Engineering and Society.

MECHENG 4N03 - NANOBIO ENGINEERING

Introduction to nanotechnology, nanomaterials, nanotechnology in living systems, nanotechnology in biomedical devices, nanobiomaterials, characterization of biomaterials, nano-coatings, nano-biofunctional interfaces, biosensing and diagnostics, organs-on-chips.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of Engineering or Integrated Biomedical Engineering and Health Sciences (IBEHS) program or permission of Department

MECHENG 4O04 - SUSTAINABLE ENERGY SYSTEMS

Assessment of current and future energy systems, covering resources, extraction, conversion with emphasis on meeting regional and global energy needs in a sustainable manner. Different renewable and conventional energy technologies and their attributes. Evaluation and analysis of energy technology systems in the context of political, social, economic and environmental goals.
Four lectures; second term
Prerequisite(s): MECHENG 2W04, 3O04; or ENGPHYS 2NE3, 3O04; or permission of the department
Antirequisite(s): ENGPHYS 3ES3

MECHENG 4P03 A/B - COMPOSITE LABORATORY II

Laboratory exercises in vibration analysis, machine structures, controls, heat transfer, gas dynamics, fluid mechanics and thermodynamics.
One lab (three hours); both terms
Prerequisite(s): ENGINEER 2Q04 or MECHENG 2Q04 or 2QA4 or ENGPHYS 2CD4, and MECHENG 3M03 A/B and registration in any Mechanical Engineering or Mechatronics program

MECHENG 4Q03 - MECHANICAL VIBRATIONS

Transient and steady state vibration of single- and multi-degree of freedom systems. Free and forced vibrations of single and multiple degree-of-freedom mechanical systems, transient response, damping and vibration isolation.
Three lectures; first term
Prerequisite(s): ENGINEER 2Q04 or MECHENG 2Q04 or 2QA4 or ENGPHYS 2CD4 and registration in any Mechanical Engineering or Mechatronics or Engineering Physics program

MECHENG 4R03 - CONTROL SYSTEMS

Fundamentals of linear, continuous control systems. Control system performance in both time and frequency domains. Design and analysis of controllers.
Three lectures; second term
Prerequisite(s): Registration in Level III Mechanical Engineering; or Level IV Mechanical Engineering and Management or Mechanical Engineering and Society; or Level IV or above in any Engineering Physics program
Antirequisite(s): ELECENG 3TP3, ELECENG 3TP4, IBEHS 4A03

MECHENG 4S03 - INCOMPRESSIBLE FLOW

Introduction to internal and external laminar and turbulent incompressible flows. Topics include turbulent boundary layers, aerodynamics and convective heat transfer.
Three lectures; one term
Prerequisite(s): MECHENG 3O04, CHEMENG 2O04, 3O04, or ENGPHYS 3O04

MECHENG 4SS3 - SMART SYSTEMS

This course will teach the fundamentals of smart systems which incorporate elements of sensing, actuation, and control in order to interact with the environment and make decisions in a predictive and intelligent manner.
Three lectures; one term
Prerequisite(s): MECHENG 4R03 or IBEHS 4A03

MECHENG 4T03 - FINITE ELEMENT APPLICATIONS

Theory of the finite element method, element derivation, solution procedures. Applications to static and dynamic mechanical systems using a finite element package.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering program

MECHENG 4U03 - COMPRESSIBLE FLOW AND TURBOMACHINERY

Compressible flows: Fanno and Rayleigh flows, normal and oblique shocks. Turbomachines: axial flow gas and wind turbines, axial flow compressors and fans.
Three lectures; one term
Prerequisite(s): MECHENG 2W04, MECHENG 3O04; CHEMENG 2O04, 3D04; or ENGPHYS 2NE3, 3O04

MECHENG 4V03 - THERMO-FLUIDS SYSTEMS DESIGN AND ANALYSIS

Design, operation and application characteristics of equipment commonly used in thermal systems. Modelling performance characteristics of piping systems, pumps, compressors, fans, heat exchangers, boilers and cooling towers. System simulation and optimization. Selection criteria of thermal equipment. Design optimization and system performance evaluation.
Three lectures, one tutorial; first term
Prerequisite(s): MECHENG 2W04, or ENGPHYS 2NE3; MECHENG 3O04 and MECHENG 3R03

MECHENG 4W03 - AIR CONDITIONING AND REFRIGERATION SYSTEMS

Re-examination of laws of thermodynamics, multicomponent vapour systems, psychrometry, air conditioning, mechanical vapour compression refrigeration, absorption refrigeration, heating and cooling load calculations, air quality and human thermal comfort.
Three lectures; one term
Prerequisite(s): MECHENG 2W04 or ENGPHYS 2NE3, and registration in Level IV or above of any Mechanical Engineering program or Engineering Physics program

MECHENG 4X04 A/B - INDEPENDENT RESEARCH PROJECT

Individual research project over two terms to be arranged by mutual consent of a faculty supervisor and the student with approval of the Department Associate Chair (Undergraduate).
Prerequisite(s): A minimum GPA of 9.5, consent of a supervisor, and registration in Level IV Mechanical Engineering, Mechanical Engineering Co-op (B.Eng.) or Level V Mechanical Engineering and Management, Mechanical Engineering and Management Co-op (B.Eng.Mgt.) or Mechanical Engineering and Society, Mechanical Engineering and Society Co-op (B.Eng.Society) or permission of the department.
Antirequisite(s): IBEHS 3I06 A/B S, IBEHS 4H03, ELECENG 4OJ4, ENGPHYS 4H04

MECHENG 4Y03 - INTERNAL COMBUSTION ENGINES

This course focuses on internal combustion engines (ICE), including operations, thermodynamics, combustion, and characteristics of gasoline and diesel engines, as well as hybrid powertrains.
Three lectures, one term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering program or Engineering Physics program

MECHENG 4Z03 - CAD/CAM/CAE

Solid modelling theory, part creation, assemblies and rigid bodies, mechanism simulation, B-Splines, data exchange, CNC machining and inspection. Major project using computer laboratory facilities.
Three lectures, one lab (one hour); second term
Prerequisite(s): Registration in Level IV or above of any Mechanical Engineering or Mechatronics Engineering program

Mechatronics

Courses in Mechatronics Engineering are administered by the Department of Computing and Software.
Information Technology Building, Room 202, ext. 24614
http://www.cas.mcmaster.ca/

Department Notes

Please note that not all elective courses will be offered in each academic year.

MECHTRON 2MD3 - DATA STRUCTURES AND ALGORITHMS FOR MECHATRONICS

Advanced programming with emphasis on embedded systems. Program specifications: Pre- and post-conditions, loop and datatype invariants; use of tools to demonstrate correctness. Selecting data structures for implementation of mathematical abstractions. Finite state machines, automata and languages; lexing and parsing. Algorithm analysis (time and space). Modelling of graphs, relations, corresponding algorithms.
Three lectures, one tutorial; second term
Prerequisite(s): MECHTRON 2MP3 or SFWRENG 2MP3; and registration in a Mechatronics Engineering program
Antirequisite(s): COMPENG 2SI3, 2SI4, COMPSCI 2C03, SFWRENG 2C03, 2MD3

MECHTRON 2MP3 - PROGRAMMING FOR MECHATRONICS

This course focuses on learning programming using the high-level systems programming language C, and on understanding how its features are implemented using the CPU and the memory hierarchy. Mathematical abstractions are implemented using fundamental data structures such as arrays, stacks, queues, etc., with static and dynamic memory allocation.
Three lectures, one tutorial; first term
Prerequisite(s): ENGINEER 1D04 or 1P13 or IBEHS 1P10, and registration in a Mechatronics Engineering program
Antirequisite(s): COMPENG 2SH4, COMPSCI 2S03, SFWRENG 2MP3, 2S03

MECHTRON 2TA4 - EMBEDDED SYSTEMS DESIGN I

Interfacing to digital and analog systems, sensors and actuators. Signals and conditioning: data acquisition, active and passive filtering, optical and analog isolation, pulse-width modulation, (de-)multiplexing. Architecture of micro-controllers and digital signal processors. Embedded system design and documentation.
Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; second term
Prerequisite(s): ENGPHYS 2E04 or SFWRENG 2DA4; MECHTRON 2MP3 or SFWRENG 2MP3 or 2S03; SFWRENG 2GA3 or registration in Level II or above of a Mechatronics program
Antirequisite(s): MECHTRON 3TA4

MECHTRON 3DX4 - DYNAMIC MODELS AND CONTROL OF PHYSICAL SYSTEMS

Modeling of dynamic continuous physical phenomena in both continuous and discrete time. Control theory, stability analysis and feedback controller design. Application of computer control to continuous processes, system identification.
Three lectures, one lab (three hours); second term
Prerequisite(s): One of MECHTRON 3MX3 or SFWRENG 3MX3 and registration in a Mechatronics Engineering program
Antirequisite(s): ELECENG 3CL4, ENGINEER 3L03, IBEHS 4A03, MECHENG 4R03, SFWRENG 3DX3, 3DX4

MECHTRON 3K04 - SOFTWARE DEVELOPMENT

Software design process. Professional responsibility. Using specifications. Documentation. Module Specification. Module interfaces. Module internal documentation. Coding styles. Portability. Software inspection. Software testing.
Three lectures, one lab (three hours); first term
Prerequisite(s): One of COMPENG 2SI3, 2SI4, ELEC ENG 2SI4, MECHTRON 2MD3, SFWRENG 2MD3, and registration in a Mechatronics Engineering or Mechatronics and Biomedical Engineering program
Antirequisite(s): COMPSCI 2ME3, SFWRENG 2AA4, 3K04, 3MD3, 3MD4

MECHTRON 3MX3 - SIGNALS AND SYSTEMS

Linear systems, signals, filters; time and frequency domains; single input-single output systems; discrete and continuous time; sampling theorem; Fourier series; Fourier, Laplace, and Z-transforms; stability.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): MATH 2Z03 and registration in a Mechatronics Engineering program
Antirequisite(s): ELECENG 3TP3, IBEHS 3A03, SFWRENG 3MX3

MECHTRON 3TB4 - EMBEDDED SYSTEMS DESIGN II

Models of embedded hardware (Register-transfer level abstraction, synchronous circuits, etc.). Design, verification and simulation of embedded hardware using a hardware description language. Design and implementation of embedded systems interacting with
analog systems. Hardware/software trade-offs in embedded system design.
Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; second term
Prerequisite(s): MECHTRON 2TA4 or 3TA4 and registration in a Mechatronics Engineering or Mechatronics and Biomedical Engineering program
Antirequisite(s): SFWRENG 2DA4

MECHTRON 3X03 - SCIENTIFIC COMPUTATION

Computer arithmetic and roundoff error analysis. Interpolation, integration, solving systems of linear and nonlinear equations. Eigenvalues and singular value decomposition. Numerical methods for ordinary differential equations.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): Both MATH 1ZB3 and 1ZC3, or both MATH 1AA3 and 1B03; MECHTRON 2MD3 or SFWRENG 2MD3; registration in a Mechatronics Engineering or Mechatronics and Biomedical Engineering program
Antirequisite(s): CHEMENG 2E04, CIVENG 2E03, COMPENG 3SK3, 3SK4, COMPSCI 4X03, ENGPHYS 2CE4, 3NM4, MATH 3NA3, 4NA3, MECHENG 3F04,

SFWRENG 3X03, 4X03

MECHTRON 4AA4 - REAL-TIME SYSTEMS AND CONTROL APPLICATIONS

Hard and soft real-time systems. Safety classification. Fail-safe design, hazard analysis. Discrete event systems. Modes. Requirements and design specifications. Tasks and scheduling. Clock synchronization. Data acquisition. Applications in real-time control.
Three lectures, one lab (three hours); first term
Prerequisite(s): SFWRENG 3BB4 or SFWRENG 3SH3; and SFWRENG 3DX4 or MECHTRON 3DX4 or IBEHS 4A03, and registration in a Mechatronics Engineering program
Antirequisite(s): SFWRENG 4A03, 4AA3, 4AA4, 4GA3

MECHTRON 4AX3 - PREDICTIVE AND INTELLIGENT CONTROL

This course introduces several concepts used in systems engineering, predictive control and artificial intelligence. A variety of techniques including prediction and estimation, linear models, basic optimization techniques, Monte Carlo techniques, neural networks, and clustering are introduced. The techniques are applied to predictive and smart systems by the example of model predictive control and intelligent control, classification and decision-making. The course is intended for engineering students with understanding in signals and systems and control.
Three lectures and one tutorial; one term
Prerequisite(s): MECHTRON 3DX4 or SFWRENG 3DX4 or IBEHS 4A03
Offered on an irregular basis.

MECHTRON 4TB6 A/B - MECHATRONICS CAPSTONE DESIGN PROJECT

Student teams prepare the requirements, design, documentation and implementation of a Mechatronics System taking economic, health, safety, cultural, legal and marketing factors into account. Students must demonstrate a working system and convincing test results.
Lectures, discussion, group project, seminars (three two-hour slots); two terms
Prerequisite(s): Registration in final level of a Mechatronics Engineering program
Cannot be taken concurrently with any co-op work term course.

Media Arts

Courses in Media Arts are administered by the Department of Communication Studies and Media Arts.
Togo Salmon Hall, Room 331, ext. 23488
https://csma.humanities.mcmaster.ca/
Courses
If no prerequisite is listed, the course is open. See also courses in Communication Studies.

MEDIAART 1A03 - MEDIA ARTS

Introduction to media arts and its cultural context, including art, design, and digital media. Students complete a series of hands-on creative projects exploring a range of media arts formats.
Three hours (lectures and tutorial); one term
Antirequisite(s): MMEDIA 1A03

MEDIAART 2B06 - TIME-BASED MEDIA

An exploration of time-based media through video and animation. Students will complete projects to develop conceptual, production, and post-production skills while readings and discussions address contemporary time-based media practices.
Lecture and lab (six hours); one term
Prerequisite(s): Registration in Level II of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 2B03, 2B06, 2H03

MEDIAART 2DF3 - DESIGN FUNDAMENTALS

Students will utilize analog and digital tools to complete exercises that develop essential visual design skills (color theory, composition, layout, typography, illustration, image editing and processing). This course emphasizes creative problem-solving and experimentation.
Lecture and lab (three hours); one term
Prerequisite(s): Registration in Level II of a Multimedia or Media Arts program
Antirequisite(s): MEDIAART 2A06, MMEDIA 2A06

MEDIAART 2G03 - DIGITAL AUDIO

Introduction to techniques in audio recording, transformation, and delivery for diverse cultural and technical contexts. Listening, reading, discussions, and demonstrations will support the creation and critique of audio projects.
Lecture, web module, tutorial (three hours); one term
Prerequisite(s): Registration in Level II of a Multimedia or Media Arts program; or registration in Level II or above of a Music, Theatre & Film, Art History, Studio Art, iArts or Communication Studies program
Antirequisite(s): MMEDIA 2G03

MEDIAART 3AN3 - ANIMATION

This class is an introduction to the history, types and basic principles of animation. Students are expected to create a significant work of animation in which they display a variety of techniques. The class will view and discuss the history of animation, independent animation, commercial animation and interactive media. In the context of these lectures, projects and screenings, students will develop a firm grasp of animation fundamentals.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 3AN3

MEDIAART 3B03 - DIGITAL CULTURES

This course explores current contests over access to the production, distribution, and consumption of digital culture across a range of technologies and practices. Assignments will include digital production.
Three hours, one term
Prerequisite(s): Registration in Level III or above of a Multimedia, Media Arts or Communication Studies program
Antirequisite(s): MMEDIA 3B03

MEDIAART 3BB3 - NEW MEDIA ART PRACTICES

This course offers a critical perspective on theories and practices of contemporary media art through screenings, production-based projects and field trip engagement with new media work.
Three hours, one term
Prerequisite(s): Registration in Level III or above of a Multimedia, Media Arts or Communication Studies program

Antirequisite(s): CMST 3BA3, MMEDIA 2PA3, 3BB3

MEDIAART 3C03 - INTERACTIVE AND SPATIAL AUDIO

This course covers the creation and delivery of interactive and spatial audio. Projects explore surround and multichannel sound, interactive sound design, software synthesis, and other advanced electroacoustic techniques.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program, or MMEDIA 2G03 (or, if previously taken, MUSIC 2Z03, ART 2Z03 or THTRFLM 2Z03)
Antirequisite(s): MMEDIA 3C03, MUSIC 3Z03

MEDIAART 3D03 - INTERFACE, CODE, DATA

- hands-on exploration of the role of interfaces, code, and data in Media Arts practice. Students will explore the possibilities of formats such as visualizations, websites, mobile apps, databases, games, live coding performances and generative art.

Lecture, web module, tutorial (three hours); one term
Prerequisite(s): Registration in Level III or above of a Multimedia, Media Arts or Communication Studies program
Antirequisite(s): MEDIAART 2A06, MMEDIA 2A06

MEDIAART 3DS3 - DOCUMENTARY STRATEGIES

Studio course exploring theory and practice of documentary across numerous media (photo, video, sound). Students will learn documentary techniques and theorize, propose, and produce projects that are informed by the history, theory, and debates foundational to documentary practice.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program

MEDIAART 3EE3 - GRAPHIC DESIGN

Students learn and practice the fundamentals of 2D design, focusing on how simple, yet intentional visual manipulation, through digital and analogue methods, communicate meaning. Students learn and practice using typography as a communication tool to organize and convey ideas and explore a design process methodology to develop design solutions to design challenges.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 2E03, 3EE3

MEDIAART 3EW3 - ENVIRONMENTAL AND WILDLIFE PHOTOGRAPHY

This course studies the creation of wildlife & environmental photography. Students draw upon readings, photographs, documentaries, and lab instruction to create critically engaged and ethically informed photographs of local wildlife and habitat.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program

MEDIAART 3I03 - NARRATIVE STRATEGIES

Students will consider how meaning is structured and perceived through narrative approaches to time-based media such as video and animation. Concepts include structure, plot, theme, genre, characterization, and point of view.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 3I03

MEDIAART 3K03 - GAME STUDIES

- study of the form, content, and playing of digital games. Topics include: form, genre, and technology; time and space; representation and narrative; and participatory play. Assignments include digital production.

Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program, a program in Communication Studies, or the Software Engineering (Game Design) program
Antirequisite(s): MMEDIA 3K03

MEDIAART 3L03 - GAME DESIGN

Students will design and develop digital games, with a game engine, informed by readings and discussion.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia, Media Arts, or Communication Studies program
Antirequisite(s): MMEDIA 3L03

MEDIAART 3MU3 - MUSICS, TECHNOLOGIES AND AUDIO CULTURES

What effects have broadcasting, mechanical and digital reproduction technologies had upon our experience of music? What are the differences between live performances, broadcasting and audio objects? This course addresses these questions by examining diverse musical and sound art genres as reflected in readings, sound recordings, videos and live performances.
Three lectures; one term
Prerequisite(s): Registration in Level III or above; and completion of one of the following: CMST 1A03, MMEDIA 1A03, MEDIAART 1A03, ENGLISH 1CS3, GENDRST 1A03, GENDRST 1AA3, PEACJUST 1A03, IARTS 1PA3, or IARTS 1PB3.
Antirequisite(s): CMST 3MU3, MMEDIA 3MU3

MEDIAART 3PC3 - PHOTOGRAPHIC COLLAGE AND COMPOSITE IMAGES

Studio course exploring theory and practice of collage and composite image-making (both analog and digital). Students will develop a series of creative projects, and will learn strategies of camera control, lighting, and digital compositing. No previous technical background required, but basic familiarity with Photoshop and digital photography is recommended.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program; or ART 2DP3 or IARTS 2DP3 and registration in Level III or above in a Studio Art or iArts program
Antirequisite(s): ART 3PC3, MMEDIA 3PC3

MEDIAART 3S03 - SOUND AND IMAGE

- study of contemporary research and creative practices that explore combined audiovisual perception and digital translations between sound and image. Students will discuss theoretical readings and complete creative projects.

Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 3S03

MEDIAART 3VA3 - VIDEO ART AND DIGITAL CINEMA

Explores intersections between contemporary art and the moving image, with an emphasis on current movements in Digital Cinema and Video Art. Students will explore the boundaries of conventional filmic production: challenging and expanding on existing skill sets to develop unique and engaging aesthetic sensibilities. Topics will include understanding Digital Cinema, anti-narrative approaches, composite and hybrid/multi-channel video, HD and UHD work flows, audio/video output for the professional sphere, and professional practices (i.e. festivals, residencies, film school, grants, graduate programs, etc).
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III or above of a Multimedia or Media Arts program; or ART 2DP3 or IARTS 2DP3 and registration in Level III or above in an iArts program
Antirequisite(s): ART 3VA3, MMEDIA 3VA3

MEDIAART 3Z03 - PRODUCTION AND CRITIQUE

The course takes up various theories & practices of critique to support students in the evolution of their independent media arts studio practice. Students will engage in an iterative cycle of production, presentation, critical analysis, and refinement within the context of group critiques.
Three hours (combined lecture and lab); one term
Prerequisite(s): Registration in Level III of a Multimedia or Media Arts program
Antirequisite(s): MEDIAART 3X03 A/B or MMEDIA 3X03 A/B

MEDIAART 4F03 - TOPICS IN MEDIA ARTS PRODUCTION

Advanced media arts production projects exploring assigned themes or media formats.
Three hours (lecture and lab); one term
Prerequisite(s): Registration in Level IV of a Multimedia or Media Arts program
Antirequisite(s): MMEDIA 4F03
MEDIAART 4F03 may be repeated, if on a different topic, to a total of six units.

MEDIAART 4ST6 A/B - SENIOR THESIS RESEARCH AND PRODUCTION

Students will complete media arts thesis projects under faculty supervision. Working alone, or collaboratively, students will conduct scholarly research into the formal issues and subject matters indicated by their creative projects. Emphasis will be placed upon the integration of research outcomes throughout a sustained production cycle to realize advanced and informed media arts works.
Lecture and lab (three hours); two terms
Prerequisite(s): Registration in Level IV of a Multimedia or Media Arts program and completion of MEDIAART 3Z03, MEDIAART 3X03 A/B or MMEDIA 3X03 A/B
Antirequisite(s): MMEDIA 4ST6 A/B

Medical Physics

Courses in Medical Physics are administered by the Department of Physics and Astronomy.
A.N. Bourns Building, Room 241, ext. 24559
http://www.physics.mcmaster.ca/
Courses

MEDPHYS 1A03 - PHYSICS IN MEDICINE AND BIOLOGY

An exploration of how physics can be used to understand biological systems and in medicine to diagnose and treat disease. Topics will include x-ray, nuclear medicine and MRI imaging, the optics of vision and imaging of the eye, and sound, heat, heat flow and fluid dynamics in ultrasound imaging and therapy.
Three lectures; one term
Prerequisite(s): Grade 12 Physics U or credit or registration in PHYSICS 1A03; and credit or registration in one of MATH 1A03, 1LS3, 1X03, 1ZA3; or ISCI 1A24 A/B

MEDPHYS 3C03 - OPERATIONAL HEALTH PHYSICS: LABORATORY & COMMUNICATION

Six practical Health Physics operational exercises are undertaken. These include survey instruments, surveys of radiation fields, contamination surveys, air sampling for radioactivity, radiation dosimetry and radiological incident response. Each topic is introduced, followed by laboratory work and then students report on their findings.
Two lectures/seminars, one lab; one term
Prerequisite(s): Registration in Level III or above of an Honours Medical and Biological Physics (B.Sc.) program; or permission of the instructor
May be offered in alternate years.

MEDPHYS 4B03 - RADIOACTIVITY AND RADIATION IN MEDICAL PHYSICS

Study of the radioactivity and radiation physics that underlies modern clinical medical physics by following the progress of an imaginary patient from their initial diagnosis through treatment for cancer. Topics include x-ray imaging, external beam radiation therapy, radiation dosimetry, radioisotopes in medicine, radiation shielding and radiation protection. The course includes 30 minutes of on-line lecture material per week.
Three lectures; one term
Prerequisite(s): One of LIFESCI 1D03, MEDPHYS 1A03 (or BIOPHYS 1S03), PHYSICS 1AA3, 1CC3, 1E03, ISCI 1A24 A/B; or permission of the instructor

MEDPHYS 4D03 - IMAGING IN MEDICINE AND BIOLOGY

- theoretical and practical treatment of the math and physics underlying imaging techniques in medicine and biology, such as clinical imaging with computed tomography (CT) and magnetic resonance imaging (MRI), and deconvolution microscopy. Topics include image formation, 2D and 3D reconstruction, noise, filtering, storage, manipulation, and analysis. The course includes a practical MATLAB programming component to introduce students to image processing.

Two lectures, one tutorial (two hours); one term
Prerequisite(s): MATH 2C03 or 2Z03

MEDPHYS 4F03 - FUNDAMENTALS OF HEALTH PHYSICS

Introduces students to the fundamentals of occupational and environmental health physics encountered in the nuclear power, medical and research fields. Concepts include principles and regulatory framework for radiation safety; key dosimetric quantities, units and models; doses from internal and external exposures to ionizing radiation; elements of a radiation safety program; and environmental exposure pathways.
Three lectures; one term
Prerequisite(s): Registration in Level IV or above of a program in the Faculties of Science, Health Sciences, or Engineering. MEDPHYS 4B03, ENGPHYS 3L04 or ENGPHYS 3D04 (or ENGPHYS 3D03) is recommended.
May be offered in alternate years.

MEDPHYS 4I03 - INTRODUCTION TO BIOPHOTONICS

This course covers the basic principles of light interaction with biological systems and specific biomedical applications of photonics such as optical light microscopy, endoscopic imaging, spectroscopy in clinical diagnosis, flow cytometry, micro-optical sensors, etc.
Three lectures; one term
Prerequisite(s): Registration in Level III or above in the Faculties of Engineering, Science, or Health Sciences, or the Integrated Biomedical Engineering & Health Sciences (IBEHS) Program
Cross-list(s): ENGPHYS 4I03
This course is administered by the Department of Engineering Physics.

MEDPHYS 4RA3 - RADIATION AND RADIOISOTOPE METHODOLOGY I

An introduction to radiation detection and radioisotope production with emphasis on principles of gas filled radiation detectors, scintillation detectors and gamma-ray spectrometry.
Two lectures every week, one lab (three hours) every other week
Prerequisite(s): One of ENGPHYS 3D04 (or ENGPHYS 3D03), 3L04, or MEDPHYS 4B03
Antirequisite(s): MEDPHYS 4R06 A/B

MEDPHYS 4T03 - CLINICAL APPLICATIONS OF PHYSICS IN MEDICINE

Basic physical concepts underlying medical imaging, nuclear medicine, physiological measurement, radiation therapy and biomedical laser applications with an overview of their technical implementation.
Three lectures; one term
Prerequisite(s): One of MATH 2MC3, MATH 2X03, MATH 2XA3 or ISCI 2A18 A/B; and MATH 2C03; and one of ENGPHYS 3L04, 3D03, or credit or registration in MEDPHYS 4B03

MEDPHYS 4U03 - RADIATION BIOLOGY

The effects of radiation on biological material at the molecular, cellular, tissue and whole organism level.
Three lectures; one term
Prerequisite(s): One of BIOLOGY 2B03, 2C03, ISCI 2A18 A/B; or registration in Honours Medical and Biological Physics

Medical Radiation Sciences

Courses in Medical Radiation Sciences are administered by the School of Interdisciplinary Science (SIS).
A.N. Bourns Science Building, Room C501, ext. 21181

Email: sis@mcmaster.ca
https://sis.mcmaster.ca/undergraduate/medical-radiation-sciences/
Notes

1. Courses for Levels I, II, III and IV Medical Radiation Sciences, Radiography, Ultrasonography or Radiation Therapy Specialization are available only to students registered in the Medical Radiation Sciences program unless otherwise stated.
2. Lab courses may be held at learning settings external to the University.
3. Students are responsible for arranging their own travel to and from or accommodation in learning settings external to the University and for covering any costs incurred. All students enrolled in the Medical Radiation Sciences program are expected to be able to travel to any learning setting in Ontario. The final assignment of learning settings for any clinical practicum course is constrained by the availability of the requested setting and resources. Students may, therefore, be required to complete a clinical practicum course in a learning setting that is not of their choosing.
4. For all clinical practicum courses, the prerequisite skills and patient care courses must have been completed within the previous twelve months; otherwise the student must complete a skills reassessment course during that twelve-month period.

Courses

MEDRADSC 1B03 - INTRODUCTION TO PATHOLOGY

Processes of disease and trauma, from damage and repair processes at the cellular level to tissues and systems. Disease development and recovery, immunity and heredity are examined.
Lectures (three hours); one term
Prerequisite(s): Credit or registration in KINESIOL 1Y03 and registration in Honours Medical Radiation Sciences (Level I)

MEDRADSC 1C03 - INTRODUCTION TO PHYSICS FOR MEDICAL RADIATION SCIENCES

Fundamental physics relevant to Medical Radiation Sciences. Vibrations and waves, electricity, heat, fluids, electromagnetic radiation, radioactivity and radiation interaction, sound and applications in Medical Radiation Sciences.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in Medical Radiation Sciences (Level I)
Antirequisite(s): MEDPHYS 1E03, LIFESCI 1D03

MEDRADSC 1E03 - INQUIRY IN MEDICAL RADIATION SCIENCES

An introduction to the process of Inquiry. Library and research tools are used to identify literature and evaluate evidence related to a variety of topics.
Lectures or seminars (three hours); one term
Prerequisite(s): Registration in Honours Medical Radiation Sciences (Level I)

MEDRADSC 1F03 - PROFESSIONS IN MEDICAL RADIATION SCIENCES

The professions and subspecialties within medical radiation sciences are introduced, including legislative and regulatory frameworks, the Canadian health care system, professionalism and reflective practice.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Honours Medical Radiation Sciences I

MEDRADSC 2A03 - PATIENT CARE

Theoretical foundation and skills development to enable the student to meet the physical and emotional needs of patients in the clinical setting while utilizing self-care concepts and safe practices. Communication (verbal and non-verbal) skills are emphasized.
Lecture (two hours), lab (two hours); one term
Prerequisite(s): MEDRADSC 1F03; and one of MEDRADSC 2G03, MEDRADSC 2N03, 2U03; and registration in Level II of a Medical Radiation Sciences specialization

MEDRADSC 2AA3 - IMAGING PROCEDURES IN HEALTH CARE

An examination of the various imaging modalities and procedures involved in a patient's diagnostic work-up and treatment.
Three hours (lectures); one term
Prerequisite(s): Registration in Level II Medical Radiation Sciences Specialization

MEDRADSC 2D03 - RELATIONAL ANATOMY I

This course examines spatial relationships of anatomical structures (appendicular and axial skeleton, excepting skull, plus structures of the pelvic and thoracic cavities) using projection, sectional and volume-rendered images.
Lecture (two hours), lab (one hour); one term
Prerequisite(s): Registration in Level II of the Radiography Specialization or Radiation Therapy Specialization

MEDRADSC 2G03 - RADIOGRAPHIC SKILLS I

Emphasis is on professional behaviours and fundamental radiographic techniques and basic radiography of the appendicular skeleton through image production using anatomical phantoms and performance of simulated examinations on peers. Communication (verbal and non-verbal) skills are emphasized.
This course is evaluated on a Pass/Fail basis.
Lecture (two hours), lab (four hours); one term
Prerequisite(s): MEDRADSC 1F03; and credit or registration in MEDRADSC 2D03, 2Y03; and registration in Level II of the Radiography Specialization

MEDRADSC 2H03 - RADIOGRAPHIC SKILLS II

Emphasis is on professional behaviours and fundamental radiographic techniques and basic radiography of the axial skeleton, chest and abdomen through image production using anatomical phantoms and performance of simulated examinations on peers. Communication (verbal and non-verbal) skills are emphasized.
This course is evaluated on a Pass/Fail basis.
Lecture (two hours), lab (four hours); one term
Prerequisite(s): MEDRADSC 2D03, 2G03 and registration in Level II of the Radiography Specialization

MEDRADSC 2I03 - PATHOLOGY AND PROCEDURES I

Radiological procedures and associated pathologies of the skeletal, digestive, respiratory and urinary systems. Physiological properties of contrast media and their use in radiological procedures are studied.
Lectures (three hours), online component (one hour); one term
Prerequisite(s): Registration in Level II of the Radiography Specialization

MEDRADSC 2J15 - RADIOGRAPHY CLINICAL PRACTICUM I

Thirteen-week radiography clinical placement. Students develop clinical and professional skills by participating in radiological procedures under direct supervision of a qualified professional.
This course is evaluated on a Pass/Fail basis.
One term (Offered in Spring/Summer Term only)
Prerequisite(s): MEDRADSC 2A03, 2AA3, 2H03, 2I03, 2RA3, 2X03, and registration in Level II of the Radiography Specialization
See Department Note 4 *above*.

MEDRADSC 2K03 - APPLIED SONOGRAPHIC PHYSICS AND INSTRUMENTATION I

- comprehensive applied examination of sound wave principles, sound and tissue interaction, pulsed wave ultrasound, transducers, instrumentation, Doppler ultrasound, and diagnostic imaging ultrasound artifacts.

Lectures (three hours), lab (one hour); one term
Prerequisite(s): Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2L03 - ABDOMINAL ULTRASONOGRAPHY I

- comprehensive study of the relational anatomy, sonographic technique/appearances of normal major abdominal organs and vasculature; pathology, sonographic correlation, clinical presentation and diagnostic tests of the vascular and reticulo-endothelial systems.

Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2M03 - OBSTETRICAL AND GYNECOLOGIC ULTRASONOGRAPHY I

- comprehensive study of the anatomy, physiology of the normal female pelvis including pregnancy. Sonographic technique, normal appearances, patient care and ethical issues will be examined.

Three hours (lectures); Tutorial (one hour); one term
Prerequisite(s): Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2N03 - SONOGRAPHIC SKILLS I

Emphasis is on professional behaviours, patient care, communication skills (verbal and non-verbal), ergonomics, image recognition, image critique and performance of sonography of the abdominal vasculature, liver and biliary systems on peers, including routine and alternative techniques.
This course is evaluated on a Pass/Fail basis.
Lectures (one hour), lab (four hours); one term
Prerequisite(s): Credit or registration in MEDRADSC 2K03, 2L03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2O03 - ABDOMINAL ULTRASONOGRAPHY II

- comprehensive study of pathology and sonographic correlation, clinical presentation and diagnostic tests of hepatic, biliary, pancreatic, urinary tract; relational anatomy, sonographic technique/appearances of normal thyroid.

Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): MEDRADSC 2K03, 2L03, 2N03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2P03 - OBSTETRICAL AND GYNECOLOGICAL ULTRASONOGRAPHY II

- comprehensive study of gynecological pathologies and normal and abnormal sonographic appearances of the female pelvis. Pathologies of the obstetrical patient will be examined.

Three hours (lectures), one hour (tutorial); one term
Prerequisite(s): MEDRADSC 2M03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2Q03 - SONOGRAPHIC SKILLS II

Emphasis is on professional behaviours, patient care, communication skills (verbal and non-verbal), ergonomics, image recognition, image critique and performance of sonography of the pancreas, urinary system, complete abdomen and female pelvis on peers, including routine and alternative techniques.
This course is evaluated on a Pass/Fail basis.
Lecture (one hour), lab (four hours); one term
Prerequisite(s): MEDRADSC 2K03, MEDRADSC 2L03, 2M03, 2N03; and registration in Level II of the Ultrasonography Specialization

MEDRADSC 2R15 - ULTRASONOGRAPHY CLINICAL PRACTICUM I

Thirteen-week sonography clinical placement. Students develop clinical and professional skills by participating in sonographic procedures under direct supervision of a qualified professional. Communication skills (verbal and non-verbal) are emphasized.
This course is evaluated on a Pass/Fail basis.
One term (Offered in Spring/Summer Term only)
Prerequisite(s): MEDRADSC 2K03, 2L03, 2M03, 2N03; and registration in Level II of the Ultrasonography Specialization
See Department Note 4 above.

MEDRADSC 2RA3 - RELATIONAL ANATOMY II

This course examines the spatial relationships of anatomical structures (contents of cranium, neck and abdominal cavity) using projection, sectional and volume-rendered images.
Lectures (three hours), lab (one hour); one term
Prerequisite(s): MEDRADSC 2D03 and registration in Level II of the Radiography or the Radiation Therapy Specialization
Antirequisite(s): MEDRADSC 3I03

MEDRADSC 2S03 - CLINICAL ONCOLOGY I

This course introduces the oncologic concepts that characterize all malignancies. Topics include epidemiology, etiology, signs and symptoms, routes of spread, staging and management. An in-depth study of some of the more common disease sites is also undertaken.
Three hours (lectures); one term
Prerequisite(s): Registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2T03 - CLINICAL ONCOLOGY II

This course builds on MEDRADSC 2S03 (Clinical Oncology I) through continued in-depth study of prevalent malignancies.
Three hours (lectures); one term
Prerequisite(s): MEDRADSC 2S03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2U03 - RADIATION THERAPY SKILLS I

Emphasis is on professional behaviours, patient care, communication skills (verbal and non-verbal), and basic radiation therapy treatment techniques are taught and evaluated through simulated labs.
This course is evaluated on a Pass/Fail basis.
Lectures (two hours), lab (four hours); one term
Prerequisite(s): Registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2V15 - RADIATION THERAPY CLINICAL PRACTICUM I

Thirteen week Radiation Therapy clinical placement. Students develop clinical skills by participating in various areas of a Radiation Therapy Department under the direct supervision of a qualified professional. Communication skills (verbal and non-verbal) are emphasized.
This course is evaluated on a Pass/Fail basis.
One term (Offered in Spring/Summer Term only)
Prerequisite(s): MEDRADSC 2A03, 2AA3, 2RA3, 2T03, 2W03, 2X03, and registration in Level II of the Radiation Therapy Specialization
See Department Note 4 above.

MEDRADSC 2W03 - PHYSICS AND INSTRUMENTATION FOR RADIATION THERAPY

Photon interactions, X-ray production, measurement of radiation, linear accelerator calibration and dose calculation in simple geometries.
Lectures (two hours), lab/tutorial (two hours); one term
Prerequisite(s): Registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2X03 - RADIOBIOLOGY AND PROTECTION

Radiation effects on cells, tissues and organs and bodies are covered with emphasis on clinical radiation hazards. Dose minimization and protective practices guidelines and regulations are examined.
Lectures (three hours); one term
Prerequisite(s): MEDRADSC 2U03 or 2Y03; and registration in Level II of the Radiography or the Radiation Therapy Specialization

MEDRADSC 2Y03 - RADIOGRAPHIC IMAGING AND INSTRUMENTATION I

Production of x-rays, interactions with matter, image production, display and quality; control of beam quality /quantity related to image quality and dose optimization are covered.
Lectures (three hours), lab (one hour); one term
Prerequisite(s): Registration in Level II of the Honours Medical Radiation Sciences - Radiography Specialization (B.M.R.Sc.)

MEDRADSC 2ZZ0 - PRE-CLINICAL PROFESSIONAL SKILLS REASSESSMENT I

Practice and reassessment of skills performance prior to Clinical Practicum 1. Specific skills and performance criteria will be detailed in a learning contract.
This course is evaluated on a Pass/Fail basis.
Prerequisite(s): Permission of the Department

MEDRADSC 3AA3 - INTERDISCIPLINARY HEALTH CARE

Students will collaborate with other health care professions students to develop interdisciplinary care plans for complex patient case scenarios. Students will learn to incorporate the range of domains of care and explore community resources available to support patients and their families/ caregivers.
Lectures (three hours), one term (Offered in Spring/Summer Term only)
Prerequisite(s): One of MEDRADSCI 2J15, 2R15 or 2V15 and registration in Level III of a Medical Radiation Sciences specialization
Not open to students with credit or registration in MEDRADSC 3C03.

MEDRADSC 3B03 - QUALITY MANAGEMENT IN MEDICAL RADIATION SCIENCES

Examination of various quality management methodologies in health care facilities, external accreditation processes and legislation associated with quality in Medical Radiation Sciences.
Lectures (two hours), tutorial (one hour); one term (Offered in Spring/Summer Term only)
Prerequisite(s): One of MEDRADSC 2J15, 2R15 or 2V15; and registration in Level III of a Medical Radiation Sciences specialization

MEDRADSC 3DA3 - ADVANCED STUDIES IN COMPUTED TOMOGRAPHY

- study of clinical use of CT in diagnosis, including clinical indications, pathophysiology, imaging appearances, imaging protocols and post-

processing tools.
Lectures (three hours), lab (one hour); one term
Prerequisite(s): MEDRADSC 3K03 and registration in Level III of the Radiography or Radiation Therapy Specialization

MEDRADSC 3DE3 - INTRODUCTION TO MAGNETIC RESONANCE IMAGING

Of magnetic resonance imaging, including instrumentation, image production, selection and control of magnetic fields, pulse sequences, safety and clinical application.
Lectures and web modules (three hours); one term (Offered in Spring/Summer Term only)
Prerequisite(s): Registration in Level III of a Medical Radiation Sciences Specialization

MEDRADSC 3DJ3 - PEDIATRIC SONOGRAPHY

This course offers a comprehensive overview of pediatric normal and abnormal anatomy including the vascular system, spinal and intracranial structures along with scanning protocols.
Lectures (three hours); one term (Offered in Spring/Summer Term only)
Prerequisite(s): Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3G03 - RADIOGRAPHIC IMAGING AND INSTRUMENTATION II

The main operations of radiographic and fluorographic equipment, from underlying physical principles to clinical application.
Three hours (lectures), one hour (lab or tutorial); one term
Prerequisite(s): MEDRADSC 2J15 and registration in Level III of the Radiography Specialization

MEDRADSC 3H03 - QUALITY CONTROL IN RADIOGRAPHY

Students perform quality control testing procedures on both analogue and digital radiographic equipment, comparing equipment performance to legislated standards and best practices concepts. Lecture (one hour), lab (two hours), tutorial (one hour); one term
Prerequisite(s): MEDRADSC 3G03 and registration in Level III of the Radiography Specialization

MEDRADSC 3J03 - PATHOLOGY AND PROCEDURES II

Radiological procedures and image appearances of associated pathologies of the cardiovascular, endocrine, nervous and reproductive systems.
Three hours (lectures); one term
Prerequisite(s): MEDRADSC 2J15 and registration in Level III of the Radiography Specialization

MEDRADSC 3K03 - COMPUTED TOMOGRAPHY

Processes of data acquisition, image reconstruction and post-processing are discussed. Scan protocol optimization in terms of image quality, demonstrated structures and patient dose are examined. Labs include scanning of anatomical phantoms.
Lectures (three hours), lab (one hour); one term
Prerequisite(s): MEDRADSC 2RA3 and registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3L03 - RADIOGRAPHIC SKILLS III

Emphasis is on professional behaviours and radiography of cranio-facial structures and development of case management and adaptation skills in modifying standard radiographic procedures to the special needs patient. Communication skills (verbal and non-verbal) are emphasized.
This course is evaluated on a Pass/Fail basis.
Lecture (two hours), lab (four hours); one term (Offered in Spring/Summer Term only)
Prerequisite(s): MEDRADSC 2J15 and registration in Level III of the Radiography Specialization

MEDRADSC 3LA3 - RADIATION THERAPY SKILLS II

Emphasis is on professional behaviours, patient care, communication skills and radiation therapy techniques, with a focus on the management of side-effects associated with radiation therapy.
Lectures (two hours), lab (two hours), tutorial (two hours); one term
Prerequisite(s): MEDRADSC 2V15 and registration in Level III of the Radiation Therapy Specialization
Antirequisite(s): MEDRADSC 3W03
This course is evaluated on a Pass/Fail basis.

MEDRADSC 3LB3 - RADIATION THERAPY SKILLS III

Emphasis is on professional behaviours, patient care, communication skills and radiation therapy techniques associated with the management of complex patient case scenarios.
This course is evaluated on a Pass/Fail basis.
Lecture (two hours), lab (two hours); one term
Prerequisite(s): MEDRADSC 3LA3, and registration in Level III of the Radiation Therapy Specialization
Antirequisite: MEDRADSC 3BB3

MEDRADSC 3M03 - ABDOMINAL ULTRASONOGRAPHY III

- comprehensive overview with sonographic correlation of the relational anatomy, normal, anomalous and pathologic conditions of the adrenal glands, abdominopelvic and thoracic cavities, GI tract and specific superficial structures.

Lectures (three hours), tutorial (one hour); one term (Offered in Spring/Summer Term only)
Prerequisite(s): MEDRADSC 2O03, 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3N03 - VASCULAR ULTRASONOGRAPHY

- comprehensive study of vascular anatomy, physiology, hemodynamics, sonographic interpretation of normal and pathologic conditions in the assessment of the vasculature of the head, neck, abdomen and extremities.

Three hours (lectures), one hour (tutorial); one term
Prerequisite(s): MEDRADSC 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3O03 - SONOGRAPHIC SKILLS III

Emphasis is on professional behaviours, patient care, communication skills (verbal and non-verbal), ergonomics, image recognition, image critique and performance of the extracranial arteries, abdominal and peripheral vasculature on peers, including routine and alternative techniques.
This course is evaluated on a Pass/Fail basis.
Lecture (one hour), lab (four hours); one term
Prerequisite(s): MEDRADSC 2R15, 3N03 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3P03 - OBSTETRICAL AND GYNECOLOGIC ULTRASONOGRAPHY III

- comprehensive study of obstetric anomalies and abnormal sonographic appearances of amniotic fluid, fetal growth, fetal syndromes, Doppler studies of the gravid patient and fetal anomalies of each system.

Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): MEDRADSC 2P03 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3Q03 - APPLIED SONOGRAPHIC PHYSICS AND INSTRUMENTATION II

Recent and emerging technological advances in ultrasound instrumentation/ imaging such as advanced signal processing, elastography, contrast ultrasound imaging and 3D/4D imaging. Bioeffects and quality assurance associated with diagnostic ultrasound will also be covered.
Lectures (three hours), tutorial (one hour); one term
Prerequisite(s): MEDRADSC 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3R03 - MUSCULOSKELETAL ULTRASONOGRAPHY

Sonographic correlation of upper/lower extremity joint anatomy; normal and pathologic musculoskeletal structures using standard scanning techniques and protocols.
Lectures (three hours), lab (one hour); one term
Prerequisite(s): MEDRADSC 2R15 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 3S03 - TREATMENT PLANNING I

Students gain the knowledge and skills required to independently plan and calculate radiation therapy treatments for a variety of sites under variable conditions.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): MEDRADSC 2V15 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3V03 - TREATMENT PLANNING II

This course further develops problem-solving skills related to dosimetry. Photon and electron beams, brachytherapy, conformal therapy and Intensity Modulated Radiation Therapy principles are emphasized.
Lectures (two hours), lab (two hours); one term
Prerequisite(s): MEDRADSC 3S03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3X03 - RESEARCH METHODS IN MEDICAL RADIATION SCIENCES

Prepares students for applied clinical research in Medical Radiation Sciences. Topics include systematic description of observations, testing hypotheses, distinctives of quantitative and qualitative research and critical review of published literature.
Lectures (three hours), tutorials (two hours); one term
Prerequisite(s): STATS 2B03; and registration in Level III of a Medical Radiation Sciences specialization or Level III or above a Life Sciences program

MEDRADSC 3Y03 - ETHICS FOR MEDICAL RADIATION SCIENCES

An overview of the major areas of clinical biomedical ethics. Extensive use of case discussion and analysis will help to develop the students' ethical problem-solving skills.
Lectures (three hours); one term
Prerequisite(s): Registration in Level III of a Medical Radiation Sciences specialization; or Level III or above of an Honours Medical & Biological Physics program

MEDRADSC 3Z06 - RESEARCH PROJECT

Students conduct an individual research project under the supervision of a faculty member. Students wishing to enroll in this course should contact the Department for further information. Students are expected to have a C.A. of at least 7.0.
Prerequisite(s): Permission of the Department
Not open to students with credit or registration in ISCI 4A12 A/B.

MEDRADSC 3ZZ0 - CLINICAL SKILL DEVELOPMENT FOR PROFESSIONALS

Practice and reassessment of skill performance by professional medical radiation technologists. Specific skills and performance criteria will be detailed in a learning contract.
This course is evaluated on a Pass/Fail basis.
Prerequisite(s): Permission of the Department

MEDRADSC 4A15 - RADIOGRAPHY CLINICAL PRACTICUM II

Sixteen-week placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in general radiography, fluoroscopy and computed tomography.
This course is evaluated on a Pass/Fail basis.
One term
Prerequisite(s): MEDRADSC 3G03, 3H03, 3J03, 3K03, 3L03 and registration in Level IV of the Radiography Specialization
See Department Note 4 above.

MEDRADSC 4B15 - RADIOGRAPHY CLINICAL PRACTICUM III

Sixteen-week placement in a Diagnostic Imaging department. Students further develop clinical skill and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in general radiography, fluoroscopy and computed tomography.
This course is evaluated on a Pass/Fail basis.
One term
Prerequisite(s): MEDRADSC 4A15 and registration in Level IV of the Radiography Specialization
See Department Note 4 above.

MEDRADSC 4C15 - ULTRASONOGRAPHY CLINICAL PRACTICUM II

Sixteen-week placement in the Sonography department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in the generalist sonographic specializations.
This course is evaluated on a Pass/Fail basis.
One term

Prerequisite(s): MEDRADSC 2R15, 3M03, 3N03, 3O03, 3P03 and registration in Level IV of the Ultrasonography Specialization
See Department Note 4 above.

MEDRADSC 4D15 - ULTRASONOGRAPHY CLINICAL PRACTICUM III

Sixteen-week placement in the Sonography department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in the generalist sonographic specializations. Communication skills (verbal and non-verbal) are emphasized.
This course is evaluated on a Pass/Fail basis.
One term
Prerequisite(s): MEDRADSC 4C15 and registration in Level IV of the Ultrasonography Specialization
See Department Note 4 above.

MEDRADSC 4E15 - RADIATION THERAPY CLINICAL PRACTICUM II

Sixteen-week placement in a Radiation Therapy department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, working towards competence in radiation therapy. Communication skills (verbal and non-verbal) are emphasized.
This course is evaluated on a Pass/Fail basis.
One term
Prerequisite(s): MEDRADSC 3DA3, 3LB3 (or 3BB3), 3V03, and registration in Level IV of the Radiation Therapy Specialization
See Department Note 4 above.

MEDRADSC 4F15 - RADIATION THERAPY CLINICAL PRACTICUM III

Sixteen-week placement in a Radiation Therapy department. Students further develop clinical and professional skills, integrating theory, developing independent decision-making capacity in the management of cases, attaining competence in radiation therapy.
This course is evaluated on a Pass/Fail basis.
One term
Prerequisite(s): MEDRADSC 4E15 and registration in Level IV of the Radiation Therapy Specialization
See Department Note 4 above.

MEDRADSC 4ZZ0 - PRE-CLINICAL PROFESSIONAL SKILLS REASSESSMENT II

Practice and reassessment of skills performance by professional medical radiation technologists prior to Clinical Practicum 2 or 3. Specific skills and performance criteria will be detailed in a learning contract.
This course is evaluated on a Pass/Fail basis.
Prerequisite(s): Permission of the Department

Midwifery

Courses in Midwifery are administered by the B.H.Sc. Midwifery Education Program.
Health Sciences Centre (HSC), Room 4H24, ext. 26654
http://www.midwifery.mcmaster.ca
midwifery@mcmaster.ca

MIDWIF 1D03 - MIDWIFERY THE PROFESSION I

Seminar presentations, discussion and arranged experiences to introduce students to the history, philosophy of care, and role of the midwife in Canada and elsewhere.
Seminar (three hours); first term
Prerequisite(s): Registration in the Midwifery Education Program

MIDWIF 1F03 - INTRODUCTION TO RESEARCH METHODS AND CRITICAL APPRAISAL

Introduction to the principles of clinical research and statistical inference, with particular emphasis on critical assessment of research evidence (both qualitative and quantitative) as presented in the health sciences literature related to midwifery care.
Lectures/tutorials (three hours); first term
Prerequisite(s): Registration in the Midwifery Education Program
Antirequisite(s): HTHSCI 2C03 A/B S

MIDWIF 1G03 - MIDWIFERY THE PROFESSION II

Seminar presentations, discussions, and laboratory practice to introduce students to communication theory and strategies, equity, diversity and inclusion in the provision of midwifery care.
Seminar (3 hours); second term
Prerequisite(s): MIDWIF 1D03 and registration in the Midwifery Education Program
Antirequisite(s): MIDWIF 2G06

MIDWIF 2F03 - PHARMACOTHERAPY

This course is an overview of basic concepts in pharmacy, pharmacology and therapeutics relevant to the practice of midwifery in Ontario. Content areas include pharmacokinetics, toxicology, adverse drug reactions during pregnancy and lactation and pharmacology in the neonate.
One lecture (three hours); first term
Prerequisite(s): HTHSCI 1D03 and 1DD3 and HTHSCI 1J03

MIDWIF 2G06 - CLINICAL SKILLS FOR MIDWIFERY PRACTICE

Lecture, demonstration and laboratory practice of fundamental skills for midwifery practice. This course combines theoretical aspects with clinical lab as well as including short placement components in which students attend births and midwifery clinics.
One Lecture (three hours), Lab (three hours); first term
Prerequisite(s): MIDWIF 1D03
May be taken concurrently with MIDWIF 1D03 with permission of the Program Director.

MIDWIF 2H15 - NORMAL CHILDBEARING

First clinical placement under the supervision of a registered midwife (18 weeks): students focus on beginning level skills for the care of women experiencing normal childbearing. Weekly problem-based tutorials include normal antepartum, intrapartum, postpartum and newborn care situations.
Second term
Prerequisite(s): HTHSCI 2M03, MIDWIF 1D03, MIDWIF 2F03, MIDWIF 2G06 (or 1A06 or 2G03). A minimum GPA of 6.0 in first term is required.
Antirequisite(s): MIDWIF 2E12

MIDWIF 2M15 - FUNDAMENTALS IN MIDWIFERY 1

First clinical placement under the supervision of a registered midwife (12 weeks): students focus on introductory skills for care during the antepartum and postpartum periods. Weekly problem-based tutorials include normal antepartum, postpartum and newborn care situations. Second or Third Term
Prerequisite(s): HTHSCI 2M03, MIDWIF 1D03, 2F03, 2G06.
Antirequisite(s): MIDWIF 2H15

MIDWIF 3F03 - MIDWIFERY ISSUES

This course addresses the theoretical basis for inter-professional collaboration and explores related professional issues such as global midwifery, ethics and risk management. The course includes critical analysis of issues in asynchronous online discussion and submission of a major paper.
Prerequisite(s): MIDWIF 2M15, 3N15
Co-requisite(s): MIDWIF 3M09

MIDWIF 3H15 - COMPLEX CARE I

First senior placement in a midwifery practice: students extend skills to more complex childbearing situations. Problem-based tutorials focus on expanding the knowledge base of maternal-newborn complications, for consultation and referral, and relationships with other health care providers.
Summer term
Prerequisite(s): MIDWIF 3F03, 3M09, 3M03 A/B

MIDWIF 3L01 - ADVANCED CLINICAL SKILLS I

- one-week intensive course using workshop format to focus on emergency interventions, evidence-based management of prenatal and intrapartum situations and communication. Students receive instruction from midwifery faculty and interdisciplinary experts in preparation for community placements and senior midwifery clinical placements.

First term
Prerequisite(s): MIDWIF 2M15

MIDWIF 3M01 - ELECTIVE PLACEMENT

This four week clinical placement course provides visiting students with the opportunity to participate in an elective placement in a midwifery practice. Visiting students will have the opportunity to address learning needs as identified in a learning contract developed with the faculty. It is available by permission of the program. Students can take the course up to three times. Students enrolled in this course will provide care to clients in home and hospital settings under the supervision of a midwife clinical preceptor and a member of the midwifery faculty.
This course is offered based on availability of preceptors and faculty. This course is graded on a pass/fail basis.

MIDWIF 3M02 - ADVANCED CLINICAL SKILLS II

Short one-week intensive course. The course builds on the skills introduced in MIDWIF 3L01 and focuses on preparing the student for recognizing situations where consultation and transfer of care is required, as well as in being able to initiate and facilitate such consultation.
Third term
Prerequisite(s): MIDWIF 2M15

MIDWIF 3M09 - FUNDAMENTALS IN MIDWIFERY 3

Students will be placed in clinical settings and supervised by physicians, nurses, social workers and other health and social service providers. Some placements may be hospital or community-based while others involve a combination of clinic and hospital on call work. Through these varied experiences, students will gain insight into the roles of other health and social service professionals, develop communication skills and learn how to function in an inter-professional team. Students will be given an option to arrange one placement out of province or out of country pending approval.
Prerequisite(s): MIDWIF 2M15, 3M15
Co-requisite(s): MIDWIF 3F03
Antirequisite(s): MIDWIF 3A09, 3K06

MIDWIF 3N15 - FUNDAMENTALS IN MIDWIFERY 2

Second clinical placement under the supervision of a registered midwife (12 weeks): students focus on introductory skills for care during physiological birth and immediate postpartum period. Weekly problem-based tutorials include intrapartum and immediate postpartum and newborn care. Third term Level II or First term Level III
Prerequisite(s): HTHSCI 2M03, MIDWIF 1D03, 2F03, 2G06.
Antirequisite(s): MIDWIF 2H15

MIDWIF 4A15 - COMPLEX CARE II

Fourth placement in a midwifery practice. In defined situations, supervision is indirect. Students care for an assigned caseload, including situations with complications. Problem-based tutorials focus on midwifery roles and responsibilities in highly complex and urgent situations.
First term
Prerequisite(s): MIDWIF 3H15

MIDWIF 4B15 - MIDWIFERY CLERKSHIP

Final placement in a midwifery practice. Supervision is increasingly indirect. Students formulate and provide care to an entire caseload of clients. Tutorials and workshops include case review, preparation for registration and establishing a practice in Ontario. Second term
Prerequisite(s): MIDWIF 4A15

Molecular Biology

Courses in Molecular Biology are administered by the Department of Biology.
Life Sciences Building, Room 218, ext. 23557
http://www.biology.mcmaster.ca
Courses
If no prerequisite is listed, the course is open.

MOLBIOL 2C03 - GENETICS

Structure, function and transmission of genes; chromosomal basis of inheritance; mono- and dihybrid crosses; sequential steps in gene function; linkage maps; sex chromosome inheritance.
Lectures (three hours), one lab or tutorial (three hours); one term
Prerequisite(s): BIOLOGY 1A03 (or BIOLOGY 1A01 and 1A02), BIOLOGY 1M03; or ISCI 1A24 A/B; and registration in Honours Molecular Biology and Genetics or Honours Arts and Science and Molecular Biology and Genetics
Antirequisite(s): BIOLOGY 2C03
Students not registered in an Honours Molecular Biology and Genetics program should register in BIOLOGY 2C03.

MOLBIOL 3B03 - ADVANCED CELL BIOLOGY

The molecular organisation and function of eukaryotic cells are examined, with a focus on information transfer from the cell surface and from the nucleus. Emphasis is placed upon interpretation of the research literature.
Three lectures, one tutorial; one term

Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B); and one of BIOLOGY 2C03 or MOLBIOL 2C03
Antirequisite(s): LIFESCI 3M03

MOLBIOL 3D03 - EXPERIMENTAL APPROACHES IN CELL BIOLOGY

Intensive laboratory based inquiry course focused on cell biological research. Cell biology techniques from various disciplines will be used to investigate the structure and function of organisms at the cellular and molecular level. Techniques employed may include light and immune fluorescent microscopy, time lapse, tissue culture, biochemistry, genetics and molecular biology. This course will also provide opportunity to develop scientific literacy skills.
One lecture, two labs (three hours); one term
Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B)); and BIOLOGY 2C03 or MOLBIOL 2C03. If not already completed, BIOSAFE 1BS0 (or HTHSCI 1BS0) must be done prior to the first lab

MOLBIOL 3I03 A/B S - INDEPENDENT RESEARCH PROJECT

Students will conduct an independent research study in a faculty member's laboratory.
For further information, please refer to https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html and search for MOLBIOL 3I03 in Level III outlines. The application form is available at https://biology.mcmaster.ca/undergraduate/experiential-opportunities/applied-research-work-integrated-learning-and-co-op/
8-10 hours per week (scheduling to be arranged by supervisor); one or two term(s)
Prerequisite(s): Registration in Honours Molecular Biology and Genetics Core or Honours Molecular Biology and Genetics Research Specialization or Honours Molecular Biology and Genetics Research Specialization Co-op. BIOLOGY 2L03 is recommended preparation. Permission of the department is required. Students are expected to have a GPA of at least 9.0.
Antirequisite(s): BIOLOGY 3IR3 A/B S

MOLBIOL 3II3 - MOLECULAR GENETICS OF EUKARYOTES

Study of the eukaryotic genome and control mechanisms of gene expression; the emphasis will be on transcriptional control, RNA surveillance and the study of epigenetic mechanisms in several model systems (yeast, nematodes, insects, plants and vertebrates). The histone code and several mechanisms of epigenetic trans-generational inheritance will be discussed.
Three lectures, one tutorial; one term
Prerequisite(s): MOLBIOL 3B03 or 3O03

MOLBIOL 3M03 - FUNDAMENTAL CONCEPTS OF DEVELOPMENT

Recent advances using genetic and molecular approaches will be discussed in the context of classical experiments. Various model systems (mice, fruitflies, worms) will be examined.
Two lectures, one tutorial or lab (three hours); one term
Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B), BIOLOGY 2C03 or MOLBIOL 2C03
Not open to students with credit or registration in HTHSCI 3DB3.

MOLBIOL 3O03 - MICROBIAL GENETICS

Molecular genetics of bacteria and bacteriophage. Special emphasis will be placed on relationships between microbial genetics and general problems in genetics and gene regulation.
Three lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 2C03 or MOLBIOL 2C03; and credit or registration in BIOLOGY 2EE3
Prerequisite(s) (Effective 2026-2027): BIOLOGY 2C03 or MOLBIOL 2C03; and BIOLOGY 2EE3

MOLBIOL 3V03 - TECHNIQUES IN MOLECULAR GENETICS

- laboratory course providing hands-on experience in experimental design and molecular biology and molecular genetic techniques.

One lecture, two labs (three hours each); one term
Prerequisite(s): BIOLOGY 2EE3; and credit or registration in MOLBIOL 3O03; and registration in Level III or above of an Honours program in Biology or Molecular Biology and Genetics. If not already completed, BIOSAFE 1BS0 (or HTHSCI 1BS0) and WHMIS 1A00 must be done prior to the first lab.
Antirequisite(s): BIOLOGY 3VV3
Priority will be given to students enrolled in an Honours Molecular Biology and Genetics Research Specialization program.

MOLBIOL 3Y03 - PLANT RESPONSES TO THE ENVIRONMENT

How plants respond at the genetic, molecular, biochemical and phenotypic levels to environmental stress. Manipulation of these responses to improve crops will be explored.
Three lectures; one term
Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B); and BIOLOGY 2C03 (or MOLBIOL 2C03); and BIOLOGY 2D03

MOLBIOL 4BB3 - PLANT METABOLISM AND MOLECULAR BIOLOGY

Formerly BIOLOGY 4B03
Analysis of plant cell metabolism and the regulation of metabolism at the biochemical and molecular genetic level.
Three lectures; one term
Prerequisite(s): BIOLOGY 2B03 (or ISCI 2A18 A/B) and BIOLOGY 2C03 (or MOLBIOL 2C03); or one of BIOLOGY 3B03, MOLBIOL 3Y03; or ISCI 2A18 A/B; and registration in Level III or above of any Honours program. MOLBIOL 3B03 is recommended.

MOLBIOL 4CT3 - CURRENT TOPICS IN MOLECULAR BIOLOGY AND GENETICS

- review of current literature in molecular biology and genetics. A combination of lectures and student presentations on selected topics.

One lecture (one hour), one tutorial (two hours); one term
Prerequisite(s): Registration in Level III or above of any Honours Biology or Honours Molecular Biology and Genetics program
Antirequisite(s): MOLBIOL 3A03

MOLBIOL 4DD3 - MOLECULAR EVOLUTION

The study of how molecules change over time within and between species. The experimental data, techniques and theories will be examined.
Two lectures, one tutorial; one term
Prerequisite(s): ANTHROP 2D03 or BIOLOGY 3FF3 or BIOLOGY 3S03; and registration in Level III or above of any Honours program
Antirequisite(s): BIOCHEM 4Y03

MOLBIOL 4ED3 - EVOLUTIONARY DEVELOPMENTAL BIOLOGY

- critical analysis of the conceptual and methodological approaches to Evolutionary Developmental biology. Emphasis is on integrating

the developmental, genetic and evolutionary approaches towards understanding how phenotypic variation is generated.

Lectures (two hours), one dry lab (two hours); one term
Prerequisite(s): BIOLOGY 3FF3 or MOLBIOL 3M03; and registration in Level III or above of any Honours program
Antirequisite(s): BIOLOGY 4ED3

MOLBIOL 4G12 A/B S - SENIOR THESIS

- thesis based upon a research project in an area of molecular biology and genetics. Arrangements to take MOLBIOL 4G12, including the agreement of the supervisory committee, should be made according to Departmental Guidelines before the end of March in Level III. For information on Departmental Guidelines, please refer to the Biology web site at https://biology.mcmaster.ca/undergraduate/undergrad-course-outlines.html and click on Level IV outlines. The application form is available at https://biology.mcmaster.ca/undergraduate/undergrad-forms-docs.html.

Prerequisite(s): Registration in Level IV of any Honours Molecular Biology and Genetics program; and permission of the Course Administrator, Life Sciences Building, Room 118
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course.

MOLBIOL 4H03 - MOLECULAR BIOLOGY OF CANCER

Cancer at the cellular and molecular level. Topics include: properties of cancer cells, activation of proto-oncogenes, function of oncoproteins, transgenic mouse models, and tumour viruses, tumour suppressor genes.
Three lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 2C03 (or MOLBIOL 2C03); and MOLBIOL 3B03; and registration in Level III or above of any Honours program

MOLBIOL 4K03 - RESEARCH ADVANCES IN BIOLOGY OF AGING

- critical analysis of the biology of aging in model organisms and age-related human disorders. Emphasis is on the molecular pathways that regulate the process of aging at the cellular and organismal levels.

One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): BIOLOGY 2B03 and BIOLOGY 2C03 (or MOLBIOL 2C03) and registration in Level IV or above of any Honours program

MOLBIOL 4P03 - MEDICAL MICROBIOLOGY

Infectious diseases: identification, epidemiology and treatment.
One lecture (two hours), one tutorial (three hours); one term
Prerequisite(s): BIOLOGY 2EE3 and registration in Level III or above of any Honours program. Credit or registration in MOLBIOL 3O03 is strongly recommended.

MOLBIOL 4RR3 - HUMAN GENETICS

Topics include genetic disorders, advanced recombinant DNA technologies, the human genome, physical and genetic mapping of Mendelian characters, linkage, transgenic animals and gene therapy.
Two lectures, one tutorial (one hour); one term
Prerequisite(s): BIOLOGY 2C03 or MOLBIOL 2C03 and registration in Level III or above of any Honours program

Mohawk

Courses in Mohawk are administered by the Indigenous Studies Department.
Hamilton Hall, Room 103, ext. 27426
http://www.mcmaster.ca/indigenous

Courses
If no prerequisite is listed, the course is open.

MOHAWK 1Z03 - INTRODUCTION TO MOHAWK LANGUAGE AND CULTURE

This course will study the Mohawk language, in its spoken and written forms, in the context of Iroquoian cultural traditions, values, beliefs and customs.
Lecture and seminars (three hours); one term

MOHAWK 2Z03 - INTERMEDIATE MOHAWK

This course expands on the vocabulary and the oral skills for the Mohawk language. In addition, the course reviews the written component of the language.
Lecture and seminars (three hours); one term
Prerequisite(s): MOHAWK 1Z03

Music

Courses in Music are administered by the School of the Arts.
Togo Salmon Hall, Room 414, ext. 27671
http://sota.humanities.mcmaster.ca/

Notes

1. Applicants to Music 1 must book an audition with the School of the Arts to take place usually in February and March. Please note Music I is currently paused for September 2025.
2. The following courses are open as electives to students not registered in a Music program. Check course descriptions to see other requirements (such as qualifying tests, auditions, specific course, or level prerequisites, etc.).
   - MUSIC 1A03 - Introduction to the History of Western Music I
   - MUSIC 1AA3 - Introduction to the History of Western Music II
   - MUSIC 1CR3 - Foundations of Music I
   - MUSIC 2CR3 - Foundations of Music II
   - MUSIC 2CU3 - Music and Culture
   - MUSIC 2DW3 - Music Creation in Digital Audio Workstations I
   - MUSIC 2F03 - Music for Film and Television
   - MUSIC 2II3 - Popular Music in North America and the United Kingdom: Post-World War II
   - MUSIC 2IM3 - Introduction to Music Composition
   - MUSIC 2MA3 - Introduction to Musical Analysis
   - MUSIC 2MC3 - Psychology of Music
   - MUSIC 2MT3 - Introduction to the Practice of Music Therapy
   - MUSIC 2MU3 - Introduction to Music Therapy Research
   - MUSIC 2TT3 - Broadway and the Popular Song
   - MUSIC 3AM3 - Music and the Arts
   - MUSIC 3DW3 - Music Creation in Digital Audio Workstations II
   - MUSIC 3J03 - Orchestration and Arranging
   - MUSIC 3O03 - Conducting
   - MUSIC 3PM3 - Music and Politics
   - MUSIC 4FG3 - Composition for Film, Games and Media
   - MUSIC 4SM3 - Music, Sound and Movies
   - MUSIC 4UM3 - Music and the Underrepresented
   - MUSIC _EE3/_EE6 (levels 1-4) - Solo Performance
   - MUSIC _GB3, _GC3, _GP3, _GR3, _GW3 (levels 1-4) - Ensemble Performance in one of the following: Concert Band, University Choir, Percussion Ensemble, Symphony Orchestra, Cantemus Vocal Ensemble.

Courses
If no prerequisite is listed, the course is open.

MUSIC 1A03 - INTRODUCTION TO THE HISTORY OF WESTERN MUSIC I

An introductory survey of Western music, from Gregorian chant to the time of Bach and Handel. Emphasis is on important composers and their works in relation to their society and culture. Previous knowledge of music is helpful but not required.
Three lectures; one term
Antirequisite(s): MUSIC 1MH3, 2B03

MUSIC 1AA3 - INTRODUCTION TO THE HISTORY OF WESTERN MUSIC II

An introductory survey of Western music, from the time of Mozart to the present. Composers studied include Beethoven, Schubert, Chopin, Verdi, Wagner, Debussy, and Stravinsky. Previous knowledge of music is helpful but not required.
Three lectures; one term
Antirequisite(s): MUSIC 2MH3

MUSIC 1CR3 - FOUNDATIONS OF MUSIC I

Introduction to foundations of music, including principles of written musical notation, and aural identification of musical structures (such as rhythms, and diatonic intervals, melodies, and harmonies). This course is not intended for students with significant theory or ear training background.
Three lectures; one term
Antirequisite(s): MUSIC 1CA3

MUSIC 1E06 A/B - APPLIED MUSIC

Intensive study of the technique and repertoire of any solo instrument or voice adhering to a particular style (such as Western classical, Broadway, jazz or pop), or individual instruction in composition.
Weekly one-hour meetings per term; two terms
Prerequisite(s): Registration in Humanities I or any Music program; and permission of the School of the Arts. Students must have a successful audition at approximately Grade 6 RCM level or equivalent (for solo performance), or a portfolio of written compositions (for composition). Prior to July 1, interested students must either contact the School of the Arts to arrange an audition (for solo performance study), or to submit their portfolio (for composition).

MUSIC 1EE6 A/B - APPLIED MUSIC

Intensive study of the technique and repertoire of any solo instrument or voice adhering to a particular style (such as Western classical, Broadway, jazz or pop), or individual instruction in composition. Must be taken in a different area of study from MUSIC 1E06 A/B.
Weekly one-hour meetings per term; two terms
Prerequisite(s): Successful audition at approximately Grade 6 RCM level (for solo performance) or equivalent, or a portfolio of written compositions (for composition); and permission of the School of the Arts.
This course is intended for students who are not in a Music program, or for study of a different subject area from MUSIC 1E06 A/B. Lesson fees are charged to students taking MUSIC 1EE6 A/B.

MUSIC 1GB3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CONCERT BAND

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

MUSIC 1GC3 A/B - ENSEMBLE PERFORMANCE: MCMASTER UNIVERSITY CHOIR

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

MUSIC 1GP3 A/B - ENSEMBLE PERFORMANCE: MCMASTER PERCUSSION ENSEMBLE

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

MUSIC 1GR3 A/B - ENSEMBLE PERFORMANCE: MCMASTER SYMPHONY ORCHESTRA

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

MUSIC 1GW3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CANTEMUS VOCAL ENSEMBLE

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

MUSIC 1HB0 A/B S - ENSEMBLE PERFORMANCE: MCMASTER CONCERT BAND

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.
Ensemble fees are charged for students taking MUSIC 1HB0 A/B S.
This course is evaluated on a Pass/Fail basis. MUSIC 1HB0 A/B S may be repeated.

MUSIC 1HC0 A/B S - ENSEMBLE PERFORMANCE: MCMASTER UNIVERSITY CHOIR

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.
Ensemble fees are charged for students taking MUSIC 1HF0 A/B S.
This course is evaluated on a Pass/Fail basis. MUSIC 1HF0 A/B S may be repeated.

MUSIC 1HP0 A/B S - ENSEMBLE PERFORMANCE: MCMASTER PERCUSSION ENSEMBLE

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.
Ensemble fees are charged for students taking MUSIC 1HP0 A/B S.
This course is evaluated on a Pass/Fail basis. MUSIC 1HP0 A/B S may be repeated.

MUSIC 1HR0 A/B S - ENSEMBLE PERFORMANCE: MCMASTER SYMPHONY ORCHESTRA

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.
Ensemble fees are charged for students taking MUSIC 1HR0 A/B S.
This course is evaluated on a Pass/Fail basis. MUSIC 1HR0 A/B S may be repeated.

MUSIC 1HW0 A/B S - ENSEMBLE PERFORMANCE: MCMASTER CANTEMUS VOCAL ENSEMBLE

Prerequisite(s): Successful audition required. Auditions are held in the first week of classes in September.

Ensemble fees are charged for students taking MUSIC 1HW0 A/B S.
This course is evaluated on a Pass/Fail basis. MUSIC 1HW0 A/B S may be repeated.

MUSIC 2CR3 - FOUNDATIONS OF MUSIC II

- continuation of the work started in MUSIC 1CR3.

Three lectures; one term
Prerequisite(s): MUSIC 1CR3 or permission of the program

MUSIC 2CU3 - MUSIC AND CULTURE

An introduction to thinking, researching and writing about music as a product of the culture in which it is practiced. Both Western and non-Western examples will be considered.
Three lectures; one term
Prerequisite(s): 6 units of Music courses; or permission of the program
Antirequisite(s): MUSIC 1MH3
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 2DW3 - MUSIC CREATION IN DIGITAL AUDIO WORKSTATIONS I

This course introduces techniques, theories, and practices for recording, arranging, and composing music within the framework of a Digital Audio Workstation (DAW). Emphasis will be placed on creative application of musical concepts, forms, theories, and performance practices instrumental (acoustic, synthesized, virtual) or vocal. Students taking this class should have experience in music-making.
Three lectures; one term
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 2E06 A/B - APPLIED MUSIC

- continuation of MUSIC 1E06 A/B on the same instrument vocal style or compositional study.

Weekly one-hour meetings per term; two terms
Prerequisite(s): MUSIC 1E06 A/B; and registration in Level II of any program in Music

MUSIC 2EE6 A/B - APPLIED MUSIC

- continuation of MUSIC 1EE6 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings per term; two terms
Prerequisite(s): MUSIC 1EE6 A/B
Antirequisite(s): MUSIC 2E06 A/B
Lesson fees are charged to students taking MUSIC 2EE6 A/B. Not open to students in any Music Program

MUSIC 2F03 - MUSIC FOR FILM AND TELEVISION

An examination of how music functions to help create meanings in film and television programs. Examples will be drawn from throughout the history of film and television.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): CMST 2T03, THTRFLM 2T03

MUSIC 2GB3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CONCERT BAND

Prerequisite(s): Registration in Level II or above, MUSIC 1GB3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 2GC3 A/B - ENSEMBLE PERFORMANCE: MCMASTER UNIVERSITY CHOIR

Prerequisite(s): Registration in Level II or above, MUSIC 1GC3 A/B or MUSIC 1GW3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 2GP3 A/B - ENSEMBLE PERFORMANCE: MCMASTER PERCUSSION ENSEMBLE

Prerequisite(s): Registration in Level II or above, MUSIC 1GP3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 2GR3 A/B - ENSEMBLE PERFORMANCE: MCMASTER SYMPHONY ORCHESTRA

Prerequisite(s): Registration in Level II or above, MUSIC 1GR3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 2GW3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CANTEMUS VOCAL ENSEMBLE

Prerequisite(s): Registration in Level II or above, MUSIC 1GW3 A/B or MUSIC 1GC3 A/B, and successful audition. Auditions are held in the first week of classes in September. This choir ensemble consists of soprano and alto voices.

MUSIC 2II3 - POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: POST-WORLD WAR II

Popular music, its social meanings, and media and technology interactions, from rock-and-roll to now. Topics include rhythm and blues (Chuck Berry), pop (Madonna), metal (Led Zeppelin.)
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): CMST 2R03

MUSIC 2IM3 - INTRODUCTION TO MUSIC COMPOSITION

This course introduces essential concepts of music composition. Emphasis will be placed on the development of musical creativity through active participation in composition, improvisation, and other compositional techniques and strategies that apply to a wide range of genres and styles using both traditional notation, and digital composition tools. This course is not intended for students studying composition in Applied Music courses (MUSIC 1E06 A/B, 1EE6 A/B, 2E06 A/B, 2EE6 A/B, 3E03, 3E06 A/B, 3EE3, 3EE6 A/B, 4E06 A/B, 4EE6 A/B).
Three lectures; one term
Prerequisite(s): One of MUSIC 1CR3, 1GC3 A/B, 1GB3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B, 1HB0 A/B, 1HC0 A/B, 1HF0 A/B, 1HJ0 A/B, 1HP0 A/B, 1HR0 A/B, MUSIC 2CR3, 2DW3, 2MA3; or permission of the program. Students who have registered in or completed MUSIC 1E06 A/B, 1EE6 A/B, 2E06 A/B, 2EE6 A/B, 3E03, 3E06 A/B, 3EE3, 3EE6 A/B, 4E06 A/B, 4EE6 A/B in an area other than composition should contact the program for permission.
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 2MA3 - INTRODUCTION TO MUSICAL ANALYSIS

Introduction to analysis of musical structures in notated music, with consideration also of form as perceived by listeners. A range of historical and

contemporary examples will be examined in this course. The ability to read music is important.
Three lectures; one term.
Prerequisite(s): One of MUSIC 1CR3, MUSIC 1E06 A/B, 1EE6 A/B, MUSIC 1GC3 A/B, 1GB3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B, MUSIC 1HB0 A/B, 1HC0 A/B, 1HF0 A/B, 1HJ0 A/B, 1HP0 A/B, 1HR0 A/B, MUSIC 2CR3, MUSIC 2IM3; or permission of the program
Offered on a rotational basis. Consult the Master Timetable for offerings. First offered 2026-27.

MUSIC 2MC3 - PSYCHOLOGY OF MUSIC

An artistic introduction to the science of music. Topics include basics of sound synthesis on commonly available technology (i.e., desktop computers), the role of technology in shaping the musical experience, and how sounds combine to convey meaning.
Three lectures, one term
Prerequisite(s): Registration in Level II or above of a Humanities program.
Antirequisite(s): MUSICCOG 2MA3, 2MP3, PSYCH 2MA3, 2MP3

MUSIC 2MT3 - INTRODUCTION TO THE PRACTICE OF MUSIC THERAPY

An introduction to the practice of music therapy, with an emphasis on the diversity of music therapy applications such as: bio-medical, psychoanalytical, behavioural and rehabilitation.
Three hours (lecture, web module); one term
Prerequisite(s): Registration in Level II or above

MUSIC 2MU3 - INTRODUCTION TO MUSIC THERAPY RESEARCH

Current research papers will be explored in the fields of education, rehabilitation, neurology and mental health.
Three hours (lecture, web module); one term
Prerequisite(s): Registration in Level II or above. Completion of MUSIC 2MT3 is strongly recommended, but not required.
Antirequisite(s): MUSIC 3MT3

MUSIC 2SI3 - SINGING

Introduction to singing; not intended for those with prior vocal training. This course meets concurrently with MUSIC 3SI3.
Three hours; one term
Prerequisite(s): Registration in level II or above of any program and one of MUSIC 1E06 A/B, 1EE6 A/B, 1GB3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B; or permission of the program
Antirequisite(s): MUSIC 3N03

MUSIC 2TT3 - BROADWAY AND THE POPULAR SONG

An historical examination of the development of English-language musical theatre in the twentieth century. Attention will be paid to the history of American popular song and its impact on the genre.
Three lectures; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): THTRFLM 2TT3

MUSIC 2WW3 - WOODWINDS

Introduction to the playing of woodwind instruments; not intended for woodwind specialists. This course meets concurrently with MUSIC 3WW3.
Three hours; one term
Prerequisite(s): Registration in level II or above of any program and one of MUSIC 1E06 A/B, 1EE6 A/B, 1GB3 A/B, 1GC3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B; or permission of the program.

MUSIC 3AM3 - MUSIC AND THE ARTS

- seminar considering historical through to contemporary examples of musics interactions with other types of artistic expression, such as visual art/images, literature, theatre (including musical theatre and opera), film/moving images, and dance/movement.

Two hour seminar; one term
Prerequisite(s): 9 units of Music courses. MUSIC 2CU3 is recommended, but not required.
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 3CP3 - CONSTRUCTING COUNTERPOINT

Topics in Counterpoint. Possible topics include species counterpoint, inventions, fugue.
Seminar (two hours); one term
Prerequisite(s): MUSIC 2CB3 or permission of the program

MUSIC 3DW3 - MUSIC CREATION IN DIGITAL AUDIO WORKSTATIONS II

- continuation of MUSIC 2DW3 - Music Creation in Digital Audio Workstations I, furthering examination of techniques, theories, and practices for recording, arranging, and composing music within the framework of a Digital Audio Workstation (DAW). Emphasis will be placed on creative application of musical concepts, forms, theories, and performance practices instrumental (acoustic, synthesized, virtual) or vocal.

Three lectures; one term
Prerequisite(s): MUSIC 2DW3
Offered on a rotational basis. Consult the Master Timetable for offerings. First offered 2026-27.

MUSIC 3E03 - APPLIED MUSIC

- continuation of MUSIC 2E06 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings; one term
Prerequisite(s): MUSIC 2E06 A/B on the same instrument and registration in a program in Music
Antirequisite(s): MUSIC 3E06 A/B

MUSIC 3E06 A/B - APPLIED MUSIC

- continuation of MUSIC 2E06 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings per term; two terms
Prerequisite(s): MUSIC 2E06 A/B and registration in a program in Music
Antirequisite(s): MUSIC 3E03

MUSIC 3EE3 - APPLIED MUSIC

- continuation of MUSIC 2EE6 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings; one term
Prerequisite(s): MUSIC 2EE6 A/B
Antirequisite(s): MUSIC 3E03, 3EE6 A/B
Lesson fees are charged to students taking MUSIC 3EE3. Not open to students in any Music Program.

MUSIC 3EE6 A/B - APPLIED MUSIC

- continuation of MUSIC 2EE6 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings per term; two terms
Prerequisite(s): MUSIC 2EE6 A/B
Antirequisite(s): MUSIC 3EE3, 3E03, 3E06 A/B
Lesson fees are charged to students taking MUSIC 3EE6. Not open to students in any Music Program.

MUSIC 3GB3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CONCERT BAND

Prerequisite(s): MUSIC 2GB3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 3GC3 A/B - ENSEMBLE PERFORMANCE: MCMASTER UNIVERSITY CHOIR

Prerequisite(s): MUSIC 2GC3 A/B or MUSIC 2GW3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 3GP3 A/B - ENSEMBLE PERFORMANCE: MCMASTER PERCUSSION ENSEMBLE

Prerequisite(s): MUSIC 2GP3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 3GR3 A/B - ENSEMBLE PERFORMANCE: MCMASTER SYMPHONY ORCHESTRA

Prerequisite(s): MUSIC 2GR3 A/B, and successful audition. Auditions are held in the first week of classes in September.

MUSIC 3GW3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CANTEMUS VOCAL ENSEMBLE

Prerequisite(s): MUSIC 2GW3 A/B or MUSIC 2GC3 A/B, and successful audition.
Auditions are held in the first week of classes in September.
This choir ensemble consists of soprano and alto voices.

MUSIC 3J03 - ORCHESTRATION AND ARRANGING

- study of the orchestral/band instruments; scoring of music for various ensembles.

Three lectures; one term
Prerequisite(s): One of MUSIC 1CR3, MUSIC 1GC3 A/B, 1GB3 A/B, 1GF3 A/B, MUSIC 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B, MUSIC 1E06 A/B, 1EE6 A/B, MUSIC 1HB0 A/B, MUSIC 1HC0 A/B, MUSIC 1HF0 A/B, MUSIC 1HJ0 A/B, MUSIC 1HP0 A/B, MUSIC 1HR0 A/B, MUSIC 2CR3, MUSIC 2IM3, MUSIC 2MA3; or permission of the program
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 3K03 - BRASS METHODS

Basic techniques of playing brass instruments. Brass literature for various educational levels. The instruments studied differ from those studied in MUSIC 4K03.
Two lectures, one lab; one term
Prerequisite(s): Registration in level II or above of any program.
Students will be expected to read music. Non-music students will be required to bring their own instruments.
Offered on rotational basis.

MUSIC 3O03 - CONDUCTING

Fundamental conducting techniques.
Three lectures; one term
Prerequisite(s): One of MUSIC 1CR3, MUSIC 1E06 A/B, 1EE6 A/B, MUSIC 1GC3 A/B, 1GB3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B, MUSIC 1HB0 A/B, 1HC0 A/B, 1HF0 A/B, 1HJ0 A/B, 1HP0 A/B, 1HR0 A/B, MUSIC 2CR3, MUSIC 2IM3, MUSIC 2MA3; or permission of the program.
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 3P03 - PERCUSSION METHODS

Basic techniques of playing percussion instruments. Percussion literature for various educational levels.
Two lectures, one lab; one term
Prerequisite(s): Registration in level II or above of any program and one of MUSIC 1E06 A/B, 1EE6 A/B, 1GB3 A/B, 1GC3 A/B, 1GF3 A/B, 1GJ3 A/B, 1GP3 A/B, 1GR3 A/B, 1GW3 A/B; or permission of the program.
Offered on rotational basis.

MUSIC 3PM3 - MUSIC AND POLITICS

- seminar considering historical through to contemporary examples of the intersection of music and politics. Music will be considered as a reflection and agent of both control and subversion.

Two hour seminar; one term
Prerequisite(s): 9 units of Music courses
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 3SI3 - VOCAL PEDAGOGY

Introductory study of vocal methods for teaching, intended for vocal specialists. This course meets concurrently with MUSIC 2SI3.
Three hours; one term
Prerequisite(s): Registration in level II or above and permission of the program

MUSIC 3SS3 - SPECIAL STUDIES IN SMALL ENSEMBLE PERFORMANCE I

Advanced supervised studies in small ensemble performance.
Weekly meetings to be arranged between the students and instructor; one term
Prerequisite(s): A grade of at least A- in MUSIC 2E06 A/B or MUSIC 2EE6 A/B; and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by July 1.
Antirequisite(s): MUSIC 3S03
This course cannot be repeated.
Lesson fees are charged to students taking MUSIC 3SS3.

MUSIC 3WW3 - WOODWIND PEDAGOGY

Review of woodwind technique and woodwind pedagogy; intended for woodwind specialists. This course meets concurrently with MUSIC 2WW3.
Three hours; one term
Prerequisite(s): Registration in level II or above and permission of the program

MUSIC 3X03 - INDEPENDENT STUDY

Supervised study in any area offered and approved by the School of the Arts.
Times to be arranged between the student and instructor; one term
Prerequisite(s): Registration in Level III or IV of any Music program and permission of the School of the Arts. Students requesting this course must

submit a written proposal to the School of the Arts by July 1. Students interested in this course should discuss their proposal with a full-time Music faculty member well in advance of the deadline.

MUSIC 4C03 - ADVANCED STUDIES IN HARMONY AND COUNTERPOINT

Advanced harmonic and/or contrapuntal study focusing on a post-Baroque style or genre selected by the instructor. Possible topics include: sonatas, songs, jazz arranging and scoring.
Seminar (two hours); one term
Prerequisite(s): MUSIC 2CB3 and registration in level III or above; or permission of the program
Offered in alternate years.

MUSIC 4E03 - APPLIED MUSIC

- continuation of MUSIC 3E03 or MUSIC 3E06 A/B on the same instrument vocal style or compositional study.

Weekly one-hour meetings; one term
Prerequisite(s): MUSIC 3E03 or MUSIC 3E06 A/B; and registration in a program in Music
Antirequisite(s): MUSIC 4E06 A/B, MUSIC 4E09 A/B

MUSIC 4E06 A/B - APPLIED MUSIC

- continuation of MUSIC 3E03 or MUSIC 3E06 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings; two terms
Prerequisite(s): MUSIC 3E03 or MUSIC 3E06 A/B; and registration in a Music Program
Antirequisite(s): MUSIC 4E03, MUSIC 4E09 A/B

MUSIC 4E09 A/B - SOLO PERFORMANCE, DIPLOMA

- continuation of MUSIC 3E06 A/B in solo performance on the same instrument, or vocal style. Advanced solo performance technique and repertoire, leading to a final examination in a recital presentation of approximately forty minutes in duration. This course is for students who have demonstrated excellence in musical performance.

Individual instruction; two terms
Prerequisite(s): MUSIC 3E06 A/B or MUSIC 3EE6 A/B with a grade of at least A-; a Grade Point Average of at least 8.0; registration in a program in Music, and permission of the School of the Arts.
Antirequisite(s): MUSIC 4E03, 4E06 A/B or 4EE6 A/B
Open only to students pursuing the Diploma in Music Performance. May not be used for degree credit. Students requesting this course must apply in writing to the School of the Arts by April 15.

MUSIC 4EE3 - APPLIED MUSIC

- continuation of MUSIC 3EE3 or MUSIC 3EE6 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings; one term
Prerequisite(s): MUSIC 3EE3 or MUSIC 3EE6 A/B
Antirequisite(s): MUSIC 4E03, 4E09 A/B, 4EE6 A/B
Lesson fees are charged to students taking MUSIC 4EE3. Not open to students in any Music Program.

MUSIC 4EE6 A/B - APPLIED MUSIC

- continuation of MUSIC 3EE3 or MUSIC 3EE6 A/B on the same instrument, vocal style or compositional study.

Weekly one-hour meetings; two terms
Prerequisite(s): MUSIC 3EE3 or MUSIC 3EE6 A/B
Antirequisite(s): MUSIC 4E06 A/B, 4E09 A/B, MUSIC 4EE3
Lesson fees are charged to students taking MUSIC 4EE6 A/B. Not open to students in any Music Program.

MUSIC 4EE9 A/B - SOLO PERFORMANCE, DIPLOMA

- continuation of MUSIC 3EE6 A/B in solo performance on the same instrument or vocal style. Advanced solo performance technique and repertoire, leading to a final examination in a recital presentation of approximately forty minutes in duration. This course is for students who have demonstrated excellence in musical performance.

Individual instruction; two terms
Prerequisite(s): MUSIC 3EE6 A/B with a grade of at least A-; a Grade Point Average of at least 8.0; and permission of the School of the Arts.
Antirequisite(s): MUSIC 4E03, 4EE3, 4E06 A/B or 4EE6 A/B, 4E09 A/B
Open only to students pursuing the Diploma in Music Performance. May not be used for degree credit. Students requesting this course must apply in writing to the School of the Arts by April 15.
Lesson fees are charged to students taking MUSIC 4EE9 A/B.

MUSIC 4FG3 - COMPOSITION FOR FILM, GAMES AND MEDIA

An introduction to composing and producing music for feature films, television, and video games. Students are introduced to a variety of film scores and recordings, compositional and artistic considerations, and learn to synchronize music with visual media through the use of computer software, and library-based sounds.
Prerequisite(s): One of MUSIC 2DW3 or MUSIC 2IM3; or permission of the program. Students who have registered in or completed MUSIC 1E06 A/B, 1EE6 A/B, 2E06 A/B, 2EE6 A/B, 3E03, 3E06 A/B, 3EE3, 3EE6 A/B, 4E06 A/B, 4EE6 A/B in composition should contact the program for permission.
Offered on a rotational basis. Consult the Master Timetable for offerings. First offered 2026-27.

MUSIC 4GB3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CONCERT BAND

Prerequisite(s): MUSIC 3GB3 A/B and successful audition
Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses. Auditions are held in the first week of classes in September.

MUSIC 4GC3 A/B - ENSEMBLE PERFORMANCE: MCMASTER UNIVERSITY CHOIR

Prerequisite(s): MUSIC 3GC3 A/B and successful audition
Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses. Auditions are held in the first week of classes in September.

MUSIC 4GP3 A/B - ENSEMBLE PERFORMANCE: MCMASTER PERCUSSION ENSEMBLE

Prerequisite(s): MUSIC 3GP3 A/B and successful audition
Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses. Auditions are held in the first week of classes in September.

MUSIC 4GR3 A/B - ENSEMBLE PERFORMANCE: MCMASTER SYMPHONY ORCHESTRA

Prerequisite(s): MUSIC 3GR3 A/B and successful audition

Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses. Auditions are held in the first week of classes in September.

MUSIC 4GW3 A/B - ENSEMBLE PERFORMANCE: MCMASTER CANTEMUS VOCAL ENSEMBLE

Prerequisite(s): MUSIC 3GW3 A/B and successful audition
Those students registered in the diploma program must, where possible, perform in this course in the same medium as they do in their other diploma courses. Auditions are held in the first week of classes in September.
This choir ensemble consists of soprano and alto voices.

MUSIC 4N03 - CHORAL METHODS

Choral rehearsal techniques and choral literature for K-12 and community choirs.
Two lectures, one lab; one term
Prerequisite(s): Registration in level III or above of any program.
Students are expected to be able to read music.
Offered on rotational basis.

MUSIC 4SM3 - MUSIC, SOUND AND MOVIES

- seminar in the analysis of the use of music and sound in moviemaking. This course will pursue many of the topics introduced in MUSIC 2F03 more intensively. Students will engage in detailed analysis of representative films.

Three hours; one term
Prerequisite(s): 9 units of Music courses. Completion of MUSIC 2F03 is useful, but not required.
Offered on a rotational basis. Consult the Master Timetable for offerings.

MUSIC 4SS3 - SPECIAL STUDIES IN SMALL ENSEMBLE PERFORMANCE II

Advanced supervised studies in small ensemble performance.
Weekly meetings to be arranged between the students and instructor; one term
Prerequisite(s): MUSIC 3SS3; and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by July 1.
This course cannot be repeated.
Lesson fees are charged to students taking MUSIC 4SS3.

MUSIC 4UM3 - MUSIC AND THE UNDERREPRESENTED

- seminar considering historical and contemporary examples of music or perspectives on music that have been historically underrepresented in various types of discourse. How canonic repertoires have been developed and the implications of these canons will be examined.

Two-hour seminar; one term
Prerequisite(s): 9 units of Music courses. MUSIC 2CU3 is recommended, but not required.
Offered on a rotational basis. Consult the Master Timetable for offerings.
First offered 2026-27.

MUSIC 4X03 - ADVANCED INDEPENDENT STUDY

Advanced supervised study in any area offered and approved by the School of the Arts.
Times to be arranged between the student and instructor; one term
Prerequisite(s): Registration in Level III or IV of any Music program and permission of the School of the Arts. Students requesting this course must submit a written proposal to the School of the Arts by July 1. Students interested in this course should discuss their proposal with a full-time Music faculty member well in advance of the deadline.

Music Cognition

Courses in Music Cognition are administered by the School of the Arts and the Department of Psychology, Neuroscience & Behaviour.
Togo Salmon Hall, Room 414, ext. 27671
http://sota.humanities.mcmaster.ca/
Courses
If no prerequisite is listed, the course is open.

MUSICCOG 2MP3 - INTRODUCTION TO MUSIC COGNITION

This course presents an overview of music cognition, covering such topics as musical acoustics, perception of melody, harmony and rhythm, social and emotional responses to music, and the evolution of music. In addition a basic introduction to music theory is included.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1FF3,1X03, 1XX3 and registration in Level II or above; or registration in Level II or above of an Arts & Science program, a Bachelor of Health Sciences (Honours) program, or an Honours Music Cognition program (B.A., B.Arts&Sc., B.Mus., B.Sc.); or permission of the instructor
Antirequisite(s): MUSIC 2MC3
Cross-list(s): PSYCH 2MP3
This course is administered by the School of the Arts.

MUSICCOG 3QQ3 A/B S - EXPERIMENTAL LABORATORY IN MUSIC COGNITION I

Students will be trained in the process of designing experiments, collecting data, performing statistical analyses and reporting on an experiment addressing an aspect of music perception and cognition. This course is intended for students with background in Music Cognition (such as MUSICCOG 2MA3, 2MP3 or 2MC3).
Two hours plus lab work; one term, or, one hour plus lab work; two terms
Prerequisite(s): Permission of the instructor

MUSICCOG 3SP3 - THE SCIENCE OF PERFORMANCE

This course explores empirical, methodological and cultural aspects of the study of performance, with a principal focus on the performing arts (music, dance, and theatre).
Three lectures; one term
Prerequisite(s): One of PNB 2XA3, PSYCH 2E03 or PSYCH 2H03; and one of ARTSSCI 2R03, HTHSCI 2A03, 2GG3, HUMBEHV 3HB3 or 3ST3, LINGUIST 2DD3, PNB 2XE3, 3XE3, SOCSCI 2J03, STATS 2B03, 2D03; and registration in Level III or IV of an Honours program; or ISCI 2A18 A/B. PSYCH 2MP3 (MUSICCOG 2MP3) is recommended.
Cross-list(s): PSYCH 3SP3
This course is administered by the Department of Psychology, Neuroscience, and Behaviour.

MUSICCOG 4D06 A/B - THESIS IN MUSIC COGNITION

Students conduct an individual research project under the supervision of a faculty member in Psychology or Music.
Prerequisite(s): Registration in Level IV of Honours Music or any Music Cognition program (B.A., B.Mus., B.Sc.) with a Grade Point Average of at least 8.0 and permission of the instructor

MUSICCOG 4MP3 - NEUROSCIENCE OF MUSIC

This seminar explores theories on how and why music evolved, and how the perception, development, performance and emotional experience of music are mediated by the brain. Primary source materials are discussed in class and experimental designs developed to address critical questions.
Three hours (lecture/seminar); one term
Prerequisite(s): MUSICCOG 2MP3 or PSYCH 2MP3 or PSYCH 3H03; and registration in a Music Cognition program (B.A., B.Arts.Sc., B.Mus., B.Sc.), or PNB 2XA3 orPSYCH 2E03 and registration in an Honours program, or ISCI 2A18 A/B; or permission of the instructor. PSYCH 2E03 is recommended.
Cross-list(s): PSYCH 4MP3
This course is administered by the Department of Psychology, Neuroscience & Behaviour.

MUSICCOG 4QQ3 A/B S - EXPERIMENTAL LABORATORY IN MUSIC COGNITION II

Students will receive advanced training in the process of designing experiments, collecting data, performing statistical analyses and reporting on an experiment addressing an aspect of music perception and cognition.
Two hours plus lab work; one term, or, one hour plus lab work; two terms
Prerequisite(s): MUSICCOG 3QQ3 A/B S and permission of the instructor

Neuroscience

Courses in NEUROSCI are administered by the Department of Psychology, Neuroscience & Behaviour.
Psychology Building, Room 102, ext. 23000
http://www.science.mcmaster.ca/pnb/
Courses
If no prerequisite is listed, the course is open.
See also courses in *PSYCH* and *PNB.*

NEUROSCI 2BB3 A/B S - RESEARCH PRACTICUM IN CELLULAR/MOLECULAR NEUROSCIENCE

Independent research practicum in cellular/molecular neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.
Prerequisite(s): Registration in Level II Honours Neuroscience with a cumulative GPA of at least 7.5 and permission of faculty supervisor and program director

NEUROSCI 2CC3 A/B S - RESEARCH PRACTICUM IN SYSTEMS/CIRCUITS NEUROSCIENCE

Independent research practicum in systems/circuits neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.
Prerequisite(s): Registration in Level II Honours Neuroscience with a cumulative GPA of at least 7.5 and permission of faculty supervisor and program director

NEUROSCI 2DD3 A/B S - RESEARCH PRACTICUM IN BEHAVIOURAL/COGNITIVE NEUROSCIENCE

Independent research practicum in behavioural/cognitive neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.
Prerequisite(s): Registration in Level II Honours Neuroscience with a cumulative GPA of at least 7.5 and permission of faculty supervisor and program director

NEUROSCI 2XN0 A/B - NEUROSCIENCE TUTORIAL

Tutorial supplementing the Honours B.Sc. Neuroscience program. Must be completed prior to enrolment in Level III.
This tutorial is evaluated on a Pass/Fail basis.
One lecture (one hour); two terms
Prerequisite(s): Registration in Level II Honours Neuroscience

NEUROSCI 3BB3 A/B S - INDIVIDUAL LAB STUDY IN CELLULAR/MOLECULAR NEUROSCIENCE

Independent laboratory project in cellular/molecular neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.
Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
If NEUROSCI 3BB3 A/B S is taken concurrently with or NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course. NEUROSCI 3BB3 A/B S may be repeated once on a different topic and with permission of the course coordinator.

NEUROSCI 3BB6 A/B - INDIVIDUAL LAB STUDY IN CELLULAR/MOLECULAR NEUROSCIENCE

Independent laboratory in cellular/molecular neuroscience, conducted in a faculty member's laboratory that extends over both terms.
Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
Antirequisite(s): NEUROSCI 3BB3 A/B S
If NEUROSCI 3BB6 A/B is taken with NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course.

NEUROSCI 3CC3 A/B S - INDIVIDUAL LAB STUDY IN SYSTEMS/CIRCUITS NEUROSCIENCE

Independent laboratory project in systems/circuits neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.
Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
If NEUROSCI 3CC3 A/B S is taken concurrently with or NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course. NEUROSCI 3CC3 A/B S may be repeated once on a different topic and with permission of the course coordinator.

NEUROSCI 3CC6 A/B - INDIVIDUAL LAB STUDY IN SYSTEMS/CIRCUITS NEUROSCIENCE

Independent laboratory in systems/circuits neuroscience, conducted in a faculty member's laboratory that extends over both terms.
Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
Antirequisite(s): NEUROSCI 3CC3 A/B S
If NEUROSCI 3CC6 A/B is taken with NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course.

NEUROSCI 3DD3 A/B S - INDIVIDUAL LAB STUDY IN BEHAVIOURAL/COGNITIVE NEUROSCIENCE

Independent laboratory project in behavioural/cognitive neuroscience, conducted in a faculty member's laboratory that may be extended over both terms.

Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
If NEUROSCI 3DD3 A/B S is taken concurrently with or NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course.
NEUROSCI 3DD3 A/B S may be repeated once on a different topic and with permission of the course coordinator.

NEUROSCI 3DD6 A/B - INDIVIDUAL LAB STUDY BEHAVIOURAL/COGNITIVE NEUROSCIENCE

Independent laboratory in behavioural/cognitive neuroscience, conducted in a faculty member's laboratory that extends over both terms.
Prerequisite(s): Registration in Level III or IV Honours Neuroscience with a cumulative GPA of at least 8.0 and permission of faculty supervisor and program director
Antirequisite(s): NEUROSCI 3DD3 A/B S
If NEUROSCI 3DD6 A/B is taken with NEUROSCI 4L09 A/B or 4L12 A/B, a different faculty member must supervise each course

NEUROSCI 3E03 - NEUROSCIENCE LAB

Practical techniques in neuroanatomy and neurophysiology, including brightfield and fluorescence microscopy, neuronal visualization via staining, and invertebrate neurophysiological recording.
One lecture, one lab (three hours); one term
Prerequisite(s): PNB 2XB3 and registration in Level III or above of Honours Neuroscience
Prerequisite(s) (Effective 2026-2027): PNB 2XB3, STATS 2B03 and registration in Level III or above of Honours Neuroscience

NEUROSCI 3J03 - VISUAL NEUROSCIENCE

Using human clinical cases, students will explore how genes and the environment affect the cells and circuits of the visual system. Cases will be investigated through the lenses of basic animal research and optometry.
Three lectures; one term
Prerequisite(s): One of PNB 2XB3, PSYCH 2E03, or ISCI 2A18 A/B; and registration in Level III or above of an Honours program
Antirequisite(s): PSYCH 3J03

NEUROSCI 3MN3 - COMPUTATIONAL MODELS IN NEUROSCIENCE

Students will study the role of model-building in neuroscience. They will learn about influential models of the brain and mind and work directly with them in code. Topics will include electrical models of the neuron, connectionist models of learning, and models of vision and information transmission.
One lecture (one hour), one laboratory (two hours, weekly); one term
Prerequisite(s): One of PNB 2XB3, LIFESCI 2CC3, or ISCI 2A18 A/B; and one of COMPSCI 1MD3, MATH 1MP3, or PNB 2A03; or permission of the Instructor

NEUROSCI 3SN3 - NEURAL CIRCUITS

Principles of circuit and systems neuroscience, emphasizing techniques, synaptic function, and neural circuit development, together with skills for thinking and communicating about science.
Three lectures, one tutorial; one term
Prerequisite(s): BIOLOGY 3P03 and one of LIFESCI 2CC3, PNB 2XB3, ISCI 2A18 A/B

NEUROSCI 4L09 A/B - NEUROSCIENCE THESIS

- research project conducted under the supervision of a faculty member affiliated with the Honours Neuroscience program.

Prerequisite(s): Registration in Level IV of Honours Neuroscience with a GPA of at least 8.5 and permission of faculty supervisor and program director
Antirequisite(s): BIOLOGY 4C09 A/B S, 4C12 A/B S, 4F06 A/B S, NEUROSCI 4L12 A/B, PNB 4D06 A/B, 4D09 A/B, 4DD6 A/B
Cannot be taken concurrently with PNB 4SC6 A/B.

NEUROSCI 4L12 A/B - NEUROSCIENCE SENIOR THESIS

- research project conducted under the supervision of a faculty member affiliated with the Honours Neuroscience program.

Prerequisite(s): Registration in Level IV of Honours Neuroscience with a GPA of at least 9.0 and permission of faculty supervisor and program director
Antirequisite(s): BIOLOGY 4C09 A/B S, 4C12 A/B S, 4F06 A/B S, NEUROSCI 4L09 A/B, PNB 4D06 A/B, 4D09 A/B, 4DD6 A/B
Cannot be taken concurrently with PNB 4SC6 A/B.

NEUROSCI 4S03 A/B - NEUROSCIENCE SEMINAR

An advanced seminar focusing on original research articles in cellular/molecular, systems/circuits, and behavioural/cognitive neuroscience.
One seminar (one and one-half hours); two terms
Prerequisite(s): NEUROSCI 3E03, 3SN3 and registration In Level IV of Honours Neuroscience program or permission of the instructor

NEXUS

NEXUS 2A03 - IMPACT OF INFECTIOUS DISEASE ON INDIVIDUALS AND SOCIETY

Infectious diseases are a major public health challenge, but their impact expands beyond healthcare. This course will explore the wide-ranging impact of infectious diseases, including economic, societal, and health-related impacts. The course will also explore the social and biological barriers to eradicating disease.
Two lectures (one hour); one term

NEXUS 4A06 A/B - HOW TO SURVIVE A PANDEMIC: CAPSTONE PROJECT FOR NEXUS MINOR

Infectious diseases are a major public health challenge, but their impact expands beyond healthcare. This course asks students to explore the wide-ranging impact of infectious diseases, including economic, societal, and health-related impacts.
Three hours; two terms
Prerequisite(s): NEXUS 2A03

NUCLST

NUCLST 1N03 - NUCLEAR TECHNOLOGY APPLICATIONS

Introduction to the nuclear energy landscape. Roles of stakeholders in the nuclear industry. Impact of nuclear energy on society and the environment. Discussion of standards and regulations. Applications in medical science and technology.
Three lectures; Fall term.

NUCLST 2N03 - NUCLEAR TECHNOLOGY & SOCIETY

Introduction to international nuclear policy, non-proliferation treaty, environmental and public health policies, and safety and security policies.
Three lectures; Winter term.
Prerequisite(s): NUCLST 1N03

NUCLST 4N03 - INTERDISCIPLINARY PROJECTS IN NUCLEAR STUDIES

Students complete an interdisciplinary project that synthesizes their knowledge and understanding across at least two areas (i.e., course lists) of nuclear studies and society.
Prerequisite(s): NUCLST 2N03

NUCLST 4NN3 - NUCLEAR ENERGY IN PRACTICE

- classroom and field-based course introducing students to nuclear energy works in the urban and natural environment and local firms, sites, and facilities related to nuclear energy.

Two lectures, one tutorial, one lab; first term.
Prerequisite(s): NUCLST 2N03 and ENGPHYS 3D04.

Nursing

Courses in Nursing are administered by the School of Nursing.
Health Sciences Centre, Room 2J16, ext. 22407
http://www.fhs.mcmaster.ca/nursing/

Courses

See also courses in *COLLAB (Nursing Consortium (A) Stream).*

NURSING 1F03 - INTRODUCTION TO NURSING AND HEALTH I FOR BASIC STREAM

This introductory course will familiarize students with ways of knowing in nursing. Students will learn self-directed and person-based learning within a problem-based learning approach to facilitate their learning throughout the B.Sc.N. program.
Tutorial (three hours); one term
Prerequisite(s): Registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 1I02

NURSING 1G03 - INTRODUCTION TO NURSING AND HEALTH II FOR BASIC STREAM

Students will be introduced to concepts of health and healing and will explore group process theory. They will learn to define clinical questions relevant to nursing and to use evidence-based approach to address these questions.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 1F03, 1I02 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 1J03

NURSING 1I02 - INTRODUCTION TO NURSING PRACTICE FOR BASIC STREAM

This course introduces students to the scope of professional practice and the meaning of caring in nursing. Students will learn beginning assessment, communication, and intervention skills in the clinical laboratory.
Tutorial and clinical lab (four hours); one term
Prerequisite(s): Registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 1F03 and WHMIS 1A00

NURSING 1J03 - PROFESSIONAL NURSING PRACTICE I FOR BASIC STREAM

Students will extend their knowledge of professional practice in the clinical laboratory focusing on healthy adults. Students will apply knowledge of growth and development, health assessment and professional caring across the lifespan.
Tutorial/clinical lab (four hours) and professional practice; one term
Prerequisite(s): WHMIS 1A00 and a minimum grade of C- in NURSING 1F03, 1I02 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 1G03

NURSING 1RP1 - REINTEGRATION COURSE

The purpose of the reintegration course is to re-familiarize the student with nursing and science course concepts and refresh their professional practice skills to ensure the students return to practice is safe and successful.
Independent study
Prerequisite(s): Registration in the BScN Basic (A) Stream, Accelerated (F) Stream or Post Diploma R.P.N.(E) Stream.

NURSING 2A04 - INTRODUCTION TO PROFESSIONAL RN PRACTICE I FOR POST DIPLOMA RPN STREAM

Students are introduced to self-directed, person-based learning in a problem-based learning approach. Role differences between R.P.N. and R.N. are explored. Biological, physical, psychological, social science and nursing theories/ concepts are integrated and applied to health care problems and clinical practice.
Tutorials (four hours); one term
Prerequisite(s): Registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream
Co-requisite(s): WHMIS 1A00

NURSING 2AA3 - PROFESSIONAL RN PRACTICE II FOR POST DIPLOMA RPN STREAM

Theories/concepts from a variety of disciplines are integrated and applied to complex health care scenarios. Nursing concepts related to health and illness across the continuum of individual and family growth and development are examined.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2A04 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream
Antirequisite(s): NURSING 2AA4

NURSING 2I04 - INTRODUCTION TO PROFESSIONAL NURSING AND HEALTH FOR ACCELERATED STREAM

Students will be introduced to core concepts related to nursing and health through problem-based tutorials. Biological, physical, psychological, social science and nursing theories/concepts are integrated and applied to health care problems.
Tutorial (four hours); one term
Prerequisite(s): Registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): NURSING 2PF3 A/B or HTHSCI 2PF3 A/B

NURSING 2J04 - PROFESSIONAL NURSING PRACTICE II FOR ACCELERATED STREAM

Nursing concepts basic to health and illness are examined across the continuum of individual and family growth and development. Planned and guided experiences are provided in the clinical laboratory and acute care institutions.
Clinical lab and professional practice (12 hours); one term

Prerequisite(s): WHMIS 1A00, and minimum grade of C- in NURSING 2U03 and registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): NURSING 2V04
This course is evaluated on a Pass/Fail basis.

NURSING 2L03 - PROFESSIONAL NURSING PRACTICE II FOR BASIC STREAM

This course is an applied professional practice course. Students will begin to apply their knowledge and skills to the care of ill clients and families, under supervision. Students will expand their understanding of internal and external influences on the health of individuals and families at the micro and macro level.
Professional practice and clinical lab (8-12 hours); one term
Prerequisite(s): WHMIS 1A00 and a minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, 1LL3 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 2MM3
This course is evaluated on a Pass/Fail basis.

NURSING 2MM3 - NURSING CONCEPTS IN HEALTH AND ILLNESS I FOR BASIC STREAM

This course uses a person-based learning within problem-based approach. Students expand their knowledge of core nursing concepts and interprofessional health care content to individuals and families. Through critical thinking they will enhance their ability to critique and apply that knowledge.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 1G03, 1J03, HTHSCI 1H06 A/B, HTHSCI 1LL3 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 2L03

NURSING 2NN3 - NURSING CONCEPTS IN HEALTH AND ILLNESS II FOR BASIC STREAM

This course uses person-based learning within a problem-based approach. An extension of NURSING 2MM3, students deepen their understanding and application of core nursing concepts and interprofessional health care content. Through critical thinking they will enhance their ability to critique and apply that knowledge.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2MM3 and a Pass in NURSING 2L03 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 2P03, and NURSING 2LA2 A/B or HTHSCI 2LA2 A/B

NURSING 2P03 - PROFESSIONAL NURSING PRACTICE III FOR BASIC STREAM

- continuation of NURSING 2L03 with applied professional practice in institutional settings.

Professional practice and clinical lab (8-12 hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2MM3 and a Pass in NURSING 2L03 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 2NN3
This course is evaluated on a Pass/Fail basis.

NURSING 2U03 - INTRODUCTION TO NURSING PRACTICE I FOR ACCELERATED STREAM

This course focuses on the acquisition of foundational clinical and reasoning skills. History taking, nurse patient relationship, physical assessment and clinical reasoning are introduced.
Lecture, clinical lab (four hours), and professional practice; one term
Prerequisite(s): Registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): WHMIS 1A00

NURSING 2V04 - NURSING CONCEPTS IN HEALTH & ILLNESS FOR ACCELERATED STREAM I

In this people-based learning within problem-based learning course students will apply knowledge of core nursing and interprofessional healthcare content to individuals, families and communities in increasingly complex situations. Through independent learning and group learning, students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence-informed practice in their plan of care.
Tutorial (four hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2I04 and registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): NURSING 2J04

NURSING 3A04 - CLINICAL REASONING IN RN PRACTICE FOR POST DIPLOMA RPN STREAM

This course focuses on the development of clinical reasoning and clinical judgment for RN practice. Clinical assessment and evidence informed decisions making skills are applied to simulated patients, virtual clinical scenarios and clinical simulation experiences.
Seminar activities supported by clinical lab as applicable (four hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2AA3, HTHSCI 2C06, 1RR2, HTHSCI 2C03, Pass in NURSING 3CN3, and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream **Antirequisite(s):** NURSING 2T04
Co-requisite(s): NURSING 3RS3 or 3RT3

NURSING 3CN3 - NURSING PRACTICE WITH THE COMMUNITY: POPULATIONS, PARTNERSHIPS, POLITICS AND POWER

Students learn about community health nursing practice with diverse clients including individuals, families, groups, communities, and populations. Exploration of various community settings including primary care, home health and public health nursing will be the focus. Participation in small group theory and professional practice activities will allow students to learn about promoting the health of clients by understanding health equity and social determinants of health. There will be opportunity for students to engage in learning related to emancipatory knowing and advocacy. Tutorial (3 hours) and professional practice
Prerequisite(s): Minimum grade of C- in NURSING 2MM3, HTHSCI 2H03, 1RR2, and a minimum grade of C- in HTHSCI 2LA2 A/B and a Pass in NURSING 2L03, and registration in the B.Sc.N. Basic (A) Stream; or HTHSCI 2S03 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream ; or Minimum grade of C- in NURSING 2V04, HTHSCI 2H03, 2HH3, 1RR2, 2C03, and a minimum grade of C- in HTHSCI 2PF3 A/B, and a Pass in NURSING 2J04, and registration in the B.Sc.N Accelerated (F) Stream
Co-requisite(s): NURSING 2AA3 or NURSING 3SS3 or 3TT3 or 3V03

NURSING 3IH3 - INTRODUCTION TO INDIGENOUS HEALTH POLICY AND PRACTICE

This course is designed to provide an introduction to a number of Indigenous health policy and practice topics. This course introduces the factors and context, both historical and current that determine the health of Indigenous populations in Ontario, Canada, and beyond. The role of the nurse, particularly in providing care for Indigenous Peoples will be integrated. The major components of the course include: (1) overview of Indigenous health policy and practice situations and matters; (2) analysis of the structure and organization

of the health care system and the distal determinants of health for Indigenous Peoples (such as colonialism, racism, self-determination, political will and the Indian Act); and finally (3) consideration of interventions, strategies and approaches that impact the health outcomes of Indigenous Peoples from a distal determinants of health perspectives.
Prerequisite(s): HTHSCI 1RR2; Registered in Level II or above

NURSING 3MH2 - NURSING CARE AND PRACTICE IN MENTAL HEALTH

This is an applied professional practice course in which students gain confidence and knowledge of the nursing role within a range of mental health nursing settings. Utilizing therapeutic communication skills, a recover-oriented lens and principles of trauma- and violence-informed care, students will participate in a guided clinical practicum.
Professional practice (8-12 hours); one term
Prerequisite(s): Registration in level III or IV of the B.Sc.N. Basic (A) Stream; or the B.Sc.N. Post Diploma R.P.N. (E) Stream Program; or the B.Sc.N. Accelerated (F) Stream.

NURSING 3NI3 - INTRODUCTION TO CONCEPTS IN NORTHERN AND INTERNATIONAL HEALTH

An introduction to the determinants of health in Northern and International contexts. This will be viewed through the lenses of historical development, political economy, and medical anthropology. Students will explore health barriers and potential inequalities within these contexts. This knowledge will inform future Northern or International clinical nursing placements. Lecture/seminar (three hours); one term
Prerequisite(s): HTHSCI 1RR2; and registration in Level 3 or above in any Stream of the B.Sc.N. Program or permission of the instructor

NURSING 3RS3 - NURSING CONCEPTS IN HEALTH AND ILLNESS III FOR POST DIPLOMA RPN STREAM

Knowledge of core nursing and interprofessional health care content to individuals, families and communities in increasingly complex situations, analyzing professional practice situations from a variety of perspectives.
Tutorial (three hours); one term
Prerequisite(s): minimum grade of C- in NURSING 2AA3, 1RR2, 3CN3, HTHSCI 2C06, 2C03 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream
Antirequisite(s): NURSING 3SS3
Co-requisite(s): NURSING 3PA2 A/B or HTHSCI 3PA2 A/B, and either NURSING 3YR4 or 3A04

NURSING 3RT3 - NURSING CONCEPTS IN HEALTH AND ILLNESS IV FOR POST DIPLOMA RPN STREAM

An extension of NURSING 3RS3, students will expand their knowledge of core nursing and interprofessional health care content to individuals, families and communities in increasingly complex situations, analyzing professional practice situations from a variety of perspectives.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 3RS3, and a Pass in NURSING 3RY4 or minimum grade of C- in NURSING 3A04, and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream **Antirequisite(s):** NURSING 3TT3
Co-requisite(s): NURSING 3PA2 A/B or HTHSCI 3PA2 A/B, and either NURSING 3A04 or 3RY4

NURSING 3RY4 - PROFESSIONAL NURSING PRACTICE V FOR POST DIPLOMA RPN STREAM

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings.
Professional practice (twelve hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2AA3, 3CN3, HTHSCI 2C03, HTHSCI 2C06, HTHSCI 1RR2 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream
Co-requisite(s): NURSING 3RS3 or NURSING 3RT3
This course is evaluated on a Pass/Fail basis.

NURSING 3SS3 - NURSING CONCEPTS IN HEALTH AND ILLNESS III FOR BASIC STREAM

- continuation of NURSING 2NN3, students will apply deepening knowledge of core nursing and interprofessional health care content to individuals, families and communities in increasingly complex situations, analyzing professional practice situations from a variety of perspectives.

Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2NN3, HTHSCI 2H03, 2HH3, 1RR2, 2LA2 A/B, and a Pass in NURSING 2P03, and registration in the B.Sc.N. Basic (A) Stream;
Co-requisite(s): NURSING 3X04 and either NURSING 3PA2 A/B or HTHSCI 3PA2 A/B

NURSING 3TT3 - NURSING CONCEPTS IN HEALTH AND ILLNESS IV FOR BASIC STREAM

An extension of NURSING 3SS3, students will apply deepening knowledge of core nursing and interprofessional health care content to individuals, families and communities in increasingly complex situations, analyzing professional practice situations from a variety of perspectives.
Tutorial (three hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 3SS3, and a Pass in NURSING 3X04, and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 3Y04 and either NURSING 3PA2 A/B or HTHSCI 3PA2 A/B

NURSING 3V04 - NURSING CONCEPTS IN HEALTH & ILLNESS FOR ACCELERATED STREAM II

An extension of NURSING 2V04, students will apply deepening knowledge of core nursing and inter-professional health care content to individuals, families and communities in increasingly complex situations. Through independent and group learning students will analyze professional practice situations from a variety of perspectives, and apply principles of evidence informed practice in their plan of care.
Tutorial (four hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2V04, HTHSCI 2H03, 2HH3, 1RR2, 2C03 and a minimum grade of C- in NURSING 2PF3 A/B or HTHSCI 2PF3 A/B, and a Pass in NURSING 2J04 and registration in the B.Sc.N. Accelerated (F) Stream
Antirequisite(s): NURSING 3SS3, NURSING 3TT3
Co-requisite(s): NURSING 3CN3, 3ZA3, 3ZB3 and either NURSING 3PF1 or HTHSCI 3PF1

NURSING 3X04 - PROFESSIONAL NURSING PRACTICE IV

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings.

Professional practice and clinical lab (twelve hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2NN3, HTHSCI 2H03, 2HH3, 2LA2 A/B, and a Pass in NURSING 2P03, and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 3SS3
This course is evaluated on a Pass/Fail basis.

NURSING 3Y04 - PROFESSIONAL NURSING PRACTICE V

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings.
Professional practice (twelve hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 3SS3, and a Pass in NURSING 3X04 and registration in the B.Sc.N. Basic (A) Stream
Co-requisite(s): NURSING 3TT3
This course is evaluated on a Pass/Fail basis.

NURSING 3ZA3 - PROFESSIONAL NURSING PRACTICE III FOR ACCELERATED STREAM

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings.
Professional practice and clinical lab (eighteen hours); one term
Prerequisite(s): Minimum grade of C- in NURSING 2V04, HTHSCI 2H03, 2HH3, 1RR2, 2C03 and a minimum grade of C- in NURSING 2PF3 A/B or HTHSCI 2PF3 A/B, and a Pass in NURSING 2J04 and registration in the B.Sc.N. Accelerated (F) Stream
Antirequisite(s): NURSING 3X04
Co-requisite(s): NURSING 3V03
This course is evaluated on a Pass/Fail basis.

NURSING 3ZB3 - PROFESSIONAL NURSING PRACTICE IV FOR ACCELERATED STREAM

This is an applied professional practice course in which students gain confidence in their emerging professional practice through a guided clinical practice in increasingly complex and diverse settings.
Professional practice and clinical lab (eighteen hours); one term
Prerequisite(s): Pass in NURSING 3ZA3 and registration in the B.Sc.N. Accelerated (F) Stream
Antirequisite(s): NURSING 3Y04
Co-requisite(s): NURSING 3V04
This course is evaluated on a Pass/Fail basis.

NURSING 4AC3 - ADVANCED ADULT CRITICAL CARE NURSING

This course builds on critical care concepts introduced in 4CC3. Care of critically ill patients, including those with unstable health conditions, emergent complications and multi-organ failure will be discussed. Psychomotor skills will be integrated as they relate to advanced life support, hemodynamic monitoring, fluid resuscitation and pharmacological management. Care prioritization and team communication will be addressed.
Seminar/simulation (three hours); one term
Prerequisite(s): N4CC3 and registration in level 4 of any Stream of the B.Sc.N. Program or as a returning student.
Co-requisite(s): NURSING 4K10 with a placement in adult critical care or returning student with RN registration.

NURSING 4CC3 - FOUNDATIONS OF ADULT CRITICAL CARE NURSING

This course focuses on the application of critical care nursing concepts. A health system perspective will be used to understand the care of adult patients requiring intensive care and monitoring. Students will integrate comprehensive physical assessments, data collection, interpretation and clinical reasoning to guide the care of these patients. Nursing and interprofessional team interventions will be discussed each week, while providing person-centered care for patients and family.
Seminar/simulation (three hours); one term
Prerequisite(s): Registration in level 4 of any Stream of the B.Sc.N. Program or as a returning student.
Co-requisite(s): NURSING 4J07 or 4K10 with a placement in adult critical care or returning student with RN licensure.

NURSING 4IP6 - INTEGRATED ADULT CRITICAL CARE PRACTICUM

As an applied professional practice course, students will focus on the integration of knowledge, skills and judgment related to care and management of critically ill patients. Students are individually placed in intensive care settings and work alongside a preceptor. Person-centered care, leadership at the bedside, and team communication are integral to the nursing role.
Professional practice (240 hours); one term
Prerequisite(s): N4CC3, N4AC3 and registration as a returning student with RN licensure.

NURSING 4J07 - PROFESSIONAL NURSING PRACTICE VI

This course focuses on the application of theory and concepts to clinical practice, including the introduction to the leadership role in patient care. Students are individually placed in a variety of health-care settings.
Professional practice (24 hours per week) plus 90 min tutorial each week to accompany learning;; one term
Prerequisite(s): Minimum grade of C- in NURSING 3TT3, HTHSCI 2S03, 3BB3, and 3PA2 A/B, and a Pass in NURSING 3CN3, 3Y04, and registration in the B.Sc.N. Basic (A) Stream; or a minimum grade of C- in NURSING 3RT3, HTHSCI 2S03, and 3PA2 A/B, and a Pass in NURSING 3AO4, 3RY4, and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream Program; or a minimum grade of C- in NURSING 3V03, and a minimum grade of C- in HTHSCI 3PF1, and a Pass in NURSING 3CN3, 3ZB3, and registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): NURSING 4P03
This course is evaluated on a Pass/Fail basis.

NURSING 4K10 - PROFESSIONAL PRACTICE AND THE NEW GRADUATE

As an applied professional practice course, students focus on the integration and application of research, theory and concepts to professional practice, including an introduction to the leadership role in client care. Students are individually placed in a variety of contexts, where they are actively involved in the enactment of the nursing role.
Professional practice (24 hours for six weeks, 35-36 hours for six - seven weeks) plus 90 min tutorial each week to accompany learning.; one term
Prerequisite(s): Minimum grade of C- in NURSING 4P03, and a Pass in NURSING 4J07, and registration in any Stream of the B.Sc.N. Program
Antirequisite(s): NURSING 4K07
Co-requisite(s): NURSING 4Q03
This course is evaluated on a Pass/Fail basis.

NURSING 4P03 - ADVANCED NURSING CONCEPTS I

This course is designed to allow students to explore first hand some of the facets and elements of the act of leading in the everyday world of professional nursing. The focus on leading will be on the challenges and issues of nurses' work. This course engages students in learning about the meaning of leading through influence.
Tutorial (three hours); one term
Antirequisite(s): NURSING 4P04
Prerequisite(s): Minimum grade of C- in NURSING 3TT3, HTHSCI 2S03, 3BB3, and 3PA2 A/B, and a Pass in NURSING 3CN3, 3Y04 and registration in the B.Sc.N. Basic (A) Stream program; or minimum grade of C in NURSING 3RT3, HTHSCI 2S03, and 3PA2 A/B, and a Pass in NURSING 3AO4, 3RY4 and registration in the B.Sc.N. Post Diploma R.P.N. (E) Stream; or a minimum C- in NURSING 3V03, and a minimum grade of C- in HTHSCI 3PF1, and a Pass in NURSING 3CN3, 3ZB3, and registration in the B.Sc.N. Accelerated (F) Stream
Co-requisite(s): NURSING 4J07

NURSING 4Q03 - ADVANCED NURSING CONCEPTS II

This course engages students in exploring the meaning of becoming a nurse. Transitioning into this role draws upon their understanding of what nursing is and the possibilities for action in professional practice involvements. This course also provides learning activities that accentuate the exploration of becoming a professional, interprofessional collaboration, and self-regulation.
Tutorial (six hours, six weeks); one term
Prerequisite(s): Minimum grade of C- in NURSING 4P03, and a Pass in NURSING 4J07, and registration in any Stream of the B.Sc.N. Program
Antirequisite(s): NURSING 4Q04
Co-requisite(s): NURSING 4K10

Ojibwe

Courses in Ojibwe are administered by the Indigenous Studies Department.
L.R. Wilson Hall, Room 1811, ext. 27426
https://indigenous.mcmaster.ca
Courses
If no prerequisite is listed, the course is open.

OJIBWE 1Z03 - INTRODUCTION TO OJIBWE LANGUAGE AND CULTURE

This course will study the Ojibwe language, in its spoken and written forms, in the context of Ojibwe cultural traditions, values, beliefs and customs.
Lecture and seminars (three hours); one term

OJIBWE 2Z03 - INTERMEDIATE OJIBWE

This course expands on the vocabulary and the oral skills for the Ojibwe language. In addition, the course reviews the written component of the language.
Lecture and seminars (three hours); one term
Prerequisite(s): OJIBWE 1Z03

Pharmacology

Courses in Pharmacology are administered by the Honours Biology & Pharmacology Co-op Program, Faculty of Health Sciences, Health Sciences Centre Room 2E21A, ext. 22312.
https://healthsci.mcmaster.ca/biopharm
biophrm@mcmaster.ca
PHARMAC courses are available only to those students registered in Honours Biology and Pharmacology.

Note
PHARMAC 3A06 A/B, 3B06 A/B, 4A03, 4AA3, 4C03, 4D03 and 4E03 will be based on self-directed problem based learning.
Courses

PHARMAC 3A06 A/B - INTRODUCTION TO PHARMACOLOGY

Principles of pharmacodynamics, principles of pharmacokinetics. Drugs acting on the CNS, female reproductive system, autonomic nervous system and respiratory system. Antimicrobials. Course teaches skills needed to perform effectively in a problem-based learning environment, critically read literature, and design a clinical trial.
One tutorial (three hours); two terms
Prerequisite(s): Registration in the Honours Biology and Pharmacology Co-op (B.H.Sc.) program or permission of the Program.

PHARMAC 3B06 A/B - METHODS IN PHARMACOLOGY

Laboratory course with extensive teaching and guidance by teaching assistants. Experimental methods for the study of drugs in vitro. Interpretation and communication of experimental data. Design and conducting a Discovery Project at an academic laboratory.
One lab (three hours); two terms
Prerequisite(s): Credit or registration in PHARMAC 3A06 A/B or BIOLOGY 3AA3 and permission of the Program.

PHARMAC 4A03 - RECEPTOR-DRUG INTERACTIONS

Receptor classification, receptor theory, stimulus response coupling, second messengers.
One tutorial (three hours); one term
Prerequisite(s): PHARMAC 3A06 A/B or BIOLOGY 3AA3 and permission of the Program.

PHARMAC 4AA3 - ADVANCED TOPICS IN PHARMACOLOGY

This course will focus on new developments in pharmacology including pharmaceutical biotechnology, with discussions on entrepreneurship and data science / artificial intelligence.
One tutorial (three hours); one term
Prerequisite(s): PHARMAC 4A03

PHARMAC 4C03 - PRINCIPLES OF TOXICOLOGY

General principles of toxicology, adverse effects of selected agents on humans and other organisms. This course includes learning skills related to oral presentations and making and presenting a poster presentation.
One tutorial (three hours); one term
Prerequisite(s): PHARMAC 3A06 A/B

PHARMAC 4D03 - DRUG DESIGN

Principles of drug design based on drug transport, metabolism and selectivity of action at the target sites with emphasis on quantitative structure-activity relationships.
One tutorial (three hours); one term
Prerequisite(s): PHARMAC 3A06 A/B, 4A03

PHARMAC 4E03 - SOCIAL PHARMACOLOGY

Epidemiological analysis of drug use in humans; adverse drug reactions; legal and economic aspects of drug utilization, prescribing patterns in national and international contexts.
One tutorial (three hours); one term

Prerequisite(s): PHARMAC 3A06 A/B or BIOLOGY 3AA3 and permission of the Program.

PHARMAC 4T15 - SENIOR THESIS

- thesis based upon a research project carried out under the direction of a supervisor approved by the Program Director.

Prerequisite(s): PHARMAC 3A06 A/B
Not open to students with credit or registration in any Level IV department- or program-based thesis or independent study/project course.

Philosophy

Courses in Philosophy are administered by the Department of Philosophy.
University Hall, Room 303, ext. 26445
http://philos.humanities.mcmaster.ca/

Department Notes

1. Students are advised to note carefully the prerequisites for all courses. Students who do not meet the specified prerequisites for a course may, in exceptional circumstances, obtain permission of the Departmental Undergraduate Counsellor to take the course. Note that not all courses are offered every year, however, all required courses are offered every year. Please consult the university Master Schedule.
2. Students interested in registering in PHILOS 3W03, 4W03 will need to obtain permission from both a faculty member willing to supervise their work and the Departmental Undergraduate Counsellor.
3. Students in Level 3 of an Honours Philosophy program may seek permission from the Departmental Undergraduate Counsellor to gain access to Level 4 courses.

Courses

If no prerequisite is listed, the course is open.

PHILOS 1A03 - PHILOSOPHICAL TEXTS

An introduction to philosophy through the close reading of selected classical texts. Authors to be considered may include Plato, Descartes, Hobbes, Hume, Marx, Mill, Nietzsche, Russell, and De Beauvoir.
Two lectures, one tutorial; one term

PHILOS 1B03 - PHILOSOPHY, LAW AND SOCIETY

An introduction to philosophy through an exploration of issues in moral, political and legal philosophy. Topics may include: The Canadian Charter of Rights; terrorism, torture, and the rule of law; legal restrictions on hate speech and pornography.
Two lectures, one tutorial; one term

PHILOS 1E03 - PHILOSOPHICAL QUESTIONS

An introduction to philosophy through the study of some of its central questions. Topics may include God, knowledge, mind and body, free will, politics, morality, and art.
Two lectures, one tutorial; one term

PHILOS 1F03 - MEANING IN LIFE

An introduction to philosophy through an exploration of the question: What makes life meaningful? Topics may include such themes as happiness, suffering, suicide, faith, love, friendship, work, art, and hope.
Two lectures, one tutorial; one term

PHILOS 2B03 - INTRODUCTORY LOGIC

An introduction to logical reasoning and the analysis of argument through the study of propositional and quantification logic.
Two lectures; one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2CT3 - CRITICAL THINKING

This course aims to improve skills in analyzing and evaluating arguments from everyday life and academic contexts.
Two lectures; one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ARTSSCI 1B06, ARTSSCI 1BB3, IBH 2AE3

PHILOS 2D03 - BIOETHICS

An introduction to ethical complexities in health care. Topics covered may include medical assistance in dying, reproductive health, genetic screening, conflicts in health care setting, or the use of artificial intelligence in medicine and patient care.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): HTHSCI 3L03, RELIGST 2C03

PHILOS 2E03 - CLASSICAL CHINESE PHILOSOPHY

An introductory survey of classical Chinese philosophy, especially Confucianism and Daoism. Readings include Confucius, Mencius, Laozi and Zhuangzi.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2F03 - PHILOSOPHICAL PSYCHOLOGY

- consideration of such questions as: In what terms might human nature be described? How do intentional and unintentional behaviour differ? How do physical and mental states differ? When is action free? Can intelligence be duplicated artificially?

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2G03 - SOCIAL AND POLITICAL ISSUES

- philosophical exploration of current social and political issues. Topics may include discrimination, violence, environmental problems, poverty, liberty, equality, democracy, or terrorism.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2H03 - AESTHETICS

An introduction to some main theories of the nature of art, criticism, and the place of art in life and society.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ARTHIST 2H03

PHILOS 2LA3 - LATIN AMERICAN PHILOSOPHY

An introduction to Latin American philosophy through the study of classic and contemporary texts. Issues may include: the nature, impact and legacy of colonialism; the contributions of the Indigenous peoples of Latin America; and the shaping and status of identity categories such as Indigenous, Latinx, and Afro-Latinx.
Two lectures, one tutorial; one term

Prerequisite(s): Registration in Level II or above.

PHILOS 2LM3 - LOVE AND MONSTERS

This course asks how, where, when love and monsters intersect. It investigates historical and philosophical themes - love, fear, trust, dignity - that underpin the human experience and the social realities that inform it. What makes things monstrous? What does love require of us? Can monsters love?
Three hours (lecture); one term
Cross-list(s): HISTORY 2LM3, INSPIRE 2LM3
This course is administered by the INSPIRE Office of Flexible Learning.

PHILOS 2N03 - BUSINESS ETHICS

An analysis of ethical issues arising in contemporary business life. Sample topics include: fair and unfair competition; responsibilities towards employees, society and the environment; honesty and integrity in business; the moral status of corporations.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): COMMERCE 2SB3

PHILOS 2P03 - ANCIENT GREEK PHILOSOPHY

- survey of ancient Greek and Roman philosophical thought from its beginnings to the Hellenistic period, including Socrates, Plato, Aristotle, the Stoics and the Epicureans.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): CLASSICS 2P03

PHILOS 2Q03 - JUSTICE, POLITICAL PHILOSOPHY, AND LAW

- critical survey of the essentials of private law (tort, contracts, and property), criminal law, administrative law, the Canadian Charter, and international law and institutions.

Three hours (lecture and discussion); one term
Prerequisite(s): Registration in level II of the Honours Justice, Political Philosophy, and Law program

PHILOS 2S03 - HISTORY OF POLITICAL PHILOSOPHY

- survey of major historical works in political philosophy, including works by some or all of: Plato, Aristotle, Hobbes, Locke, Rousseau, Kant, Wollstonecraft, Bentham, Mill, Taylor, and Marx.

Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above of the Honours Justice, Political Philosophy, and Law program

PHILOS 2TT3 - ETHICAL ISSUES IN COMMUNICATION

An examination of ethical issues as they arise in interpersonal communication, mass communication, and social media. Different moral theories and approaches to moral decision-making will be employed to help students evaluate concrete examples.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2U03 - PHILOSOPHY OF HEALTH AND MEDICINE

An introductory course examining philosophical issues in health and medicine. Topics may include: defining "health" and "disease"; justifying different study designs to measure therapeutic effectiveness or health outcomes; how scientific findings can and should be used to support clinical practice.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in level II or above

PHILOS 2X03 - EARLY MODERN PHILOSOPHY

- survey of the metaphysical, epistemological, and moral questions asked and answered by philosophers of the 17th and 18th centuries, such as Descartes, Cavendish, Astell, Locke, Hume, Du Châtelet, and Amo.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 2YY3 - ETHICS

An introduction to moral philosophy and its application to contemporary moral problems. Topics may include the objectivity of values, the nature of moral judgments, rights and duties, virtues, and consequentialism.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): IBH 1BC3

PHILOS 2ZZ3 - PHILOSOPHY OF LOVE AND SEX

An exploration of philosophical texts concerned with the nature of love and sex, including such themes as friendship, romance, perversity, intimacy, desire, sex and sexuality.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

PHILOS 3B03 - EUROPEAN PHILOSOPHY FROM NIETZSCHE TO WORLD WAR II

- study of the development of philosophy in Europe from roughly the 1830s to the period preceding World War II, with a special focus on the work of Friedrich Nietzsche and on the intellectual movements with which he interacted, such as philosophy of life, existentialism, pessimism, feminism, and socialism.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3C03 - ADVANCED BIOETHICS

An advanced study of selected topics in bioethics with a focus on ethical issues in medical research on humans. Topics may include vulnerability and vulnerable research subjects, incentives for participation, moral obligations to participate in research studies, high risk research, fair subject selection, or the ethics of germline gene editing studies.
Three hours (lecture and discussion); one term
Prerequisite(s): One of PHILOS 2D03, PHILOS 2YY3, or RELIGST 2C03

PHILOS 3CC3 - ADVANCED ETHICS

An advanced discussion of one or more theories or current issues in ethics. Topics may include meta-ethics, ethical naturalism, theories of rights and obligations, moral psychology, the role of moral emotions, or moral responsibility.
Three hours (lecture and discussion); one term
Prerequisite(s): One of PHILOS 2D03, PHILOS 2YY3, or RELIGST 2C03, and at least three additional units of Philosophy, and registration in Level III or above

PHILOS 3D03 - PHILOSOPHY OF SCIENCE

- survey of philosophical problems concerning science. Topics to be considered include explanation, causation, scientific laws, and instrumentalism vs. realism.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3E03 - PHILOSOPHY OF LANGUAGE

This course surveys some of the main themes pertaining to the philosophical study of language and communication and attempts to understand the most significant developments of the discipline in the course of the last century.
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy or PHILOS 2B03; and registration in Level III or above

PHILOS 3EE3 - CONTEMPORARY CONTINENTAL PHILOSOPHY

An examination of the work of 20th- and 21st-century continental philosophers such as Heidegger, Sartre, Beauvoir, Foucault, Deleuze, Derrida or Agamben.
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above
Antirequisite(s): PHILOS 4E03

PHILOS 3GH3 - GLOBAL HEALTH ETHICS

- survey of global health ethics paradigms and an exploration of specific topics in the ethics of global health, such as the decolonizing of global health, the use of novel health technologies, and global health emergencies.

Three hours (lecture and discussion); one term
Prerequisite(s): One of PHILOS 2D03, PHILOS 2YY3, or RELIGST 2C03 and registration in Level III or above

PHILOS 3HH3 - METAPHYSICS

An investigation of metaphysical concepts, such as substance, individuation, identity, essence, quality, process, mind, time and causality. Some contemporary criticisms of metaphysics will be discussed.
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of philosophy and registration in Level III or above

PHILOS 3I03 - PHILOSOPHY AND FEMINISM

- philosophical investigation of current feminist theorizing at the intersection of gender, race, sexuality, ability, and other categories of social difference.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy or GENDRST 1A03 (or WOMENST 1A03) and GENDRST 1AA3 (or WOMENST 1AA3); and registration in Level III or above

PHILOS 3L03 - ENVIRONMENTAL PHILOSOPHY

- philosophical study of the relationship between humans and nature or the natural environment, including what that relationship should be.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3MI3 - PHILOSOPHY OF MIND

An introduction to some main themes in and approaches to the philosophy of mind, focusing on questions such as: What is the mind? What kind of mental states exist? What is the relation between mental states and brain states? What is consciousness? What is intentionality? How similar are brains and computers?
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3N03 - POLITICAL PHILOSOPHY

- study of major political concepts and themes, such as social contract, ideology, justice, freedom, equality, reform vs. revolution, state vs. individual.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy or Political Science and registration in Level III or above, or registration in Level III or above in a Combined Honours BA Program in Leadership and Civic Studies

PHILOS 3NN3 - PHILOSOPHY OF THE ENLIGHTENMENT

An examination of the philosophy of 18th-century Europe, particularly of the thinkers associated with the Encyclopedia project. This movement was a concerted attempt to replace the old theological-cum-political order with one based on scientific reason and human rights.
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3O03 - THEORY OF KNOWLEDGE

- study of scepticism and certainty, knowledge and belief, perception, memory, and truth.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in level III or above

PHILOS 3Q03 - PHILOSOPHY OF LAW

An investigation of the nature of law and of issues arising within legal systems. These issues include legal reasoning, equality, legal insanity, punishment, and the Charter of Rights and Freedoms.
One lecture (2 hours), one tutorial; 3 hours, one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above; or registration in Level III or IV of the Combined Honours in Peace Studies or Combined Honours in Global Peace and Social Justice Program
Antirequisite(s): PEACEST 3Q03; PEACJUST 3Q03

PHILOS 3SR3 - METAPHYSICS OF SOCIAL REALITY

- study of philosophical theories about the metaphysics of social phenomena, such as social institutions, social norms, social conventions, social kinds, social groups, and artifacts.

Three hours (lecture and discussion); one term
Prerequisite(s): Six units of philosophy and registration in Level III or above

PHILOS 3T03 - PHILOSOPHY AND RACE

This course is a philosophical exploration of what race is, both from a metaphysical standpoint - is it real, is it biological, or social, or something else altogether - and also the implications of how we understand race and racialization on both our social and political lives and on the discipline of philosophy itself.
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of philosophy and registration in Level III or above

PHILOS 3VV3 - KANT

An introduction to Immanuel Kant's philosophy. The course will focus on a specific work or theme of Kant's theory.
Three hours (lecture and discussion); one term
Prerequisite(s): PHILOS 2X03, and registration in Level III or above

PHILOS 3W03 - INDEPENDENT STUDY

An independent study course in which a student works with a Philosophy faculty member on a mutually agreed topic outside normally available course offerings. Interested students must first secure the agreement of a Philosophy faculty member to supervise their work and complete a proposal form (available from the Philosophy Department Office) before attempting to enroll in this course.
Prerequisite(s): Registration in Level III or IV of any program in Philosophy, with a Grade Point Average of at least 8.5 and permission of the Department

PHILOS 3WP3 - MODERN WOMEN PHILOSOPHERS

An introduction to the social and political thought of women philosophers of Europe and North America working and writing from the 17th to 19th centuries. Central topics include gender and racial justice across themes such as marriage, sex, suffrage, and the abolition of slavery. Figures discussed may include Judith Drake, Gabrielle Suchon, Mary Church Terrell, Ida B. Wells-Barnett, Victoria Woodhull, and Clara Zetkin.
Three hours (lecture and discussion); one term.
Prerequisite(s): Registration in Level III or above and six units of Philosophy or three units of Philosophy and GENDRST 2AA3

PHILOS 3XX3 - PLATO

- detailed study of one or more of Plato's dialogues, with an emphasis on his philosophical ideas.

Three hours (lecture and discussion); one term
Prerequisite(s): PHILOS 2P03 or CLASSICS 2P03
Antirequisite(s): CLASSICS 3XX3

PHILOS 3YY3 - HEGEL

An introduction to Hegel's philosophy and its historical context, considering neglected voices in particular (e.g. Germaine de Staël, Frederick Douglass, and Karl Marx).
Three hours (lecture and discussion); one term
Prerequisite(s): Six units of Philosophy and registration in Level III or above

PHILOS 3ZZ3 - ARISTOTLE

- detailed study of various parts of the philosophy of Aristotle. Topics covered may include Aristotle's views on logic, nature, the soul, metaphysics, ethics and politics.

Three hours (lecture and discussion); one term
Prerequisite(s): PHILOS 2P03 or CLASSICS 2P03
Antirequisite(s): CLASSICS 3ZZ3

PHILOS 4A03 - EARLY MODERN PHILOSOPHY

- critical study of one or more 17th- or 18th-century European or British philosophers, such as Descartes, Leibniz, Hume.

Seminar (three hours); one term
Prerequisite(s): PHILOS 2X03 and registration in Level IV of any program in Philosophy
Departmental permission required

PHILOS 4C03 - PHILOSOPHY OF CONSTITUTIONAL LAW

- philosophical study of the nature and role of constitutions and of the judicial interpretation and application of constitutional charters of rights.

Seminar (three hours); one term
Prerequisite(s): PHILOS 3Q03 and registration in Level IV of any program in Philosophy
Departmental permission required

PHILOS 4D03 - HISTORY OF ANALYTIC PHILOSOPHY

- study of the historical development of analytic philosophy, including its philosophical ideas (e.g. on mind, language, and logic) and the broader intellectual context in which that movement took shape.

Seminar (three hours); one term
Prerequisite(s): Registration in Level IV of any program in Philosophy
Departmental permission required

PHILOS 4JP3 - TOPICS IN JUSTICE, POLITICAL PHILOSOPHY, AND LAW

This course critically examines topics relating to the structure and underlying rationale of one or more key areas of law, such as (but not limited to) tort, contract, property, or criminal law.
Seminar (three hours); one term
Prerequisite(s): Registration in level IV of the Honours Justice, Political Philosophy, and Law program
PHILOS 4JP3 may be repeated, if on a different topic, to a total of six units.
Departmental permission required.

PHILOS 4K03 - SEMINAR IN ANCIENT PHILOSOPHY

- critical examination of a major thinker, movement, theme, or work in ancient Greek and Roman philosophy (e.g. pre-Socratic philosophy, a particular Platonic dialogue, Stoic ethics, ancient skepticism, or philosophy in late antiquity).

Seminar (three hours); one term
Prerequisite(s): PHILOS 2P03 or CLASSICS 2P03; and registration in Level IV of any program in Philosophy or Classics
Antirequisite(s): CLASSICS 4K03
Departmental permission required

PHILOS 4ME3 - TOPICS IN METAPHYSICS AND EPISTEMOLOGY

- close study of selected topics falling under the broad umbrella of metaphysics and epistemology, which includes questions about knowledge, reality, mind, language, and science.

Seminar (three hours); one term
Prerequisite(s): Registration in Level IV of any program in Philosophy
PHILOS 4ME3 may be repeated, if on a different topic, to a total of six units.
Departmental permission required

PHILOS 4S03 - HUMAN RIGHTS AND GLOBAL JUSTICE

This course examines the philosophical foundations and political implications of human rights and theories of justice in the international sphere. We will also consider related topics of sovereignty, political legitimacy, international responsibility, humanitarian intervention, international criminal law.
Seminar (three hours); one term
Prerequisite(s): Registration in level IV of the Honours Justice, Political Philosophy, and Law program
Departmental permission required

PHILOS 4SE3 - SOCIAL EPISTEMOLOGY

An examination of how social practices and social structures relate to epistemic phenomena such as knowledge, understanding, testimony, justification, and disagreement.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV of any program in Philosophy
Departmental permission required

PHILOS 4T03 - SPECIAL TOPICS IN PHILOSOPHY

This course critically examines advanced topics in Philosophy.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV of any program in Philosophy PHILOS 4T03 may be repeated, if on a different topic, to a total of six units.
Departmental permission required

PHILOS 4V03 - MULTIDISCIPLINARY WORKSHOP IN APPLIED ETHICS AND POLICY

This course is a multidisciplinary, team-based workshop focused on identifying and resolving the ethical and policy challenges presented by new technologies that are promising but also potentially disruptive. Open to students from Health Sciences, Engineering, Business, Humanities, Sciences and Social Sciences.
Three hours; one term
Prerequisite(s): 6 units of PHILOS 2D03, 2YY3, 2S03, 2G03, 2N03, or 2TT3; 3 units of PHILOS 3C03, 3CC3, or 3GH3; 3 units of PHILOS 3I03, 3L03, 3Q03, 3N03 or 3T03; and permission of the department.
This course is restricted to students accepted into CAEP (Certificate for Applied Ethics and Policy).

PHILOS 4W03 - INDEPENDENT STUDY

An independent study course in which a student works with a Philosophy faculty member on a mutually agreed topic outside normally available course offerings. Interested students must first secure the agreement of a Philosophy faculty member to supervise their work and complete a proposal form (available from the Philosophy Department Office) before attempting to enroll in this course.
Prerequisite(s): Registration in Level IV of any Honours program in Philosophy, with a Grade Point Average of at least 8.5 and permission of the Department

PHILOS 4XP3 A/B - LAW AND COMMUNITY

This course seeks to foster a sophisticated understanding of the legal institutions that make up the social world by hosting visits with a number of offices whose central mission involves participating in the political and legal processes in which laws are made, applied and developed.
This course is evaluated on a Pass/Fail basis.
Three hours; two terms (alternate weeks)
Prerequisite(s): Registration in level IV of the Honours Justice, Political Philosophy, and Law program Departmental permission required

PHILOS 4YY3 - TOPICS IN ETHICS

An advanced study of ethics broadly defined to include those aspects of human life that provide meaning and value (e.g. aesthetic, moral, religious, social or political experience.)
Seminar (three hours); one term
Prerequisite(s): One of PHILOS 2YY3 or 2D03 and registration in Level IV of any program in Philosophy or Global Peace & Social Justice
Antirequisite(s): PHILOS 4B03
PHILOS 4YY3 may be repeated, if on a different topic, to a total of six units.
Departmental permission required

Physics

Courses in Physics are administered by the Department of Physics and Astronomy.
A.N. Bourns Science Building, Room 241, ext. 24559
http://www.physics.mcmaster.ca/

Department Notes

1. The Department reserves the right to withdraw a Level III or IV course which is not specifically required in a Physics program if the registration falls below ten.
2. Students in Level III or IV of Physics programs will find a number of relevant electives among the offerings of the Department of Biology, the Department of Engineering Physics and the School of Earth, Environment & Society.
3. Courses in Physics and Astronomy are not open to students registered in the Bachelor of Technology program.

Courses

If no prerequisite is listed, the course is open.

PHYSICS 1A03 - INTRODUCTORY PHYSICS

- first course in university physics, taught using examples and applications from many areas of science. Topics include the concepts of force and energy, mechanics, waves and fluids.

Three hours (lectures, online tutorials), one lab (two hours) every other week; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03
Co-requisite(s): WHMIS 1A00 if not already completed, must be completed prior to the first lab.
Antirequisite(s): PHYSICS 1C03, PHYSICS 1V03
Not open to students with credit or registration in ISCI 1A24 A/B or PHYSICS 1D03.
It is recommended that students in Chemical and Physical Sciences Gateway complete PHYSICS 1C03.

PHYSICS 1AA3 - INTRODUCTION TO MODERN PHYSICS

- course presenting aspects of modern physics relevant to life sciences. Electromagnetic fields. Atomic, quantum, and nuclear physics. Applications to imaging and understanding biological systems.

Three lectures, one lab (three hours) every other week; one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1V03
Antirequisite(s): PHYSICS 1CC3
Not open to students with credit or registration in ISCI 1A24 A/B.
It is recommended that students in Chemical and Physical Sciences Gateway complete PHYSICS 1CC3.

PHYSICS 1C03 - PHYSICS FOR THE CHEMICAL AND PHYSICAL SCIENCES

- first course in university physics intended for physics and chemistry students, or students in any other discipline who have an appropriate secondary school background including calculus. This course is a comprehensive treatment of linear mechanics - kinematics, dynamics, and the relevant conservation laws, simple harmonic motion, and fluids.

Three lectures, one lab (two hours) every week; one term
Prerequisite(s): Grade 12 Physics U; and either Grade 12 Calculus and Vectors U or MATH 1F03; and credit or registration in one of ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1X03, 1ZA3
Co-requisite(s): WHMIS 1A00 if not already completed, must be completed prior to the first lab.

Antirequisite(s): PHYSICS 1A03, 1V03
Not open to students with credit or registration in ISCI 1A24 A/B or PHYSICS 1D03.

PHYSICS 1CC3 - MODERN PHYSICS FOR THE CHEMICAL AND PHYSICAL SCIENCES

This course is the continuation of PHYSICS 1C03. Topics include simple harmonic motion, waves, interference, electrostatics, magnetostatics and an introduction to quantum physics.
Three lectures, one lab (three hours) every other week; one term
Prerequisite(s): PHYSICS 1A03, 1C03, 1V03
Antirequisite(s): PHYSICS 1AA3
Not open to students with credit or registration in ISCI 1A24 A/B.

PHYSICS 1D03 - INTRODUCTORY MECHANICS

- course for engineering students. Principles of mechanics of particles and rigid bodies, including Newton's Laws, rotational kinematics and dynamics, torque, energy, momentum, angular momentum, and simple harmonic motion.

Three lectures, one lab (three hours) every other week; one term
Prerequisite(s): Registration in a program in the Faculty of Engineering

PHYSICS 1E03 - WAVES, ELECTRICITY AND MAGNETIC FIELDS

- course for engineering students. Oscillations and waves, interference; electrostatics, electric potential, circuit elements; magnetic fields.

Three lectures, one lab (three hours) every other week; one term
Prerequisite(s): PHYSICS 1D03 and registration in a program in the Faculty of Engineering
Antirequisite(s): PHYSICS 2B03

PHYSICS 1V03 - INTRODUCTORY PHYSICS

- first course in university physics, taught using examples and applications from many areas of science. Topics include the concepts of force and energy, mechanics, waves and fluids.

Online, three hours (online lectures, online tutorials), online lab (two hours) every other week; one term
Prerequisite(s): One of Grade 12 Calculus and Vectors U, MATH 1F03 Co-requisite(s): WHMIS 1A00 if not already completed, must be completed prior to the first lab.
Antirequisite(s): PHYSICS 1A03, PHYSICS 1C03
Not open to students with credit or registration in ISCI 1A24 A/B or PHYSICS 1D03.
It is recommended that students in Chemical and Physical Sciences Gateway complete PHYSICS 1C03.

PHYSICS 2B03 - ELECTRICITY AND MAGNETISM I

Electric and magnetic fields, electric potential, Maxwell's equations, D.C. circuits.
Three lectures, one lab (three hours) every other week; one term
Prerequisite(s): One of ARTSSCI 2D06 A/B, ISCI 1A24 A/B, PHYSICS 1A03, 1C03, 1D03, 1V03; and one of ARTSSCI 1D06 A/B, MATH 1A03, 1LS3, 1X03, 1ZA3 (or ISCI 1A24 A/B); and credit or registration in one of ARTSSCI 1D06 A/B, MATH 1AA3, 1LT3, 1XX3, 1ZB3 (or ISCI 1A24 A/B)
Antirequisite(s): MEDPHYS 2B03, PHYSICS 1E03

PHYSICS 2BB3 - ELECTRICITY AND MAGNETISM II

Differential form of Maxwells equations, A.C. circuits.
Three lectures; one term
Prerequisite(s): PHYSICS 2B03; one of MATH 2MC3, MATH 2X03, MATH 2XA3 or ISCI 2A18 A/B; and credit or registration in MATH 2C03

PHYSICS 2C03 - MODERN PHYSICS

Special relativity. Introductory quantum physics.
Three lectures; one term
Prerequisite(s): One of ARTSSCI 2D06 A/B, LIFESCI 1D03, MEDPHYS 1A03 (or BIOPHYS 1S03), PHYSICS 1AA3, 1CC3, 1E03; and one of ARTSSCI 1D06 A/B, MATH 1AA3, 1LT3, 1XX3, 1ZB3; or ISCI 1A24 A/B; or registration in an Honours Medical and Biological Physics program
Antirequisite(s): ENGPHYS 2QM3

PHYSICS 2E03 - MECHANICS

Dynamics of a particle, simple harmonic motion and resonance, central field problem, many-particle systems, non-inertial systems, generalized coordinates and Lagrange's equations.
Three lectures; one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1D03, 1V03, ARTSSCI 2D06 A/B, ISCI 1A24 A/B; and credit or registration in one of MATH 2MC3, 2X03, 2XA3, 2ZZ3 or ISCI 2A18 A/B; and credit or registration in MATH 2C03 or 2Z03
Antirequisite(s): ENGPHYS 2CD4

PHYSICS 2P03 - INTRODUCTORY LABORATORY

An introduction to common techniques in experimental physics, data analysis and error analysis.
Two lectures or tutorials (two hours), one lab every other week (three hours); one term
Prerequisite(s): One of PHYSICS 1A03, 1C03, 1V03 and credit or registration in MEDPHYS 1A03 (or BIOPHYS 1S03), PHYSICS 1AA3, 1CC3, LIFESCI 1D03 or registration in ARTSSCI 2D06 A/B or ISCI 1A24 A/B
Antirequisite(s): PHYSICS 3H03

PHYSICS 2VG3 - VIDEO GAME PHYSICS

- physics engine is computer code for moving objects in modern 3D games and VR simulations, relying on concepts from classical mechanics including kinematics, forces and rotation. This course explores video game physics and shows how to implement a physics engine in Python code. Topics include 3D graphics, rigid body dynamics, collisions, integrators, constraints and real time solvers for games versus accurate physics simulations. Students will require a laptop suitable for in-class work and code development.

Three lectures, one lab, one term
Prerequisite(s): One of PHYSICS 1AA3, 1CC3 or 1D03, ARTSSCI 2D06 A/B or ISCI 1A24 A/B; and one of MATH 1MP3, COMPSCI 1MD3, PNB 2A03, DATASCI 2G03 or equivalent courses, with permission of the instructor
Antirequisite(s): DATASCI 3VG3
May be offered in alternate years.
This course is administered by the Department of Physics and Astronomy.

PHYSICS 3A03 - RELATIVITY, GRAVITY AND THE GEOMETRY OF SPACETIME

An introduction to general relativity. Topics include: special relativity and Minkowski spacetime, introductory tensor analysis, gravity as curvature, Einstein Field equations, black holes and cosmology.
Three lectures; one term
Prerequisite(s): PHYSICS 2C03 or ENGPHYS 3SP3; and credit or registration in MATH 3C03 or registration in level III or above of the Honours Mathematics

and Physics (B.Sc.) program
Alternates with PHYSICS 3C03.

PHYSICS 3C03 - ANALYTICAL MECHANICS

Topics include: Lagrangian and Hamiltonian dynamics; coupled oscillators and normal modes; canonical transformations and action-angle variables; integrable systems; perturbation theory; motion of rigid bodies; chaos.
Three lectures; one term
Prerequisite(s): One of PHYSICS 2E03 or ENGPHYS 2CD4; and credit or registration in MATH 3C03 or registration in level III or above of the Honours Mathematics and Physics (B.Sc.) program
Alternates with PHYSICS 3A03.

PHYSICS 3D03 - INQUIRY IN PHYSICS

Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; one term
Prerequisite(s): Registration in an Honours Physics (B.Sc.) program, Honours Mathematics and Physics (B.Sc.) or Chemical and Physical Sciences (B.Sc.)
Antirequisite(s): PHYSICS 3DA1, PHYSICS 3DB2
Not open to students with credit or registration in ISCI 3A12 A/B

PHYSICS 3ET3 A/B S - PHYSICS TEACHING PLACEMENT

This placement course allows students to explore teaching as a profession, work on scientific communication and integrate academics with a community, volunteer or professional experience.
Students must complete 60 hours of placement work involving teaching, assisting a teacher and/or tutoring. In addition, students will complete an academic component.
May be completed over one or two terms
Prerequisite(s): SCIENCE 2C00; and registration in Level III or above of any Honours program in Physics or the Honours Mathematics and Physics (B.Sc.) program; and permission of the Chair of the Department

PHYSICS 3K03 - THERMODYNAMICS AND STATISTICAL MECHANICS

The laws of thermodynamics, with emphasis on the mathematical structure of the theory; classical and quantum statistical mechanics.
Three lectures; one term
Prerequisite(s): MATH 2C03 and one of ISCI 2A18 A/B, MATH 2MC3, 2X03, 2XA3

PHYSICS 3MM3 - QUANTUM MECHANICS I

Quantum physics in 1D and 3D systems, with applications including the hydrogen atom.
Three lectures; one term
Prerequisite(s): Credit or registration in MATH 3C03, and one of ENGPHYS 2QM3, PHYSICS 2C03; or registration in Honours Mathematics and Physics

PHYSICS 3N04 - PHYSICAL OPTICS

Geometrical optics, electromagnetic waves, interference of light, Fraunhofer and Fresnel diffraction, polarized light, Fresnel equations, optical properties of materials, introduction to optical systems and precision optics experiments, selected topics in modern optics.
Three lectures, one tutorial, one lab (three hours each, three per Term); one term
Prerequisite(s): One of ISCI 2A18 A/B, MATH 2MC3, 2X03, 2XA3, 2ZZ3; and one of MATH 2C03, 2Z03; and one of PHYSICS 2B03 or ENGPHYS 2A04
Cross-list(s): ENGPHYS 3E04
Antirequisite(s): ENGPHYS 3E03, PHYSICS 3N03
This course is administered by the Department of Engineering Physics.

PHYSICS 3P03 - ADVANCED LABORATORY

Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics. As part of this course, students will become familiar with computing for instrument interfacing, data visualization and data analysis.
One lab (three hours); one term
Prerequisite(s): PHYSICS 2P03; and MEDPHYS 2B03 or PHYSICS 2B03; and credit or registration in one of ENGPHYS 2QM3, PHYSICS 2C03
Antirequisite(s): PHYSICS 3H03, 3H04, 3HC1

PHYSICS 3QI3 - INTRODUCTION TO QUANTUM INFORMATION

An introduction to basic notions of quantum information and information processing. Topics may include the Einstein-Podolsky-Rosen (EPR) paradox, Bells inequalities, the measurement problem, quantum entanglement, quantum teleportation, quantum cryptography, and quantum computing.
Three lectures; one term
Prerequisite(s): One of MATH 1AA3, 1LT3, 1XX3, 1ZB3, ISCI 1A24 A/B, ARTSSCI 1D06 A/B; and either MATH 1B03 or 1ZC3

PHYSICS 4B03 - ELECTROMAGNETIC THEORY

Potential theory, electrostatics and magnetostatics in matter, electrodynamics, electromagnetic waves and wave guides, radiation.
Two lectures; one term
Prerequisite(s): MATH 3D03 and either PHYSICS 2BB3 or both ENGPHYS 2A04 and 2E04; or registration in Honours Mathematics and Physics or Honours Physics Co-op

PHYSICS 4E03 - PARTICLE AND NUCLEAR PHYSICS

An introduction to modern particle and nuclear physics. Topics include: radioactive decay, classical and
quantum scattering, structure of the nucleus, structure of nucleons, antiparticles, quarks and leptons, the Standard Model.
Three lectures; one term
Prerequisite(s): PHYSICS 3MM3
Alternates with PHYSICS 4Q03.

PHYSICS 4F03 - QUANTUM MECHANICS II

Advanced quantum mechanics with applications such as scattering, perturbation theory and the variational method.
Three lectures; one term
Prerequisite(s): PHYSICS 3MM3 and credit or registration in MATH 3D03; or registration in Honours Mathematics and Physics (B.Sc.)

PHYSICS 4G03 - COMPUTATIONAL PHYSICS

- course using computers to solve selected problems in physics. Students are required to develop working programs for solving problems such as: Monte Carlo simulations, The Schrodinger equation, molecular dynamics, differential equations among others.

Three lectures; one term
Prerequisite(s): DATASCI 2G03 (or PHYSICS 2G03); and PHYSICS 3MM3 or ENGPHYS 2QM3; or registration in Honours Physics Co-op (B.Sc.) or Honours Medical and Biological Physics (B.Sc.); or permission of the instructor

PHYSICS 4IS3 - INDEPENDENT STUDY

Independent study to be carried out under the supervision of a faculty member. Students will typically conduct a research project or a major review paper on a topic of their choice in the field of Physics.
8-10 hours per week (scheduling to be arranged with supervisor); One term
Prerequisite(s): Permission of the Chair of the Department
This course may be taken twice, but the independent studies must be on two different topics.

PHYSICS 4K03 - PHYSICS OF QUANTUM MATTER

Crystal structure and binding; lattice vibrations; electron energy bands; metals and semiconductors; magnetism.
Three lectures; one term
Prerequisite(s): PHYSICS 3MM3
May be offered in alternate years.

PHYSICS 4L03 A/B - LITERATURE REVIEW

- directed reading and review of the literature in any field of physics or astronomy, supervised by a member of the Department of Physics & Astronomy, or any other suitable supervisor approved by the Department. More information and the application form can be found at https://physics.mcmaster.ca/undergraduate-studies/current-students/upper-year-research-projects.html. Students are responsible for securing a suitable supervisor and are required to submit an application 30 days prior to the start of Fall Term (see the Sessional Dates section of this Calendar).Normally, a report and poster presentation will be required.

Normally students will spend 4-5 hours per week (scheduling to be arranged with supervisor)
Occasional tutorial (two hours); two terms
Prerequisite(s): Registration in Level IV of Honours Mathematics and Physics or any Honours Physics program; and permission of the Chair of the Department
Antirequisite(s): PHYSICS 4LQ3
Not open to students with credit or registration in ISCI 4A12 A/B.

PHYSICS 4LQ3 A/B - LITERATURE REVIEW

- directed reading and review of the literature in quantum physics, supervised by a member of the Department of Physics & Astronomy, or any other suitable supervisor approved by the Department. More information and the application form can be found at https://physics.mcmaster.ca/undergraduate-studies/current-students/upper-year-research-projects.html. Students are responsible for securing a suitable supervisor and are required to submit an application 30 days prior to the start of Fall Term (see the Sessional Dates section of this Calendar). Normally, a report and poster presentation will be required.

Normally students will spend 4-5 hours per week (scheduling to be arranged with supervisor)
Occasional tutorial (two hours); two terms
Prerequisite(s): Registration in Level IV of Honours Mathematics and Physics (B.Sc.) or any Honours Physics program; and permission of the Chair of the Department
Antirequisite: PHYSICS 4L03
Not open to students with credit or registration in ISCI 4A12 A/B.

PHYSICS 4P06 A/B - SENIOR RESEARCH PROJECT

An experimental or theoretical project supervised by a member of the Department of Physics & Astronomy, or any other suitable supervisor approved by the Department. More information and the application form can be found at https://physics.mcmaster.ca/undergraduate-studies/current-students/upper-year-research-projects.html. Students are responsible for securing a suitable supervisor and are required to submit an application prior to the start of Fall Term (see the Sessional Dates section of this Calendar).Normally, a report, oral and poster presentation will be required.
Normally students will spend 8-10 hours per week (scheduling to be arranged with supervisor)
One occasional tutorial (two hours); two terms
Prerequisite(s): Registration in Level IV of any Honours Physics or the Honours Mathematics and Physics program; and a GPA of at least 9.0; and permission of the Chair of the Department **Antirequisite(s):** BIOPHYS 4P06 A/B, MEDPHYS 4Y06 A/B, MATH 4P06 A/B S, PHYSICS 4PQ6 A/B, STATS 4T06 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

PHYSICS 4PQ6 A/B - SENIOR RESEARCH PROJECT - QUANTUM

An experimental or theoretical project in a topic related to Quantum Physics supervised by a member of the Department of Physics & Astronomy, or any other suitable supervisor approved by the Department. More information and the application form can be found at https://physics.mcmaster.ca/undergraduate-studies/current-students/upper-year-research-projects.html. Students are responsible for securing a suitable supervisor and are required to submit an application prior to the start of Fall Term (see the Sessional Dates section of this Calendar). Normally, a report, oral and poster presentation will be required.
Normally students will spend 8-10 hours per week (scheduling to be arranged with supervisor)
One occasional tutorial (two hours); two terms
Prerequisite(s): Registration in Level IV of any Honours Physics or the Honours Mathematics and Physics (B.Sc.) program; and a GPA of at least 9.0; and permission of the Chair of the Department
Antirequisite(s): BIOPHYS 4P06 A/B, MATH 4P06 A/B S, MEDPHYS 4Y06 A/B, PHYSICS 4P06, STATS 4T06 A/B
Not open to students with credit or registration in ISCI 4A12 A/B.

PHYSICS 4Q03 - INTRODUCTION TO QUANTUM FIELD THEORY

An introduction to quantum field theory. Topics include: creation and annihilation operators, many-particle systems, Bose-Einstein condensation, fields and forces, relativistic quantum field theory, spin-statistics connection, antiparticles.
Three hours (lectures); one term
Prerequisite(s): PHYSICS 3MM3
Alternates with PHYSICS 4E03.

PHYSICS 5GT3 - GRADUATE TOPICS IN PHYSICS

This course allows an undergraduate student to take a graduate-level course (3 units) offered by the Department of Physics and Astronomy. Refer to the *Graduate Calendar* for course information.
Prerequisite(s): Permission of the Department of Physics and Astronomy
Undergraduate students will be required to meet all academic obligations of the graduate-level course offering.
PHYSICS 5GT3 may be repeated, if on a different graduate level topic.

Psychology, Neuroscience & Behaviour

Courses in PNB are administered by the Department of Psychology, Neuroscience & Behaviour.
Psychology Building, Room 102, ext. 23000
http://www.science.mcmaster.ca/pnb/

Department Notes

1. The PNB course designation stands for Psychology, Neuroscience & Behaviour. PNB courses require registration in a program in the Department of Psychology, Neuroscience & Behaviour. PSYCH courses are open to all students who meet the stated prerequisites.
2. The University reserves the right to limit enrolment in any course. Where priorities have to be established, first consideration will be given to students registered in an Honours program in the Department of Psychology, Neuroscience & Behaviour.
3. Students in any Psychology, Neuroscience & Behaviour or Combined Psychology, Neuroscience & Behaviour program are eligible to complete a library study, independent research project, or thesis. Students wishing to complete undergraduate research are expected to (a) find their own research supervisor and (b) complete the appropriate application/permission form and submit it before the deadline specified on the Psychology, Neuroscience & Behaviour website (https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/).

Courses

If no prerequisite is listed, the course is open.
See also courses in *PSYCH*.

PNB 2A03 - PYTHON FOR PNB

Students will gain introductory experience programming in Python. Topics will include basic programming skills, data manipulation and analysis, plotting, and automating routine tasks. Students will learn these topics in the context of solving everyday problems experimental psychologists face.
Lectures (two hours), lab (one hour), tutorial (one hour); one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program
Antirequisite(s): MATH 1MP3

PNB 2Q03 A/B S - INTRODUCTORY INDEPENDENT RESEARCH

Independent research practicum that provides students the opportunity to participate in research projects in a PNB laboratory.
By application through PNB 2XT0 in December of preceding Fall Term.
Prerequisite(s): PNB 2XA3, 2XB3, 2XC3 with an average of at least 9.0; and permission of the course coordinator

PNB 2XA3 - HUMAN PERCEPTION & COGNITION

Humans gain knowledge by sensing, perceiving, evaluating and acting upon the world around us. This course explores psychological theories and measurements of these processes.
Three lectures, one tutorial; one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or Honours Neuroscience program or Honours Music (Music Cognition) program
Antirequisite(s): PSYCH 2H03

PNB 2XB3 - NEUROANATOMY & NEUROPHYSIOLOGY

This course describes the physiology of the neuron, communication between neurons, and the neural circuits that underlie touch, vision, audition, vestibular sensation, and movement.
Three lectures; one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or Honours Neuroscience program
Not open to students with credit or registration in ISCI 2A18 A/B

PNB 2XC3 - ANIMAL BEHAVIOUR & EVOLUTION

This course integrates evolutionary analyses with in-depth discussions of genetic and cognitive mechanisms that generate major classes of behaviour shared by most animals, including humans.
Three lectures; one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or Honours Neuroscience program
Antirequisite(s): LIFESCI 2D03

PNB 2XD3 - INTEGRATIVE PNB THROUGH SCIENTIFIC WRITING

The course promotes integration across themes within Psychology, Neuroscience & Behaviour and teaches fundamental writing skills for the sciences. Students will be exposed to multiple topic areas and multiple faculty members.
Three lectures, one tutorial; one term
Prerequisite(s): PNB 2XA3 (or PSYCH 2H03), PNB 2XB3 (or one of ISCI 2A18 A/B, LIFESCI 2CC3), and PNB 2XC3 (or LIFESCI 2D03); and registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or registration in Honours Neuroscience program

PNB 2XE3 - DESCRIPTIVE STATISTICS AND RESEARCH METHODS

Students will learn research methods related to experimental design and to visualize and statistically describe data using various software packages.
Three lectures, one computer lab (two hours); one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or Honours Neuroscience program.
Not open to students with credit or registration in ISCI 2A18 A/B or STATS 2B03.

PNB 2XF3 - PERSPECTIVES IN PNB

Students will read and discuss scientific articles, and attend research seminars delivered by investigators within the Department of Psychology, Neuroscience & Behaviour (Faculty of Science).
Two lectures or colloquia, one tutorial; one term
Prerequisite(s): Registration in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program

PNB 2XT0 - PNB TUTORIAL

Tutorial supplementing the Honours programs offered through the Department of Psychology, Neuroscience & Behaviour. This tutorial is a prerequisite for PNB 3RM3 and therefore must be completed prior to enrollment in Level III.
This tutorial is evaluated on a Pass/Fail basis.
One hour (tutorial); one term
Prerequisite(s): Registration in Level II or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program

PNB 3A03 - NEUROIMAGING

This course explores the use of neuroimaging to study brain structure and function in the fields of psychology and neuroscience. It will survey common neuroimaging modalities including magnetic resonance imaging (MRI), positron emission tomography (PET), and light microscopy. Students will become fluent in image processing techniques through weekly programming exercises.
Lectures (three hours, weekly); one term
Prerequisite(s): Registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program, or Level III or above of the Honours Neuroscience program.

PNB 3EE3 - PERCEPTION LABORATORY

Students will study human perception from an applied, experimental perspective. They will learn how to design experiments to probe the boundaries of human perception, how to visualize and analyze data, and how to communicate research findings orally and in writing. Topics include: psychophysics, perceptual illusions, interactions between perception, attention and motor behaviour, experimental design, statistical modelling, computer programming, eye-tracking, and collaborative writing.
One tutorial (one hour), one lab (three hours); one term
Prerequisite(s): Credit or registration in PNB 3XE3 and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or ISCI 2A18 A/B

PNB 3EV3 - EVOLUTIONARY PSYCHOLOGY LAB

Students will be trained in the process of designing experiments, collecting data, performing statistical analyses, and reporting on an experiment addressing an aspect of evolutionary psychology.
Seminar and lab (three hours); one term
Prerequisite(s): Credit or registration in PNB 3XE3 and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or ISCI 2A18 A/B

PNB 3HP3 - HISTORY OF PSYCHOLOGY

An account of the various schools of thought leading up to contemporary psychology including a history of how philosophers and physiologists influenced the earliest roots of Psychology as a science.
Three lectures; one term
Prerequisite(s): Registration in Level III or IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program

PNB 3L03 - NEURODEVELOPMENT & PLASTICITY LAB

Seminars and laboratory experience in current problems in neurobiology.
One lab (three hours); one term
Prerequisite(s): Credit or registration in PNB 3XE3; and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or ISCI 2A18 A/B; or registration in Level III or above of Honours Neuroscience program

PNB 3MM3 - COGNITIVE NEUROSCIENCE LAB

Working in groups, students will learn to conduct experiments in the field of cognitive neuroscience. Issues related to research design and scientific communication will be emphasized.
Three hours (labs), two hours (tutorial); one term
Prerequisite(s): Credit or registration in PNB 3XE3 and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or ISCI 2A18 A/B

PNB 3Q03 A/B S - INDEPENDENT LIBRARY STUDY

- library project under the supervision of a faculty member that may extend over both terms. Students are expected to find their own research supervisor and are required to submit an application/ permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week over one term or 4-5 hours per week over two terms (scheduling arranged by supervisor)
Prerequisite(s): Registration in Level III or IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or B.A. Psychology program. Students are expected to have a cumulative GPA of at least 8.0.
If PNB 3Q03 A/B S is taken concurrently with PNB 4D06 A/B, 4D09 A/B or 4DD6 A/B, a different faculty member must supervise each course.
Permission of the Department is required.

PNB 3QM3 A/B S - INDEPENDENT RESEARCH IN MENTAL HEALTH

- research project within the mental health field under the supervision of a faculty member within the mental health community. Students are expected to find their own research supervisor and are required to submit an application/permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week (scheduling arranged by supervisor); one or two term(s)
Prerequisite(s): Registration in Level III or IV of the Honours B.A. or Honours B.Sc. Psychology, Neuroscience & Behaviour (Mental Health Specialization) program. Students are expected to have a cumulative GPA of at least 8.0.
Antirequisite(s): PNB 3QM6 A/B, PNB 3QQ3 A/B S
PNB 3QM3 A/B S may be repeated once if on a different topic with permission of the course coordinator.
Permission of the Department is required.

PNB 3QQ3 A/B S - INTERMEDIATE INDEPENDENT RESEARCH

- laboratory project under the supervision of a faculty member that may extend over both terms. Students are expected to find their own research supervisor and are required to submit an application/ permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week over one term or 4-5 hours per week over two terms (scheduling arranged by supervisor)
Prerequisite(s): Registration in Level III or IV of a program in the Department of Psychology, Neuroscience & Behaviour program or B.A. Psychology program. Students are expected to have a cumulative GPA of at least 8.0.
If PNB 3QQ3 is taken concurrently with PNB 4D06 A/B, 4D09 A/B or 4DD6 A/B, a different faculty member must supervise each course.
Permission of the Department is required.

PNB 3S03 - ANIMAL BEHAVIOUR LAB

Laboratory and field studies involving a wide variety of species.
One lab (three hours); one term
Prerequisite(s): Credit or registration in PNB 3XE3 and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; or ISCI 2A18 A/B

PNB 3SL3 A/B - SERVICE LEARNING IN PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR

Students develop their academic and interpersonal skills, as well as a sense of civic awareness and responsibility, by collaborating with community partners. Students may co-create and deliver outreach or education programs, conduct research in the community, or develop a new community resource, for example. Applications will be available at the beginning of March on the Psychology, Neuroscience & Behaviour (PNB) website. Applications must be submitted by April 1 of the preceding academic year. Successful students will be notified by May 30.
Lecture (one hour); additional in-person contact time with community partner
Prerequisite(s): Registration in Level III or above of any Honours Psychology, Neuroscience & Behaviour or Combined Honours Psychology, Neuroscience & Behaviour program, or the Honours Neuroscience program, and permission of the supervising faculty member
First offered in 2026-2027.

PNB 3V03 - HUMAN MEMORY LAB

Students will conduct a series of experiments aimed at contemporary issues in human memory and cognition. Understanding of background literature, experimental design, links between research questions and data analysis, and scientific communication will be emphasized.
One lab (three hours); one term
Prerequisite(s): PSYCH 3VV3; and credit or registration in PNB 3XE3; and registration in Level III or above of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program

PNB 3XD3 A/B - INTEGRATIVE MENTOR: LEARNING TO WRITE THROUGH STUDENT EDITING

This course trains Level III and IV students to mentor Level II students who are taking the PNB 2XD3 writing course. The course runs the entire school year (September-April). In the Fall Term, students discuss writing skills and mentoring skills with the course instructor. Students also complete writing assignments and develop an editing guild to support their Winter Term work with the PNB 2XD3 students. In the Winter Term, the students make a short presentation about an aspect of writing that caused them difficulty. They also meet with PNB 2XD3 students 3-4 hours per week to support those students with their writing assignments.
One lecture (one hour), one tutorial (one hour); two terms
Prerequisite(s): A grade of at least A- in PNB 2XD3

PNB 3XE3 - INFERENTIAL STATISTICS AND RESEARCH METHODS

Advanced topics include general linear model; multiple regression; analysis of variance; repeated measures; data transformations; factor analysis.
Three lectures, one computer lab (two hours); one term
Prerequisite(s): One of ARTSSCI 2R03, PNB 2XE3 or credit or registration in ISCI 2A18 A/B; or registration in Level III or above of Honours Neuroscience program
Not open to students with credit or registration in STATS 2MB3.

PNB 4A03 - ASSESSMENT IN CHILDREN

Examines intellectual, educational, neuropsychological and clinical standardized assessment measures and explores the intricacies of interviewing, test selection, scoring, interpretation and report writing.
Three lectures; one term
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program; and PSYCH 2AP3, 3B03, 3MT3. Preference will be given to students registered in Honours Psychology, Neuroscience & Behaviour (Mental Health Specialization).

PNB 4D06 A/B - SENIOR THESIS

Students conduct an individual research project under the supervision of a faculty member. Students are expected to find their own thesis supervisor and to submit the appropriate permission form to the Department of Psychology, Neuroscience & Behaviour. For information and guidelines regarding this course, refer to the department web site at https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ or contact the Course Administrator (pnb@mcmaster.ca). If any of PNB 3Q03 A/B S, 3QQ3 A/B S, 4Q03 A/B S, 4QQ3 A/B S, or 4QQ6 A/B are taken concurrently with PNB 4D06 A/B, a different faculty member must supervise each course.
One lecture, 8-10 hours of research per week (scheduling arranged by supervisor); two terms
Prerequisites(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program with a Grade Point Average of at least 8.5, and a minimum grade of 7.0 in PNB 3XE3; and one of MUSICCOG 3QQ3 A/B S, NEUROSCI 3MN3, PNB 3EE3, 3EV3, 3L03, 3MM3, 3QM3 A/B S, 3QQ3 A/B S, 3S03, 3V03
Prerequisite(s) (Effective 2026-2027): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program with a Grade Point Average of at least 8.5, and with a minimum grade of 7.0 in PNB 3XE3; and one of NEUROSCI 3MN3, PNB 3EE3, 3EV3, 3L03, 3MM3, 3S03, 3V03
Antirequisite(s): PNB 4D09 A/B, 4DD6 A/B
Cannot be taken concurrently with ISCI 4A12 A/B or PNB 4SC6 A/B
Permission of the Department is required.

PNB 4D09 A/B - SENIOR HONOURS THESIS

Students conduct an individual research project under the supervision of a faculty member. Students are expected to find their own thesis supervisor and to submit the appropriate permission form to the Department of Psychology, Neuroscience & Behaviour. For information and guidelines regarding this course, refer to the department web site at https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ or contact the Course Administrator (pnb@mcmaster.ca). If any of PNB 3Q03 A/B S, 3QM3 A/B S, 3QQ3 A/B S, 4Q03 A/B S, PNB 4QQ3 A/B S, are taken concurrently with PNB 4D09 A/B, a different faculty member must supervise each course.
One lecture, 12-15 hours of research per week (scheduling arranged by supervisor); two terms
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program with a Grade Point Average of at least 8.5, and with a minimum grade of 7 in PNB 3XE3; and one of MUSICCOG 3QQ3 A/B S, NEUROSCI 3MN3, PNB 3EE3, 3EV3, 3L03, 3MM3, 3QM3 A/B S, 3QQ3 A/B S, 3S03, 3V03;
Prerequisite(s) (Effective 2026-2027): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program with a Grade Point Average of at least 8.5, and with a minimum grade of 7.0 in PNB 3XE3; and one of NEUROSCI 3MN3, PNB 3EE3, 3EV3, 3L03, 3MM3, 3S03, 3V03;
Antirequisite(s): BIOLOGY 4C09 A/B, 4C12 A/B S, 4F06 A/B S, NEUROSCI 4L09 A/B, 4L12 A/B, PNB 4D06 A/B, 4DD6 A/B, 4QQ6 A/B
Cannot be taken concurrently with ISCI 4A12 A/B or PNB 4SC6 A/B.
Permission of the Department is required.

PNB 4E03 - TOPICS IN SOCIAL DIVERSITY

Students will be exposed to cognitive neuroscience and psychological research on social diversity including topics such as social identity, intergroup bias,

empathy, and dehumanization.
Three lectures; one term
Prerequisite(s): Registration in Level III or IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or in Level III or IV Honours Neuroscience

PNB 4J03 - INQUIRY IN PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR

This course provides students with an opportunity to develop skills for investigations in selected areas of psychology, neuroscience and behaviour.
Three lectures; one term
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program
Not open to students with credit or registration in ISCI 4A12 A/B.

PNB 4Q03 A/B S - SENIOR INDEPENDENT LIBRARY STUDY

- library project under the supervision of a faculty member that may extend over both terms.Students are expected to find their own research supervisor and are required to submit an application/permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week over one term or 4-5 hours per week over two terms (scheduling arranged by supervisor)
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program. Students are expected to have a cumulative GPA of at least 8.0.
If PNB 4Q03 A/B S is taken concurrently with PNB 4D06 A/B, 4D09 A/B, 4QQ6 A/B, a different faculty member must supervise each course.
Permission of the Department is required.

PNB 4QQ3 A/B S - SENIOR INDEPENDENT RESEARCH

- laboratory project under the supervision of a faculty member that may extend over both terms. Students are expected to find their own research supervisor and are required to submit an application/permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week over one term or 4-5 hours per week over two terms (scheduling arranged by supervisor)
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program. Students are expected to have a cumulative GPA of at least 8.0.
Antirequisite(s): PNB 4QQ6 A/B
If PNB 4QQ3 A/B S is taken concurrently with PNB 4D06 A/B, 4D09 A/B, 4DD6 A/B, a different faculty member must supervise each course.
PNB 4QQ3 A/B S may be repeated once if on a different topic with permission of the course coordinator.
Permission of the Department is required.

PNB 4QQ6 A/B - SENIOR INDEPENDENT RESEARCH

- laboratory project under the supervision of a faculty member that extends over both terms. Students are expected to find their own research supervisor and are required to submit an application/permission form to the Department of Psychology, Neuroscience & Behaviour at least 30 days prior to the start of term. See https://pnb.mcmaster.ca/undergraduate/experiential-opportunities/research-2/ for more details.

8-10 hours per week over one term or 4-5 hours per week over two terms (scheduling arranged by supervisor)
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program. Students are expected to have a cumulative GPA of at least 8.0.
Antirequisite(s): PNB 4D09 A/B, 4QQ3 A/B S
If PNB 4QQ6 A/B is taken concurrently with PNB 4D06 A/B, a different faculty member must supervise each course.
Permission of the Department is required.

PNB 4SC6 A/B - SCIENCE COMMUNICATION IN THE BEHAVIOURAL SCIENCES

Students will learn critical writing skills to translate basic research for popular media outlets. Examples of bad journalism and inaccurate reporting will be highlighted.
Two lectures, one tutorial; two terms
Prerequisite(s): Registration in Level IV of an Honours or Combined Honours Psychology, Neuroscience & Behaviour program or Level IV Honours Neuroscience; program
Antirequisite(s): HUMBEHV 4SC6 A/B
Cannot be taken concurrently with BIOLOGY 4C09 A/B, 4C12 A/B S, 4F06 A/B S, ISCI 4A12 A/B, NEUROSCI 4L09 A/B, 4L12 A/B, PNB 4D06 A/B, 4D09 A/B.

Political Science

Courses in Political Science are administered by the Department of Political Science.
Kenneth Taylor Hall, Room 527, ext. 24741
https://politicalscience.mcmaster.ca/

Department Notes

1. The Department of Political Science offers courses in the fields of Canadian Politics, Comparative Politics, International Relations, Political Theory and Public Policy, as well as courses that are not field specific. The Department does not require students to concentrate in any field of study. (Please see Department of Political Science in the Faculty of Social Sciences section of this Calendar for specific program requirements.) However, students should note that prerequisites for upper year courses normally come from the specific field of which those courses are part. In some instances, prerequisites call simply for prior coursework in a particular field, in which case students may consult the lists below to determine which courses satisfy these requirements.
2. Not every Political Science course listed in this Calendar is offered every year. Students are advised to consult the Master Timetable published by the Office of the Registrar or contact the Department after April 1st for the list of courses that will be offered in the following academic year.
3. All students are encouraged to seek advice from members of the Department in developing a program of study. All Honours students are strongly advised to discuss their program with an undergraduate advisor to ensure that it meets Departmental requirements.
4. POLSCI 2NN3 and POLSCI 3NN3 or POLSCI 3N06 A/B are required for students in Honours Political Science programs.
5. POLSCI 2006 A/B is required for students enrolled in Honours Political Science programs and is recommended for students in the B.A. program.
6. Students should be alerted to those Level II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
7. Some Level III courses do not have course prerequisites. However, students without related Level II courses should contact one of the Department's undergraduate advisors or the course instructor to determine whether they

have the appropriate academic background for any specific Level III course.

8. Political Science Honours and Combined Honours students are encouraged but not required to take one or more of the Level III Honours Issues courses (POLSCI 3B03, 3H03 and 3J03). The topics of the courses will be described on the Department's website in advance of the date on which registration for them begins. Normally they will correspond to the research interests of the permanent faculty members (if available) who will teach them.

Students are responsible for ensuring that course prerequisites are fulfilled.

I. **Canadian Politics**

POLSCI 2C03 2D03, 2K03, 2F03, 2LW3, 2PF3, 2PP3, 2U03, 3BB3, 3C03, 3CL3, 3CS3, 3EL3, 3FG3, 3GG3, 3IP3, 3J03, 3JJ3, 3K03, 3OP3, 3PA3, 3RF3, 3Z03, 4CA3, 4CF3, 4ED6 A/B, 4EM3, 4JS3, 4LC3, 4O06 A/B, 4PO3, 4RR3, 4UP3

II. **Comparative Politics**

POLSCI 2ID3, 2M03, 2PF3, 2PP3, 2U03, 2US3, 2XX3, 3BB3, 3CS3, 3EE3, 3EL3, 3G03, 3GA3, 3GG3, 3H03, 3I03, 3JR3, 3K03, 3KK3, 3LC3, 3LL3, 3OP3, 3PA3, 3PG3, 3V03, 3VV3, 3Y03, 4AA6 A/B, 4D06 A/B, 4ED6 A/B, 4EF3, 4EM3, 4KC3, 4LA3, 4PA3, 4PO3, 4Q06 A/B, 4RR3, 4SS3, 4UF3, 4UP3, 4WS3, 4YR3

III. **International Relations**

POLSCI 2I03, 2ID3, 2J03, 2XX3, 3B03, 3EE3, 3GA3, 3GC3, 3JR3, 3K03, 3KK3, 3LB3, 3PA3, 3PG3, 3Q03, 3Y03, 4D06 A/B, 4DV3, 4EF3, 4GC3, 4GG3, 4HR3, 4KB3, 4NN3, 4PB3, 4PE3, 4QQ3, 4Y03, 4YR3

IV. **Political Theory**

POLSCI 2O06 A/B, 3CC3, 3CD3, 3LA3, 3PB3, 3PG3, 3VV3, 4DV3, 4FF3, 4HH3, 4OL3, 4PB3, 4RT3, 4Y03

V. **Public Policy**

POLSCI 2C03, 2PP3, 2U03, 2EM3, 2LW3, 3B03, 3CS3, 3GC3, 3IP3, 3J03, 3LL3, 3LP3, 3PA3, 3Z03, 4CF3, 4ED6 A/B, 4EF3, 4EM3, 4G06 A/B, 4JS3, 4O06 A/B, 4PO3, 4LC3, 4RR3, 4SS3, 4WS3

The following courses while satisfying the requirements of the program are not specific to any field of study:

POLSCI 1AA3, 1AB3, 2NN3, 2MN3, 3NN3, 3PR3, 3UU3, 3WP3, 4AL3, 4Z06 A/B, 4ZZ3, 4ZZ6 A/B

Courses

If no prerequisite is listed, the course is open.

POLSCI 1AA3 - GOVERNMENT, POLITICS, AND POWER

What forces shape the political process? Towards what ends? In whose interests? In this course we will investigate these questions by focusing on the ideas, institutions, and structures that have shaped the contemporary political landscape.

Lectures and tutorials (three hours); In-class or online; one term

Antirequisite(s): POLSCI 1G06 A/B

POLSCI 1AB3 - POLITICS AND POWER IN A GLOBALIZING WORLD

This course explores theories of conflict/cooperation, cases of international action/inaction, and the formal and informal rules written by global political actors. We will also ask questions about why states resemble or differ from one another.

Lectures and tutorials (three hours); In-class or online; one term

Antirequisite(s): POLSCI 1G06 A/B

POLSCI 2C03 - FORCE AND FEAR, CRIME AND PUNISHMENT

This course examines the use of the criminal justice system, other coercive policies and the use of actual force by governments in Canada and other democratic states and the impact it has on citizens.

Lectures and tutorials (three hours); one term

POLSCI 2D03 - CANADIAN DEMOCRACY

An introduction to institutions delimiting the practice of citizenship in Canada and of the political values they embody.

Three hours (lectures and tutorials); one term

POLSCI 2F03 - POLITICS, POWER AND INFLUENCE IN CANADA

This course analyzes who gets represented and whose interests get translated into public policies in Canada, including issues of inequality, immigration and citizenship, and representation by parties, interest groups and social movements.

Lectures and tutorials (three hours); one term

POLSCI 2I03 - GLOBAL POLITICS

- study of institutions and processes of the international political system.

Three hours (lectures and tutorials); one term

POLSCI 2ID3 - INTERNATIONAL DEVELOPMENT

Beginning with a historical account of development, this course aims to introduce students to the idea of international development. It will also introduce students to development in practice including an exploration of actionable ways of solving some developmental challenges.

Lectures and tutorials (three hours); one term

POLSCI 2J03 - GLOBAL POLITICAL ECONOMY

An examination of the relationship between economics and politics on a global scale. Students develop an appreciation of theoretical approaches to the global political economy through investigation of several historical eras and key structures such as trade, production, finance, development, environment, gender, labour, knowledge, race, health, security and governance.

Three hours (lectures and tutorials); one term

POLSCI 2K03 - POLITICAL ECONOMY OF THE MEDIA

- comparative examination of changing patterns of ownership and control of the mass media in light of globalization, technological change, government policy, market restructuring and corporate consolidation.

Three lectures; one term

Prerequisite(s): Completion of one of the following: CMST 1A03, MMEDIA 1A03, POLSCI 1AA3, POLSCI 1AB3, SOCIOL 1C03 or SOCIOL 1Z03, and registration in Level II or above; or registration in Level II or above in Justice, Political Philosophy and Law

Cross-list(s): CMST 2K03

This course is administered by the department of Communication Studies and Multimedia.

POLSCI 2LW3 - COMMUNICATION POLICY AND LAW

An examination of communication law and policy. Topics include freedom of expression and the press, telecommunications and broadcasting regulation, Internet law, privacy, and intellectual property.

Three hours; one term

Prerequisite(s): Registration in Level II or above of a program in Humanities or Social Sciences

Antirequisite(s): CMST 3I03

Cross-list(s): CMST 2LW3

This course is administered by the Department of Communication Studies and Multimedia.

POLSCI 2M03 - GOVERNANCE, REPRESENTATION, AND PARTICIPATION IN DEMOCRACIES

- systematic introduction to comparing the politics of industrialized and post-industrial countries including electoral and government institutions, parties, ideologies and values, and political economy.

Three hours (lectures and tutorials); one term

POLSCI 2NN3 - POLITICS BY DESIGN

What steps are involved in designing and implementing a primary-source research project? This course focuses on the key elements of the research process - from developing original research questions, to gathering and analysing primary data.
Lectures and tutorials (three hours); In-class or online; one term
Prerequisite(s): POLSCI 1AB3 or POLSCI 1G06 A/B
Antirequisite(s): POLSCI 3N06 A/B
See Note 4 *above*.

POLSCI 2O06 A/B - POLITICAL THEORY

An introduction to political theory that includes Classical Greek thought, early modern natural right theory and contemporary political theory.
Three hours (lectures and tutorials); two terms (See Note 5 above.)

POLSCI 2PF3 - POLITICS OF FUNNY

Examination of politics through the lens of comedy, from stand up to satirical news and including perspectives on race, class, gender, and free speech.
Lectures and tutorials (three hours); one term
Prerequisite(s): Registration in Level II or above

POLSCI 2PP3 - LAW, POLITICS AND PUBLIC POLICY

An examination of the interactions between law, politics and public policy and its impact on domestic and international governance systems. Students will learn a variety of theoretical and methodological approaches to study law and public policy, with a focus on the application of these debates to contemporary social and political issues.

- hours (lecture and tutorials)

POLSCI 2U03 - PUBLIC POLICY AND ADMINISTRATION

This course examines the forces and factors influencing government policy decisions and the implementation of those policy choices from Canadian and comparative perspectives as means of understanding the distribution of wealth and power in society.
Lectures and tutorials (three hours); one term

POLSCI 2US3 - US POLITICS

An introduction into the politics and institutions of the United States of America.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

POLSCI 2XX3 - POLITICS OF THE DEVELOPING WORLD

An examination of major theoretical approaches to the study of development and underdevelopment, such as modernization, politics of order, dependency and modes of production.
Three hours (lectures and tutorials); one term

POLSCI 3B03 - HONOURS ISSUES IN INTERNATIONAL RELATIONS AND GLOBAL PUBLIC POLICY

In-depth examination of a theoretical and empirical issue or topic in international relations or global public policy. Specific topic to be chosen by the instructor.
Three hours; (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of an Honours Political Science Program. (See Note 8 above.)

POLSCI 3BB3 - POLITICAL COMMUNICATION: CANADA AND THE WORLD

The relationship between politics and the media is analysed in terms of issues such as political news coverage, electioneering, political marketing, policy formation and publicity, and agenda setting and public opinion.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above of a Communication Studies or Political Science program; or POLSCI 1AA3 and 1AB3 or 1G06 and registration in Level III or above of the Honours Social Psychology (B.A.) program
Cross-list(s): CMST 3D03

POLSCI 3C03 - GOVERNMENT, POLITICS, AND INDIGENOUS PEOPLES RIGHTS

An historical examination of the leadership and politics in Canada's indigenous communities, with a particular focus on pre-contact political structures, the Indian Act and its consequences, and contemporary social questions. Course content will consider political themes in relation to the impacts upon individual and collective rights of Indigenous Peoples.
Three hours; (lectures and discussion); one term
Prerequisite(s): Three units of Level II Indigenous Studies or permission of the instructor or registration in Honours Political Science Specialization in Public Law and Judicial Studies.
Cross-list(s): INDIGST 3J03
This course is administered by the Department of Indigenous Studies.

POLSCI 3CC3 - POLITICAL AUTHORITY: 20TH-CENTURY POLITICAL THEORY

An examination of major themes in political theory in the 20th century focusing on concerns about legitimate political authority and the nature of power and human relations in modern society.
Lectures and discussion (three hours); one term
Prerequisite(s): ARTSSCI 2A06 or POLSCI 2O06 and registration in Level III or above

POLSCI 3CD3 - 21ST CENTURY POLITICAL THEORY

Surveys political theory writings on topics such as internationalism, environmentalism, authoritarianism, and technology, that address distinctive conceptual challenges of the current era.
Lectures and discussion (three hours); one term
Prerequisite(s): POLSCI 2O06 A/B

POLSCI 3CL3 - CONSTITUTIONAL AND PUBLIC LAW IN CANADA

This course examines how law mediates the relationship between government and citizens with a focus on the constitutional, administrative and criminal law in Canada.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above

Antirequisite(s): POLSCI 3NN6 A/B

POLSCI 3CS3 - CAMPAIGN SCHOOL

This course offers an in-course and experiential learning experience in campaign and election management using a municipal, provincial or federal election as a case study.

- hours

Prerequisite(s): POLSCI 3EL3 or registration in Level III Political Science (or higher) or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list(s): CIVDEM 3CS3 - Campaign School

POLSCI 3EE3 - INTERNATIONAL RELATIONS: NORTH-SOUTH

An examination of recent North-South relations concentrating on such issues as commodity trade, protectionism, the debt crisis and negotiations over a new international economic order.
Three hours; (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above
Priority will be given to students registered in a Political Science program. (See Note 7 above.)

POLSCI 3EL3 - ELECTION LAW AND POLICY

This course examines the politics, policy, and legal foundations of electoral systems in Canada and on a comparative basis.
Lectures and discussion (three hours); one term
Prerequisite(s): POLSCI 1AA3 and registration in Level III or above.
Cross-list(s): CIVDEM 3EL3

POLSCI 3FG3 - PUBLIC SERVICE LEADERSHIP

Focuses on core leadership competencies identified by the federal public service as key in dynamic organizations and effective leaders.
Three hours; (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of an Honours program
Antirequisite(s): SOCSCI 3EL3

POLSCI 3G03 - POLITICS OF DIVERSITY: RACE, ETHNICITY, AND MULTICULTURALISM

This course explores the complex dynamics of race, ethnicity, and multiculturalism within the Canadian political landscape, while incorporating comparative perspectives from other plural societies. Students will examine theoretical frameworks and practical applications of multicultural policies, the impact of immigration, and the political representation of diverse communities. Through case studies and comparative analysis, the course will address issues of identity, inclusion, and social justice, providing a comprehensive understanding of how different countries navigate political challenges. By the end of the course, students will be equipped to critically analyze and engage with the politics of diversity in Canada and beyond.
Three hours (lectures and discussion); one term
Prerequisite(s): Six units of Political Science and registration in Level III or above. (See Note 7 above).

POLSCI 3GA3 - GLOBAL POLITICAL ECONOMY OF RESOURCE EXTRACTION IN AFRICA

This course examines both the domestic and global undercurrents that shape the governance and management of natural resource extraction in Africa and beyond.
Lectures and discussion (three hours); one term

POLSCI 3GC3 - POLITICS OF A DYING PLANET

An examination of the politics that is steering humanity to the brink of catastrophic climate change and planetary mass extinction. It investigates the politics that generates, and is generated by, a dying planet.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in level III or above
Antirequisite(s): GEOG 3EG3
Cross-list(s): ENVSOCTY 3EG3
Not open to students with credit in POLSCI 3B03 if the topic was Global Climate Change.

POLSCI 3GG3 - FEDERALISM

An analysis of the constitutional framework, evolution, and structure of the federal system in Canada and/or other Western countries.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above. (See Note 7 above.)

POLSCI 3H03 - HONOURS ISSUES IN COMPARATIVE POLITICS

Examination of a theoretical and empirical issue or topic in comparative politics of the developing or developed world. Specific topic to be chosen by instructor.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of an Honours Political Science Program. (See Note 8 above.)

POLSCI 3I03 - TOPICS IN AMERICAN POLITICS

The study of a central component of the U.S. political system.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above
POLSCI 3I03 may be repeated, if on a different topic, to a total of six units. Priority will be given to students registered in a Political Science program. (See Note 9 above.)

POLSCI 3IP3 - INTELLECTUAL PROPERTY

An examination of intellectual property from a practical/legal perspective, and in broader context. Exploring the politics of intellectual property online and offline: philosophies and practices, politics and institutions, and alternatives.
Three hours; one term
Prerequisite(s): Completion of one of the following: CMST 1A03, MMEDIA 1A03, POLSCI 1AA3, or POLSCI 1AB3, and registration in Level III or above; or registration in Level III or above of a program in Justice, Political Philosophy and Law
Cross-list(s): CMST 3II3
This course is administered by the department of Communication Studies and Multimedia.

POLSCI 3J03 - HONOURS ISSUES IN CANADIAN POLITICS AND CANADIAN PUBLIC POLICY

In-depth examination of a theoretical and empirical issue or topic in Canadian politics or Canadian public policy. Specific topic to be chosen by instructor.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above of an Honours Political Science Program. (See Note 8 above.)

POLSCI 3JJ3 - PROVINCIAL POLITICS IN CANADA

- study of the development, nature and functioning of the political systems of the Canadian provinces.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above. (See Note 7 above.)

POLSCI 3JR3 - THE RULE OF LAW AND LEGAL AND JUDICIAL REFORMS IN THE DEVELOPING WORLD

The course offers an examination of legal systems throughout the developing world following World Bank, IMF, international aid agencies' push to homogenize the rule of law through legal and judicial reforms.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above or permission of the instructor

POLSCI 3K03 - MIGRATION AND CITIZENSHIP: CANADIAN, COMPARATIVE AND GLOBAL PERSPECTIVES

This course examines immigration as a local, national and global phenomenon. It considers the process of incorporation of immigrants into receiving societies, and the implications of migration for our understanding of citizenship and the nation-state.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above. (See Note 7 above.)

POLSCI 3KK3 - GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES

An examination of genocide and other extreme crimes against humanity.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above
Cross-list(s): SOCIOL 3KK3
Priority will be given to students registered in a Political Science or Sociology program. (See Note 7 above.)

POLSCI 3LA3 - RELIGION AND POLITICS

The relationship between religion and politics is explored by way of readings by Locke, Rousseau, and Schmitt, and case studies concerning the place of religion in public life.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): RELIGST 3CC3
Cross-list(s): SCAR 3CC3

POLSCI 3LB3 - GLOBALIZATION AND THE WORLD ORDER

Addresses the past and current dynamics of globalization and how global systems have evolved into their current forms, including global economy, global governance and citizenship.
Lectures and discussion (three hours); one term
Prerequisite(s): One of POLSCI 2I03, 2J03; and registration in Level III or above

POLSCI 3LC3 - SOUTHEAST ASIAN POLITICS

Examines the politics of select Southeast Asian countries including history, economy, regime type, civil-military relations, party system, socio-political cleavages, human rights and development.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above

POLSCI 3LL3 - DEVELOPMENT AND PUBLIC POLICY

An examination of critical issues in public policy as they impact on the process of development.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above
See Note 7 above.

POLSCI 3LP3 - TOPICS IN LAW AND POLICY

In-depth examination of a specific area or field of law and its intersection with politics and public policy at the domestic and/or international level. Specific topic to be chosen by the instructor.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above

POLSCI 3NN3 - STATISTICAL ANALYSIS OF PRIMARY DATA

Social scientific research often produces enormous quantities of primary data - on voters, states, beliefs, and actions. This course highlights statistical techniques we can use to simplify that data - allowing us to identify patterns and relationships.
Lectures and tutorials (three hours); In-class or online; one term
Prerequisite(s): POLSCI 2NN3
Antirequisite(s): POLSCI 3N06
See Note 4 above.

POLSCI 3OP3 - POLITICAL PSYCHOLOGY

Political psychology is an inter-disciplinary approach that draws on a range of social psychological concepts to understand political behaviour and dynamics. Addresses issues such as political knowledge, misinformation and opinion formation, political polarization, emotion and enmity, international and inter-societal conflict, and strategies for conflict reduction. Students will also be introduced to basic notions of the experimental design.

- hours

Prerequisite(s): SOCPSY 1Z03 and one of POLSCI 1AA3, 1AB3; or Level III or above in any Political Science or Social Psychology program.
Cross-list(s): SOCPSY 3OP3 - Political Psychology

POLSCI 3PA3 - POLITICS OF PANDEMICS

Politics of Pandemics looks at the political and global implications of pandemics, including COVID-19 as well as historic epidemics and viruses. It considers the impact and influence of global health governance arrangements. It also examines the role of political authority, and different systems of democratic governance, with respect to alternative policy responses and varying health outcomes.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above

POLSCI 3PB3 - POLITICS FROM BELOW

This course examines social and political problems with large-scale democracies and considers several contemporary responses that, in their own distinctive ways, turn to community/locality.
Lectures and discussion (three hours); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in Level III or above

POLSCI 3PG3 - POLITICAL GEOGRAPHY

This course examines the intersections between Political Science and Geography. It aims to unpack how these two disciplines inform and enrich each other by exploring the intellectual development of political geography as a sub-discipline.
Lectures and discussion (three hours); one term
Prerequisite: Registration in Level III or above.

POLSCI 3PR3 - PRACTICE OF POLITICS

Connects theories and generalizations about politics with experience on the ground. Students engage real-world issues, while reflecting upon issues of citizenship, power, opportunity, and exclusion.
One term
Prerequisite(s): Registration in Level III or above Political Science; and permission of the Department
Antirequisite(s): SOCSCI 3EL3

POLSCI 3Q03 - THE CAUSES OF WAR

An examination of theoretical perspectives on the causes of war and conditions for peace between and within political communities.
Three hours (lectures); one term
Prerequisite(s): Registration in Level III or above
Priority will be given to students registered in a Political Science program. (See Note 7 *above.)*

POLSCI 3RF3 - THE CHARTER OF RIGHTS AND FREEDOMS

An examination of the Charter of Rights and Freedoms and its interpretation and impact on governments, public policy and governance in Canada.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above
Antirequisite(s): POLSCI 3NN6 A/B

POLSCI 3UU3 - READING COURSE

Topics to be arranged between an individual student and instructor.
One term
Prerequisite(s): Registration in Level III or IV of any program in Political Science, and the written permission of an Undergraduate Advisor on behalf of the Department. A written proposal must be submitted to the Department by the instructor prior to the term in which the course is to be taken.

POLSCI 3V03 - GENDER AND POLITICS

Theoretical and empirical approaches to understanding the role of gender in politics, including electoral politics, democratization, peace and security, organized women's movements.
Lectures and discussion (three hours); In-class or online; one term
Prerequisite(s): Three units of POLSCI and registration in Level III or above. (See *Note 7* above).

POLSCI 3VV3 - DEMOCRATIC THEORY

An examination of historical and contemporary debates about democracy and its challenges.
Lectures and discussion (three hours); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in Level III or above

POLSCI 3WP3 - WORKING IN POLITICS

This course will provide students with the opportunity to earn academic credit for their work in an employment or volunteer position. The department does not provide positions, but may assist students in finding their own position.
Prerequisite(s): Registration in Level II or above of any program in Political Science; and written permission of the faculty member supervising; and permission of the Department

POLSCI 3Y03 - DEMOCRATIZATION AND HUMAN RIGHTS

- review of the process of democratization and the forces that drive it and an assessment of the place of human rights in emerging democracies.

Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above. (See Note 7 above.)

POLSCI 3Z03 - CANADIAN PUBLIC SECTOR MANAGEMENT

This course introduces students to the structures and processes of management in the Canadian public sector. The purpose is to highlight the role played by institutions, processes, and personnel in governing Canada. The course provides an exposure to the organizational and operational arrangements and practices in the public service, and examines the governing framework of the country.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level III or above.
Cross-list(s): CIVDEM 3Z03 - Canadian Public Sector Management
(See *Note 7* above.)

POLSCI 4AA6 A/B - CONTEMPORARY POLITICS

An in-depth and extensive examination of theoretical, conceptual, methodological and/or empirical issues associated with a specific topic affecting the practice of politics in modern times.
Three hours (seminar); two terms
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4AL3 - PATHWAYS: APPROACHING LIFE WITH A POLITICAL SCIENCE DEGREE

This course will assist in preparing students to transition from their undergraduate education in Political Science to graduate or professional schools, first jobs, and careers. Students will review and practice writing skills; presentation skills; resume development; networking; problem-solving; among other academic and life skills.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4CA3 - ISSUES IN CANADIAN POLITICS

An examination of the major issues in contemporary Canadian politics, with a particular emphasis on democratic institutions.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4CF3 - CANADIAN FOREIGN POLICY

This seminar will consider the theories and practice of Canadian foreign policy.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4D06 A/B - INTERNATIONAL POLITICS

In-depth and extensive examination of theoretical, conceptual, methodological and/or empirical issues associated with a specific topic in international relations, global politics or global public policy.
Three hours (seminar); two terms
Prerequisite(s): One of POLSCI 2I03 or 2J03; and registration in Level IV Honours Political Science

POLSCI 4DV3 - DEATH AND VIOLENCE

Is violence a continuation of politics? Is death the end? Considers topics in mortality and vulnerability including self-sacrifice, revolution, tragedy, grief and

the hallowed dead.
Seminar (three hours); one term
Prerequisite(s): 3 units of Level III Political Theory and registration in Level IV Honours Political Science

POLSCI 4EC6 A/B - PARTNERED LEARNING IN ELECTIONS AND DEMOCRACY

This interdisciplinary course examines ways to strengthen electoral integrity, foster inclusive civic participation, and build democratic resiliency - whether in the local community, nationally, or in places around the world. Students gain research skills and foundational knowledge on specific topics pursuant to weekly course schedule, and work in teams on a partner-informed research project.
Prerequisite(s): Registration in Level IV Political Science or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list: CIVDEM 4EC6 A/B, CIVDEM 4ED6 A/B

POLSCI 4ED6 A/B - PARTNERED LEARNING IN ELECTIONS AND DEMOCRACY

This interdisciplinary course examines ways to strengthen electoral integrity, foster inclusive civic participation, and build democratic resiliency - whether in the local community, nationally, or in places around the world. Students gain research skills and foundational knowledge on specific topics pursuant to weekly course schedule, and work in teams on a partner-informed research project.
Prerequisite(s): Registration in Level IV Political Science or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Antirequisite(s): POLSCI 4EC6 A/B; CIVDEM 4EC6 A/B
Cross-list(s): CIVDEM 4ED6 A/B - Partnered Learning in Elections and Democracy

POLSCI 4EF3 - POLITICAL ECONOMY OF FINANCE FOR GREEN AND JUST TRANSITIONS

This seminar looks at finance for green and just transitions. Course material explores the historical, social, economic, and political determinants of change by paying attention to issues of class-based, gendered, and racialized forms of power, conflict, and struggle around finance for a greener and more socially just world. We will draw on real-world, concrete cases of institutions, movements, banks, and so on while deepening our conceptual understandings. This is a course designed for undergraduate students with an interest in finance but without any background in finance.
Seminar (3 hours)
Prerequisite(s): Level IV Honours Political Science program

POLSCI 4EM3 - ELECTIONS MANAGEMENT

This course covers the general building blocks of election administration from voter registration to recounts. Students will learn how election administration bodies manage different aspects of the election process; recognize the key debates and tensions in election policy; and identify their impacts on election administration.

- hours (seminar)

Prerequisite(s): Registration in Level IV Political Science or IBH or Commerce or in the Interdisciplinary Minor in Civic Vitality, Democracy and Electoral Management.
Cross-list(s): COMMERCE 4EM3, CIVDEM 4EM3 - Elections Management

POLSCI 4FF3 - RIGHTS AND JUSTICE

An examination of major debates in liberal political theory, with emphasis on rights, individualism, and egalitarianism.
Three hours (seminar); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in Level IV Honours Political Science

POLSCI 4G06 A/B - POLITICS OF PUBLIC POLICY

An examination of the political causes and mechanisms that shape public policies, such as political parties, interest groups, policy legacies, and how they influence policy choices on challenging issues as well as account for cross-national differences.
Seminar (three hours); two terms
Prerequisite(s): one course in Public Policy or Comparative Politics; and registration in Level IV Honours Political Science

POLSCI 4GC3 - ADVANCED ISSUES IN GLOBAL CITIZENSHIP

This seminar critically assesses what it means to be a global citizen in relation to pressing global challenges, including refugee movements, climate change, corporate responsibility, humanitarian interventions, and global inequality.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science Specialization in Global Citizenship or permission of the Department

POLSCI 4GG3 - CONCEPTUAL ISSUES IN GLOBAL POLITICS

An examination of contending theoretical approaches and issues to global politics.
Three hours (seminar); one term
Prerequisite(s): POLSCI 2I03 and registration in Level IV Honours Political Science

POLSCI 4HH3 - CRITICAL THEORY

An examination of selected critical political theories from the 1930s to the present.
Seminar (three hours); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in Level IV Honours Political Science

POLSCI 4HR3 - HUMAN RIGHTS

An examination of the concept of human rights as reflected in international declarations and practices.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4JS3 - JUDICIAL STUDIES

An examination of the theories, factors and principles underlying the impact of the judiciary on political and policy outcomes in democratic states.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science Specialization in Public Law and Judicial Studies and incoming exchange students completing the Certified International Experience (CIE)

POLSCI 4KB3 - NON-WESTERN INTERNATIONAL RELATIONS

This seminar challenges the assumptions found in the 'canonical' readings of IR Theory. It draws on a plethora of Non-Western thinkers such as Frantz

Fanon, Aimé Césaire, Al-Afghani, Gandhi, Soekarno, Kwame Nkrumah, and Edward Said, among others.
Three hours (seminar); one term
Prerequisite(s): POLSCI 2I03 and registration in Level IV Honours Political Science.

POLSCI 4KC3 - COMPARATIVE DEMOCRATIZATION

Concepts, theories and issues in democratization, including: definitions and measurement, emergence and consolidation; institutional design, party and electoral systems, rule of law, political culture, civil society, media freedom and foreign assistance.
Three hours (seminar); one term
Prerequisite(s): One course in Comparative Politics and registration in Level IV Honours Political Science

POLSCI 4LA3 - POLITICS IN LATIN AMERICA

An examination of Latin America's longstanding hegemonic crisis and corresponding ideologies such as populism, corporatism, and authoritarianism.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4LC3 - RESEARCH ON LAW AND COURTS

This course reviews the methodological and empirical foundations for judicial research and requires the completion of a major research paper in the field.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science Specialization in Public Law and Judicial Studies and incoming exchange students completing the Certified International Experience (CIE)

POLSCI 4NN3 - STUDIES IN GLOBAL POLITICAL ECONOMY

An examination of selected issues in the global political economy.
Three hours (seminar); one term
Prerequisite(s): POLSCI 2J03 and registration in Level IV Honours Political Science

POLSCI 4O06 A/B - CANADIAN POLITICS

In-depth extensive examination of the theoretical, conceptual, methodological and/or empirical issues associated with a specific topic in Canadian politics or Canadian public policy.
Seminar (three hours); two terms
Prerequisite(s): POLSCI 1AA3 and 1AB3 or POLSCI 1G06; and registration in Level IV Honours Political Science

POLSCI 4OL3 - ORIGINS OF LAW

Is the birth of law inevitable? Why? Considers topics such as divinity, rationality, performativity, and "the people" in the development and reform of legal order.
Seminar (three hours); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in Level IV Honours Political Science

POLSCI 4PA3 - POLICY ANALYSIS AND IMPLEMENTATION

This course examines the methods to analyze the efforts of policy actors to improve policy outcomes through the development and implementation of policy options.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4PB3 - POLITICS OF BORDERS

This seminar examines recent theoretical and empirical developments in borders and border control. Topics to be considered include biometric controls, digital borders, and border walls. Resistance to these border controls, in the form of anti-deportation campaigns, Indigenous contestations of settler state borders, and sanctuary cities, will also be featured.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4PE3 - GLOBAL POLITICAL ECOLOGY

An in-depth examination of the politics of climate change at the international and national level.
Seminar (three hours); one term
Prerequisite: Registration in Level IV Honours Political Science

POLSCI 4PO3 - PUBLIC OPINION

This course examines the conceptual foundations and theoretical frameworks of public opinion research. It also develops practical skills by offering exercises in survey design and analysis.
Seminar (three hours); one term
Prerequisite(s): POLSCI 3NN3 and registration in Level IV Honours Political Science.

POLSCI 4Q06 A/B - COMPARATIVE POLITICS

An in-depth an extensive examination of theoretical, conceptual, methodological and/or empirical issues associated with a specific topic in comparative politics.
Seminar (three hours); two terms
Prerequisite(s): One course in Comparative Politics and registration in Level IV Honours Political Science

POLSCI 4QQ3 - ISSUES IN INTERNATIONAL POLITICS

An examination of selected issues in international politics and foreign policy.
Three hours (seminar); one term
Prerequisite(s): One of POLSCI 2I03 or POLSCI 2J03 and registration in Level IV Honours Political Science

POLSCI 4RR3 - HEALTH POLICY IN THE INDUSTRIALIZED WORLD

Discussion of the Canadian health system and comparison to alternate examples (i.e. UK or US). Topics include multilevel governance, reform initiatives, health spending, and tools for evaluation.
Three hours (seminar); one term
Prerequisite(s): One course in Comparative Politics and registration in Level IV Honours Political Science.

POLSCI 4RT3 - RADICAL POLITICAL THEORY

This course explores a wide range of radical political theories, historical and contemporary, ranging from Marxism, to anarchism, to non-Western political philosophies, and more. Its specific topic/theme will be determined annually by the instructor.

- hours (seminar)

Prerequisite(s): 3 units of Level III Political Theory and registration in Level IV Honours Political Science

POLSCI 4SS3 - PUBLIC OPINION AND POLICY

An examination of public opinion about public policies, like education, social assistance, and health care, through analysis of survey data from around the globe.
Seminar (three hours); one term
Prerequisite(s): A grade of at least B- in POLSCI 3NN3 and registration in Level IV Honours Political Science

POLSCI 4ST3 - SPECIAL TOPICS IN CONTEMPORARY POLITICS

This Level IV seminar course will deal with a selected topic concerning an emerging and important issue in the field and in political life.
Three hours (blended format (lectures and online)); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4UF3 - US FOREIGN POLICY

This seminar will consider the theories and practice of current US foreign policy.
Three hours (seminar); one term
Prerequisite(s): POLSCI 2US3 and registration in Level IV Honours Political Science

POLSCI 4UP3 - URBAN POLITICS AND GOVERNANCE IN THE 21ST CENTURY: CANADIAN AND COMPARATIVE PERSPECTIVES

This course examines political processes at the city-region level, exploring patterns of conflict and collaboration among governmental and community-based actors attempting to formulate solutions to complex 21st century urban problems. Students learn about major policy issues facing cities, and work in small groups to examine urban politics and governance in one or more selected locales. Course may involve a field trip/learning excursion either locally or to a nearby US city.
Three hours (seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science, or ENVSOCTY 3UP3

POLSCI 4WS3 - POLITICS OF THE WELFARE STATE: CONTEMPORARY CHALLENGES IN COMPARATIVE PERSPECTIVE

This course canvasses competing accounts about the relationship of welfare state policies and social inequalities, and applies them to understand the politics of the welfare state's development as well as contemporary projects for social policy reform. The course includes group work and simulation elements.
Three hours (Seminar); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4Y03 - DOMINATION AND DECOLONIZATION

This course explores political theories of decolonization from the early 20th century to the present day criticizing the conceptual and practical foundations of empire.
Seminar (three hours); one term
Prerequisite(s): ARTSSCI 2A06 A/B or POLSCI 2O06 A/B and registration in a Level IV Honours Political Science (B.A.)

POLSCI 4YR3 - CHILD/YOUTH RIGHTS AND SECURITY IN GLOBAL POLITICAL PERSPECTIVE

An examination into how global power and politics construct, rely upon, constrain, regulate, diminish, and deny the possibilities and prospects for young people's political subjecthood.
Seminar (three hours); one term
Prerequisite(s): Registration in Level IV Honours Political Science

POLSCI 4Z06 A/B - HONOURS ESSAY

- major research paper, supervised by a faculty member. The subject matter is to be different from that covered in POLSCI 3UU3, if the student is registered or has credit in that course.

Prerequisite(s): Registration in Level IV Honours Political Science normally with a minimum C.A. of 9.0; and written permission of the faculty member supervising the students Honours Essay; and permission of the Department.

POLSCI 4ZZ3 - EXPERIENTIAL LEARNING IN RESEARCH

- major collaborative research project supervised by a faculty member and involving a unique course of instruction. one term

Prerequisite(s): Registration in Level IV Honours Political Science; and written permission of the faculty member supervising the research; and permission of the Department.
Not open to students with credit in POLSCI 3UU3 or POLSCI 4Z06 A/B if on a similar topic.

POLSCI 4ZZ6 A/B - EXPERIENTIAL LEARNING IN RESEARCH

- major collaborative research project supervised by a faculty member and involving a unique course of instruction.

Prerequisite(s): Registration in Level IV Honours Political Science; and written permission of the faculty member supervising the research; and permission of the Department.
Not open to students with credit in POLSCI 3UU3 or POLSCI 4Z06 A/B if on a similar topic.

Process Automation Technology

Courses in Process Automation Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 121, ext. 20195
http://mybtechdegree.ca
For the Four-Year Program, registration is only permitted for courses of the same level in which the student is registered, unless otherwise specified.

PROCTECH 2CA3 - CAD FOR DESIGN

Two-dimensional drafting: drawing environment and commands, drafting settings, drawing editing, plotting output, dimensioning, orthographic projections and views, sectional and auxiliary views. Three-dimensional solid modeling: parts, assemblies, 2D drawings generation.
One lab (three hours); first term
Prerequisite(s): Registration in level II or above of the Automation Systems Engineering Technology Co-op program

PROCTECH 2CE3 - CHEMICAL ENGINEERING I: MASS BALANCE

Steady-State mass balances with possible recycle and reactions. Gas laws. Phase rule. Vapour-liquid equilibrium basics.
Two lectures, one tutorial, one lab (two and one half hours); first term

Prerequisite(s): ENGTECH 1CH3, 1MC3, 1PH3 and registration in level II or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 2EC3 - CHEMICAL ENGINEERING II: ENERGY BALANCE

Steady-state energy balances including possible reactions. Combined mass and energy balances. First and second law of thermodynamics. Physical/chemical equilibrium. Application to industrial processes. Drawing and interpretation of Piping and Instrumentation diagrams (P&ID).
Two lectures, one tutorial, one lab (two and one half hours); second term
Prerequisite(s): ENGTECH 1MC3, PROCTECH 2CE3 and registration in level II or above of the Automation Systems Engineering Technology Co-op program

PROCTECH 2EE3 - ELECTRICITY AND ELECTRONICS II

Second course in electricity and electronics covers transformers, passive and active filters, and semiconductor diodes and transistors theory and applications.
Two lectures, two tutorials, one lab (three hours); first term
Prerequisite(s): ENGTECH 1EL3, 1MC3 and registration in level II or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 2IC3 - INSTRUMENTATION AND CONTROL

This course covers common pressure, level, temperature and flow measuring systems that provide the basis to specify, design, construct, test and tune a control loop using a PID controller. A distributed control system is also introduced.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 1MC3 and registration in level II or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 2PL3 - PLC PROGRAMMING

This course covers Programmable Logic Controllers (PLCs) and their use in automation applications. AC and DC motors, PLC basics, Input/output, memory addressing and program control instructions, PLC networking, motor control protection and starting.
Three lectures, one lab (three hours); second term
Prerequisite(s): ENGTECH 1MT3, PROCTECH 2EE3, 2IC3 and registration in level II or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 2SE3 - SYSTEMS ENGINEERING FUNDAMENTALS

This course covers the principles of systems engineering and their application across systems life cycle. Emphasis is given to concept exploration, requirements analysis, development, operation, and retirement of complex automation systems.
Three lectures; second term
Prerequisite(s): Registration in level II or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 3CE3 - CHEMICAL ENGINEERING III: UNIT AND PROCESS DESIGN

This course covers simulation and analysis of integrated process units within a chemical process plant. Key topics covered are: process flow diagrams and simulation models, process analysis using simulation model, rudimentary process optimization and plant simulation
Three lectures, one lab (two hours); first term
Prerequisite(s): ENGTECH 2MA3, PROCTECH 2EC3, and registration in Level III of the Automation Systems Engineering Technology Co-op program.

PROCTECH 3CT3 - CONTROL THEORY I

This course covers analysis and design of closed loop control systems. System characteristics and performance, stability analysis, system types, performance improvement, digital control systems, compensation, filtering and motion system tuning.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 2MT3, PROCTECH 2IC3, 2PL3 and registration in level III or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 3MC3 - MOTION CONTROL AND ROBOTICS

The motion control part of this course covers the theory and operation of AC and DC drive systems and digital motion control. The robotics portion of the course covers robot anatomy and attributes, end effectors, robot programming and applications.
Three lectures, one lab (three hours); first term
Prerequisite(s): PROCTECH 3CT3, PROCTECH 3PL3 and registration in Level IV of the Automation Systems Engineering Technology Co-op program

PROCTECH 3PL3 - ADVANCED PLC PROGRAMMING AND CONTROL

Advanced PLC programming concepts such as files, subroutines and indexing, industrial networks, PID and PWM, HMI, AC and DC drives integration and implementation in PLCs, and automation design project.
Three lectures, one lab (three hours); first term
Prerequisite(s): PROCTECH 2PL3 and registration in level III or above of the Automation Systems Engineering Technology Co-op program.

PROCTECH 4AS3 - INDUSTRIAL SYSTEM COMPONENTS AND INTEGRATION

This course covers advanced sensor and actuator technology, robotics and vision systems, automated workcell, flexible manufacturing systems, computer integrated manufacturing. Hardware and software integration issues, when and how to automate, OPC and HMI.
Three lectures, one lab (three hours); first term
Prerequisite(s): PROCTECH 4IC3, 4IT3; ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program

PROCTECH 4CT3 - ADVANCED CONTROL THEORY II

This course covers process characteristics, methods of analysis, controller design, adaptive control, loop tuning, process control improvement examples with emphasis on plant control and tutorial exercises using MATLAB.
Three lectures, one tutorial; second term
Prerequisite(s): PROCTECH 3CE3, 3CT3 and registration in level IV of the Automation Systems Engineering Technology Co-op program.
Co-requisite(s): PROCTECH 4IC3

PROCTECH 4IC3 - INDUSTRIAL NETWORKS AND CONTROLLERS

Corporate and industrial networks, OSI model, Ethernet and TCP/IP, Modbus, Foundation Field bus, DeviceNet, PROFIBUS, AS-I, proprietary buses and protocols and interfaces, distributed I/O, drivers and devices and their implementation in PC and PLC based systems.
Three lectures, one lab (three hours); second term
Prerequisite(s): PROCTECH 3MC3, 3PL3 and 3SD3 or SMRTTECH 3CC3 and registration in level IV of the Automation Systems Engineering Technology

Co-op program
Co-requisite(s): PROCTECH 4CT3
Antirequisite(s): SFWRTECH 3IT3

PROCTECH 4IT3 - INTERNET TECHNOLOGIES AND DATABASES

This course covers the following topics: internet technologies and standards, database concepts, structured query language elements, web database processing and client and server side scripts.
Two lectures, one lab (two hours); second term
Prerequisite(s): ENGTECH 1CP3, 1PR3 and registration in level IV of the Automation Systems Engineering Technology Co-op program.
Antirequisite(s): SFWRTECH 4WP3

PROCTECH 4MH3 - MACHINE HEALTH AND REMOTE MONITORING

This course covers machine monitoring using an electronic interface to a machines PLC and with Direct Machine Interface (DMI) modules, installation of noise and vibration sensor network and analysis of data from the sensors. It also covers, signal processing, mobile and remote monitoring through sensors, wired and wireless Local Area Networks, cloud, and the Internet of Things (IoT).
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program or the Automotive and Vehicle Engineering Technology Co-op program; OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program

PROCTECH 4MS3 - MANUFACTURING TECHNOLOGIES

This course examines manufacturing and production technologies, material selection and design process, measurement and quality assurance. Plastics, steels, and ceramics manufacturing, environmental and safety management, asset management and reliability.
Three lectures, one lab (two hours every other week); first term
Prerequisite(s): ENGTECH 1CH3, 1PH3, 1MT3, PROCTECH 2CA3, 3CE3; ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program

PROCTECH 4SS3 - SYSTEM SPECIFICATION AND DESIGN

This course focuses on requirement analysis, functional design, detailed design, reliability, maintainability and system life cycle. Methodologies and tools, requirements and validations, requirements for safety-related systems and mission critical systems.
Two lectures, one tutorial (two hours); first term
Prerequisite(s): PROCTECH 2SE3 or PROCTECH 2I03, PROCTECH 2CA3, and registration in level IV of the Automation Systems Engineering Technology Co-op program.

PROCTECH 4TR1 - CAPSTONE DESIGN PROJECT I

This course requires students to research, design, develop and implement an independent project. The project plan and a model developed will be documented as a technical report and presented in a seminar.
One tutorial, one lab (two hours); second term
Prerequisite(s): GENTECH 3MT3, PROCTECH 3CE3, 3MC3, 4SS3 and registration in level IV of the Automation Systems Engineering Technology Co-op program
Cannot be taken concurrently with any co-op work term course.

PROCTECH 4TR3 - CAPSTONE DESIGN PROJECT II

This course is a continuation of PROCTECH 4TR1 and it requires students to conduct further research, modify/refine project design, develop and implement the independent project proposal submitted as a part of the Capstone Design Project I course. The project will be documented as a technical report and presented in a seminar.
One tutorial, one lab (three hours); first term
Prerequisite(s): PROCTECH 4TR1, 4IT3 or SFWRTECH 4WP3; PROCTECH 4IC3 or SMRTTECH 4ID3 or SFWRTECH 3IT3, ENGTECH 4EE0 and registration in level IV of Automation Systems Engineering Technology Co-op program
Cannot be taken concurrently with any co-op work term course.

Psychology

Courses in PSYCH are administered by the Department of Psychology, Neuroscience & Behaviour.
Psychology Building, Room 102, ext. 23000
http://www.science.mcmaster.ca/pnb/

Department Notes

1. The PNB course designation stands for Psychology, Neuroscience & Behaviour. PNB courses require registration in a program in the Department of Psychology, Neuroscience & Behaviour. PSYCH courses are open to all students who meet the stated prerequisites.
2. The University reserves the right to limit enrolment in any course. Where priorities have to be established, first consideration will be given to students registered in an Honours program in the Department of Psychology, Neuroscience & Behaviour.

Courses

If no prerequisite is listed, the course is open.
See also courses in *HUMBEHV* and *PNB*.

PSYCH 1F03 - SURVEY OF PSYCHOLOGY

Students completing this course will have a good understanding of the methods, research questions and major areas of psychology. This course would be ideal for students looking to complete an elective requirement without necessarily planning to continue study in psychology. Students considering applying to an Honours Psychology, Neuroscience & Behaviour program are referred to PSYCH 1X03; for which this course is an anti-requisite.
On-line web modules, weekly online testing, in-person midterm and final exam; one term
Antirequisite(s): PSYCH 1N03, 1X03
Not open to students with credit or registration in ISCI 1A24 A/B.

PSYCH 1FF3 - SURVEY OF BIOLOGICAL BASIS OF PSYCHOLOGY

This course introduces important themes as the foundations to investigate psychology, neuroscience and behaviour with an emphasis on sensory systems, and behaviours critical to survival. This course would be ideal for students looking to complete an elective requirement without necessarily planning to continue study in psychology. Students considering applying to an Honours Psychology, Neuroscience & Behaviour program are referred to PSYCH 1XX3; for which this course is an anti-requisite.
On-line web modules, weekly online testing, in-person midterm and final exam; one term
Prerequisite(s): Grade 12 Biology U or credit or registration in one of BIOLOGY 1A03, 1M03, 1P03; or registration in a Nursing program; or registration in Level I or above of an Arts & Sciences program
Antirequisite(s): HTHSCI 1G03, PSYCH 1NN3, 1XX3

Not open to students with credit or registration in ISCI 1A24 A/B or students registered at the B.Sc.N. Conestoga campus.

PSYCH 1X03 - INTRODUCTION TO PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR

This course introduces the scientific methods used to study the psychology of higher order processes and interpersonal behaviour. Students interested in applying to an Honours Psychology, Neuroscience & Behaviour program are encouraged to take PSYCH 1X03 rather than PSYCH 1F03.
Lecture, web modules, weekly tutorials (three hours); one term
Antirequisite(s): PSYCH 1F03, 1N03
It is recommended that students without Grade 12 Biology U complete BIOLOGY 1P03 prior to or concurrently with this course.
Not open to students with credit or registration in ISCI 1A24 A/B or registered in B.Sc.N. Conestoga campus.

PSYCH 1XX3 - FOUNDATIONS OF PSYCHOLOGY, NEUROSCIENCE & BEHAVIOUR

This course introduces important themes as the foundations to investigate psychology, neuroscience and behaviour with an emphasis on sensory systems, and behaviours critical to survival. Students interested in applying to an Honours Psychology, Neuroscience & Behaviour program are encouraged to take PSYCH 1XX3 rather than PSYCH 1FF3.
Three hours (lecture, web modules, weekly tutorials); one term
Prerequisite(s): Grade 12 Biology U or credit or registration in one of BIOLOGY 1A03, 1M03, 1P03; or registration in a Nursing program; or registration in Level I or above of an Arts & Sciences program
Antirequisite(s): HTHSCI 1G03, PSYCH 1FF3, 1NN3
Not open to students with credit or registration in ISCI 1A24 A/B or students registered at the B.Sc.N. Conestoga campus.

PSYCH 2AA3 - CHILD DEVELOPMENT

- general survey of theories and mechanisms of child development, illustrated through examples from neural, perceptual, cognitive, social and emotional development.

Students in an Honours or Combined Honours Psychology, Neuroscience & Behaviour program are referred to PSYCH 3GG3 for which this course is an antirequisite.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03, and registration in Level II or above; or registration in Level II or above of an Arts & Science or B.H.Sc. (Honours) program
Antirequisite(s): PSYCH 3GG3

PSYCH 2AP3 - PSYCHOLOGICAL PERSPECTIVES ON MENTAL HEALTH

Provides students with a survey of the fundamentals of psychopathology, focusing on the description and etiology of major disorders.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03, and registration in Level II or above; or registration in Level II or above of an Arts & Science or B.H.Sc. (Honours) program
Prerequisite(s) (Effective 2026-2027): ISCI 1A24 A/B; or one of PSYCH 1F03, 1N03, 1X03 and one of PSYCH 1FF3, 1XX3 and registration in Level II or above; or registration in Level II or above of an Arts & Science or B.H.Sc. (Honours) program

PSYCH 2B03 - PERSONALITY

An introduction to the scientific study of personality which will consider theory, assessment and research in five approaches to personality: psychodynamic, biological, trait, behavioural and humanistic.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03, and registration in Level II or above; or registration in Level II or above of an Arts & Science or Honours Health Sciences Program - (B.H.Sc.(Hons)) program

PSYCH 2C03 - SOCIAL PSYCHOLOGY

An overview of research and theory in social psychology. Topics include, but are not limited to, social influence, persuasion, prejudice, aggression, altruism, sexuality, and processes related to attitude formation and change.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03, and registration in Level II or above; or registration in Level II or above of an Arts & Science or Honours Health Sciences Program - (B.H.Sc.(Hons)) program

PSYCH 2E03 - SENSORY PROCESSES

General processes mediating sensation and perception. Topics include neural principles of sensory pathways, the measurement of perception and the role of sensory processes in behaviour.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1FF3, 1NN3, 1XX3 and registration in Level II or above; or registration in Level II or above of an Arts & Science, B.H.Sc. (Honours), the Honours Music (Music Cognition) or any Honours Cognitive Science of Language program

PSYCH 2GG3 - LEARNING, MEASURING, AND SHAPING BEHAVIOUR

This course will survey principles of learning theories along with measurement and assessment of behaviour through theoretical, experimental, and real-world applications in humans and animals.
Lectures (two hours), one tutorial; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03 and registration in Level II or above; or registration in Level II or above of an Arts & Science or B.H.Sc. (Honours) program

PSYCH 2H03 - HUMAN LEARNING AND COGNITION

The psychological study of knowledge and how people use it. Topics include pattern recognition, remembering and reasoning.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1N03, 1X03 and credit or registration in one of PSYCH 1FF3, 1NN3, 1XX3, and registration in Level II or above; or registration in Level II or above of an Arts & Science, B.H.Sc. (Honours), Honours Music (Music Cognition) or any Honours Cognitive Science of Language program
Antirequisite(s): PNB 2XA3

PSYCH 2MP3 - INTRODUCTION TO MUSIC COGNITION

This course presents an overview of music cognition, covering such topics as musical acoustics, perception of melody, harmony and rhythm, social and emotional responses to music, and the evolution of music. In addition a basic introduction to music theory is included.
Three lectures; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1F03, 1FF3, 1X03, 1XX3 and registration in Level II or above; or registration in Level II or above of an Arts & Science, a B.H.Sc. (Honours) program, or an Honours Music Cognition program

(B.A., B.Arts.Sc., B.Mus., B.Sc.); or permission of the instructor
Antirequisite(s): MUSIC 2MC3
Cross-list(s): MUSICCOG 2MP3
This course is administered by the School of the Arts.

PSYCH 2NF3 - CLINICAL NEUROPSYCHOLOGY

This course provides an introduction to neuropsychology and places it in a clinical context. A review of human neuroanatomy, case histories of human brain damage, and assessment techniques are used to appreciate the relationship between brain health and behaviour.
Two lectures, one tutorial; one term
Prerequisite(s): ISCI 1A24 A/B or one of PSYCH 1FF3, 1NN3, 1XX3 and registration in Level II or above; or registration in Level II or above of an Arts & Science, B.H.Sc. (Honours), the Honours Music (Music Cognition) or any Honours Cognitive Science of Language program
Not open to students with credit or registration in ISCI 2A18 A/B.

PSYCH 3A03 - AUDITION

An introduction to the biology of hearing with an emphasis on fundamental auditory principles and underlying physiological mechanisms. Topics include physical acoustics, sound analysis, anatomy and physiology of mammalian auditory system, and perception and psychoacoustics.
Three lectures, one tutorial; one term
Prerequisite(s): One of BIOLOGY 2A03, ISCI 2A18 A/B, LIFESCI 2CC3, PNB 2XA3, PNB 2XB3, PSYCH 2E03, 2NF3

PSYCH 3AB3 - ADOLESCENT PSYCHOLOGY

This course will explore cognitive, social, emotional, neurological and physical development from puberty through the teenage years.
Three lectures; one term
Prerequisite(s): PSYCH 2AA3 or 3GG3

PSYCH 3AC3 - HUMAN SEXUALITY

This course will survey research and theory on human sexuality from evolutionary, social, cultural, and clinical perspectives.
Three lectures; one term
Prerequisite(s): One of PSYCH 2AA3, 2C03, 3GG3. Completion of PSYCH 2C03 is strongly recommended.
Prerequisite(s) (Effective 2026-2027): PSYCH 2C03

PSYCH 3AG3 - AGING

- survey of sensory, cognitive, personality, and social changes that occur during the normal aging process.

Two lectures, one tutorial: one term
Prerequisite(s): PSYCH 2AA3 or 3GG3

PSYCH 3B03 - SPECIAL POPULATIONS

Discusses selected topics related to normal and abnormal development in children, including behavioral affective, perceptual, and cognitive disorders and developmental disability.
Three lectures; one term
Prerequisite(s): PSYCH 2AP3; and credit or registration in PSYCH 2AA3 or 3GG3; and registration in Level III or IV of an Honours program

PSYCH 3BA3 - POSITIVE PSYCHOLOGY

This course will explore the physiology, psychological effects, and adaptive value of positive emotional and cognitive responses to the outside world, and to our own thoughts and behaviors.
Three lectures; one term
Prerequisite(s): PSYCH 2B03

PSYCH 3BN3 - COGNITIVE NEUROSCIENCE

An introduction to cognitive neuroscience, which is aimed at the study of psychological, computational, and neuroscientific bases of perception and cognition. Classes include traditional lectures, student presentations and critical discussions of articles from the current research literature.
Three lectures; one term
Prerequisite(s): One of LIFESCI 2CC3, PNB 2XB3, PSYCH 2E03, 2NF3, and one of PNB 2XA3, 3MM3, PSYCH 2H03, and one of ARTSSCI 2R03, PNB 3XE3, STATS 2B03, 2MB3; or one of PNB 2XA3, 3MM3, PSYCH 2H03 and ISCI 2A18 A/B

PSYCH 3C03 - CHILD LANGUAGE ACQUISITION

Language behaviour and development in children, from birth to school age. The course examines how data from children's language acquisition can inform linguistic theory.
Three hours; one term
Prerequisite(s): LINGUIST 1A03; and one of LINGUIST 1AA3, PNB 2XA3 or PSYCH 2H03
Cross-list(s): LINGUIST 3C03
This course is administered by the Department of Linguistics and Languages.

PSYCH 3CB3 - ATTITUDES AND PERSUASION

This course will explore social psychological theories and research relating to attitude formation and change, and the impact of attitudes on behavior.
Three lectures; one term
Prerequisite(s): PSYCH 2C03

PSYCH 3CC3 - FORENSIC PSYCHOLOGY

Introduces students to applications of psychology to the law. Includes topics such as eyewitness testimony, criminal profiling, assessment of criminal responsibility, jury psychology and psychopathy.
Three lectures; one term
Prerequisite(s): Completion of at least 9 units of Psychology (PSYCH and/or PNB) courses and registration in Level III or above; or ISCI 2A18 A/B

PSYCH 3D03 - THE MULTISENSORY MIND

This course will consider how unisensory phenomena rely on more than one sensory modality. Topics will include: flavour, posture, music, empathy, synesthesia and sensory substitution.
Three lectures; one term
Prerequisite(s): PNB 2XA3 or both PSYCH 2H03 and 2E03; and one of LIFESCI 2CC3, PNB 2XB3, PSYCH 2NF3 or ISCI 2A18 A/B; and registration in an Honours program

PSYCH 3EV3 - EVOLUTION AND MENTAL HEALTH

This seminar course explores how evolutionary theory can be used to examine fundamental issues in mental health science.
Three lectures; one term
Prerequisite(s): PSYCH 3M03 and registration in Level III or above

PSYCH 3F03 - EVOLUTION AND HUMAN BEHAVIOUR

The study of human social psychology and behaviour in light of evolutionary theories. Topics include family relations, sex differences, mate choice,

cooperation and conflict, and universality and diversity across cultures.
Three lectures; one term
Prerequisite(s): One of ANTHROP 2D03, LIFESCI 2D03, PNB 2XC3, PSYCH 2GG3; or BIOLOGY 1A03, BIOLOGY 1M03; or BIOLOGY 1M03, HTHSCI 1I06 A/B; or ISCI 1A24 A/B

PSYCH 3FA3 - NEUROSCIENCE OF LEARNING AND MEMORY

Learning and memory mechanisms will be discussed from several perspectives ranging from cognitive neuroscience to synaptic physiology.
Three lectures, one tutorial (two hours); one term
Prerequisite(s): One of ISCI 2A18 A/B, LIFESCI 2CC3, PNB 2XB3, PSYCH 2NF3

PSYCH 3JJ3 - SOCIO-EMOTIONAL DEVELOPMENT

Discusses historical and contemporary topics related to socio-emotional development from infancy to middle childhood, with an emphasis on the development of maladaptive social behaviours.
Three lectures; one term
Prerequisite(s): PSYCH 2C03; and credit or registration in one of PSYCH 2AA3 or 3GG3; and registration in Level III or IV of an Honours program

PSYCH 3M03 - MOTIVATION AND EMOTION

The biological basis of motivation and emotion in humans and other mammals, with an integration of evolutionary, physiological, developmental, and social perspectives.
Three lectures; one term
Prerequisite(s): One of LIFESCI 2D03, PNB 2XC3, PSYCH 2GG3; and one of ISCI 2A18 A/B, LIFESCI 2CC3, PNB 2XB3, PSYCH 2NF3

PSYCH 3MT3 - PSYCHOMETRICS

An introduction to theoretical and practical concepts in standardized psychological measurement. It will cover applications in areas, such as education, employment, health, and clinical psychology.
Three lectures; one term
Prerequisite(s): One of PSYCH 1F03, 1N03, 1X03, and one of PSYCH 1FF3, 1NN3, 1XX3, and one of ARTSSCI 2R03, COMMERCE 2QA3, ECON 2B03, HTHSCI 2A03, 2GG3, LINGUIST 2DD3, PNB 2XE3, SOCSCI 2J03, STATS 2B03, 2D03, or credit or registration in HUMBEHV 3HB3 or 3ST3, and registration in Level III or above; or registration in Level III or IV of an ISCI program or B.H.Sc. (Honours) program

PSYCH 3NL3 - COGNITIVE NEUROSCIENCE OF LANGUAGE

- survey of the current scientific literature dealing with brain function related to language processes in typical and special populations.

Three hours; one term
Prerequisite(s): Registration in Level III or IV of a program in Linguistics, Cognitive Science of Language or Honours or Combined Honours Psychology, Neuroscience & Behaviour program or an Honours Applied Psychology in Human Behaviour (B.A.Sc.) program.
Cross-list(s): LINGUIST 3NL3
This course is administered by the Department of Linguistics and Languages.

PSYCH 3SP3 - THE SCIENCE OF PERFORMANCE

This course explores empirical, methodological and cultural aspects of the study of performance, with a principal focus on the performing arts (music, dance, and theatre).
Three lectures; one term
Prerequisite(s): One of PNB 2XA3, PSYCH 2E03 or PSYCH 2H03; and one of ARTSSCI 2R03, HTHSCI 2A03, 2GG3, HUMBEHV 3HB3 or 3ST3, LINGUIST 2DD3, PNB 2XE3, 3XE3, SOCSCI 2J03, STATS 2B03, 2D03; and registration in Level III or IV of an Honours program; or ISCI 2A18 A/B. PSYCH 2MP3 (MUSICCOG 2MP3) is recommended.
Cross-list(s): MUSICCOG 3SP3

PSYCH 3T03 - BEHAVIOURAL ECOLOGY

This course will explore proximate causes and ultimate function of behaviour from the perspective of evolutionary and ecological theory. Topics include aggression, altruism, kinship, parent-offspring interaction, sex and reproduction. In addition, students will have a chance to learn how behaviour can be studied to better understand human impacts on the environment.
Three lectures; one term
Prerequisite(s): One of BIOLOGY 2C03, 2F03, 3FF3, 3SS3, ISCI 2A18 A/B, LIFESCI 2D03, PNB 2XC3
Antirequisite(s): LIFESCI 3C03

PSYCH 3TT3 - SCIENCE OF TEACHING AND LEARNING

Students will gain practical experience with teaching methods and communication skills relevant to psychology, neuroscience and behaviour and explore issues in educational psychology. Applications must be submitted by March 1 of the preceding academic year, with selection for placements announced by May 15.
Three lectures; one term
Prerequisite(s): A grade of A- in both PSYCH 1X03 (or 1F03) and PSYCH 1XX3 (or 1FF3) or ISCI 1A24 A/B; and registration in Level III or IV of an Honours program; and permission of the instructor/ coordinator

PSYCH 3VV3 - HUMAN MEMORY

This course focuses on a selected set of themes that have shaped the study of human memory over the past half century. These themes will be considered in light of contemporary research that encourages critical analysis of widely held beliefs about human memory.
Three lectures; one term
Prerequisite(s): PNB 2XA3 or PSYCH 2H03; and registration in Level III or IV of an Honours program

PSYCH 3WA3 - THE MIND AS A WORK OF ART

This course explores how the arts can be used as a model to understand the nature of human cognition and behaviour. Through an analysis of the psychology and neuroscience of visual art, theatre, dance and music, we can develop an understanding of perception, learning, memory, motor control, reasoning, problem solving, decision making, language, emotion, motivation, and social cognition.
Three lectures; one term
Prerequisite(s): One of PNB 2XA3 or PSYCH 2H03 and registration in Level III or above of an Honours program

PSYCH 4KK3 - BAYESIAN INFERENCE

This course explores a sophisticated method for drawing inferences from data, used both for statistical analysis and as a model of human brain function.
Three lectures, one tutorial (optional and virtual); one term
Prerequisite(s): One of ARTSSCI 1D06 A/B, ISCI 1A24 A/B, MATH 1A03, 1LS3, 1X03 and one of ARTSSCI 2R03, ECON 2B03, GEOG 3MB3, HTHSCI 2A03, 2GG3, ISCI 2A18 A/B, PNB 3XE3, STATS 2B03, 2D03, 2MB3, 3J04, 3Y03; and registration in Level III or above of an Honours program

PSYCH 4MP3 - NEUROSCIENCE OF MUSIC

This seminar explores theories on how and why music evolved, and how the perception, development, performance and emotional experience of music are mediated by the brain. Primary source materials are discussed in class and experimental designs developed to address critical questions.
Three hours (lecture/seminar); one term
Prerequisite(s): MUSICCOG 2MP3, or PSYCH 2MP3 or PSYCH 3H03; and registration in a Music Cognition program (B.A., B.Arts.Sc., B.Mus., B.Sc.), or PNB 2XA3 or PSYCH 2E03 and registration in an Honours program, or ISCI 2A18 A/B; or permission of the instructor. PSYCH 2E03 is recommended.
Cross-list(s): MUSICCOG 4MP3

PSYCH 4R03 - SPECIAL TOPICS IN ANIMAL BEHAVIOUR

An advanced seminar focusing on selected topics in animal behaviour.
Seminar and discussions (three hours); one term
Prerequisite(s): PNB 2XC3 or PSYCH 2GG3; and PSYCH 3F03 or PSYCH 3T03; and registration in Level IV of an Honours Biology, or an Honours or Combined Honours Psychology, Neuroscience & Behaviour program
This course may be repeated, if on a different topic.

Russian

Courses in Russian are administered by the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/

Department Notes

1. Students should note that the Department has classified its Russian language courses under the following categories:
   - **Introductory Level Language Courses:** RUSSIAN 1Z03, 1ZZ3
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

Courses

If no prerequisite is listed, the course is open.

RUSSIAN 1Z03 - INTENSIVE BEGINNER'S RUSSIAN I

This course is designed for students with no prior knowledge of Russian. Students will learn the Cyrillic alphabet, some basic rules of pronunciation and the essentials of Russian grammar. The sequel to this course is RUSSIAN 1ZZ3.
Three hours; one term
Antirequisite(s): Grade 12 U or M equivalent
Not open to students with credit in RUSSIAN 1ZZ3. The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 1ZZ3 - INTENSIVE BEGINNER'S RUSSIAN II

This course is designed to develop the four basic skills of listening, speaking, reading and writing. Students will continue to learn new vocabulary and the essentials of Russian grammar and to use them in simple conversations and in writing. The sequel to this course is RUSSIAN 2Z03.
Three hours; one term
Prerequisite(s): RUSSIAN 1Z03
Antirequisite(s): Grade 12 U or M equivalent
The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 2G03 - MASTERPIECES OF RUSSIAN LITERATURE IN FILM AND TV SERIES (TAUGHT IN ENGLISH)

An examination of 19th and 20th century Russian literature through the prism of contemporary film and TV series, with a special focus on interpretations offered by European and North American cinema.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

RUSSIAN 2H03 - SOVIET PROPAGANDA IN FILMS AND OTHER MASS MEDIA (TAUGHT IN ENGLISH)

- study of Soviet and post-Soviet propaganda in films, news, posters, TV reels, and other mass media. The "fake news" phenomenon is explored through the history of propaganda in Soviet Union and other countries.

Three hours; one term
Prerequisite(s): Registration in Level II or above of any program

Sanskrit

Courses in Sanskrit are administered by the Department of Religious Studies.
University Hall, Room 123, ext. 23109
http://religiousstudies.mcmaster.ca

Department Notes

1. Students are advised to consult both the Department (University Hall, Room 123) and the Undergraduate Timetable for a list of the courses offered in the current year.
2. Students wishing to specialize in Asian Religious Traditions should consider beginning language training in Sanskrit or Japanese or both early in their program (See Sanskrit course offerings listed below or course offerings listed under *Japanese* in the *Course Listings* section of this Calendar).

Courses

If no prerequisite is listed, the course is open.

SANSKRIT 2A03 - INTRODUCTION TO SANSKRIT I

Introduction to the Sanskrit alphabet and basic grammar. No previous knowledge of Sanskrit is required.
Lectures, discussion (four hours); one term
Cross-list(s): SCAR 2SK3

SANSKRIT 2B03 - INTRODUCTION TO SANSKRIT II

This course will continue the study of Sanskrit grammar.
Lectures, discussion (four hours); one term
Prerequisite(s): SANSKRIT 2A03 or SCAR 2SK3
Cross-list(s): SANSKRIT 2B03

SANSKRIT 3A03 - READINGS IN SANSKRIT

This course introduces students to selected readings in Sanskrit texts.
Lectures, discussion (4 hours); one term
Prerequisite(s): SANSKRIT 2B03 or SCAR 2SB3
Cross-list(s): SCAR 3SA3

SANSKRIT 3B03 - ADVANCED READINGS IN SANSKRIT

Intermediate course with readings in selected Sanskrit texts.
Lectures, discussion (four hours); one term
Prerequisite(s): SANSKRIT 2B03 or SCAR 2SB3
Cross-list(s): SCAR 3SB3

School for Eng Practice

SEP 4X03 - LIVABLE CITIES, THE BUILT AND NATURAL ENVIRONMENT

This course explores urban renewal with respect to concepts of the natural and built environment. Students are expected to apply various tools and evaluate the methods that promote best practices, in the context of theory and case studies.

Science

Courses with the subject code SCIENCE are administered by the Faculty of Science.
Burke Science Building, Room 136, ext. 27590
http://www.science.mcmaster.ca/
science@mcmaster.ca

Courses

If no prerequisite is listed, the course is open.

SCIENCE 1A03 - INVESTIGATING SCIENCE: OPPORTUNITIES & EXPERIENCES

Designed to prepare students for their university careers through the introduction to the people, academic programs, resources and attitudes needed during their undergraduate studies. Course content is taught through in-class sessions and mini-projects and will focus on investigating science through research to explore the opportunities and experiences available to students in the Faculty of Science.
Lecture (two hours), tutorial (three hours); one term
Prerequisite(s): Registration in one of Chemical and Physical Sciences Gateway, Environmental and Earth Sciences Gateway, Life Sciences Gateway, or Mathematics and Statistics Gateway
This course is administered by the School of Interdisciplinary Science (SIS).

SCIENCE 2A03 - PEER MENTORING IN SCIENCE

This course will engage students in considering the role of mentorship in their science education and developing their own mentoring skills. It explores the theory and practice of how mentoring benefits both mentors and mentees. Emphasis will be placed on facilitative leadership, reflective practice, and scientific discourse. Students will gain practical experience, as well as leadership and communication skills, which can be applied to the development of peer-mentoring relationships with science students transitioning to university.
Three hours (seminar), three hours (tutorial); one term
Prerequisite(s): SCIENCE 1A03, registration in Level II or above of an Honours program in the Faculty of Science, and a GPA of at least 7.0; or permission of the Department
Not open to students with credit in SCIENCE 3A03.
This course is administered by the School of Interdisciplinary Science (SIS).

SCIENCE 2AR3 - FOUNDATIONS OF SCIENCE: EQUITY, JUSTICE AND ANTI-RACISM IN SCIENCE

In this course, students will be exposed to an interdisciplinary curriculum, which examines the intersections of equity, justice and anti-racism with science. Students will learn from case studies, literature and guest speakers about the following themes: current status of global science; demographics of scientists in North America and the world; historical trajectories or science disciplines; documented experiences and individual stories of racialized scientists, and scientists from other equity denied group; progress, trends and issues of race and representation in science disciplines; equity and justice-centered language and terminology; and current initiatives and support systems available to students at McMaster.
Lectures (three hours); one term
Prerequisite(s): Registration in Level II or above.

SCIENCE 2C00 - SKILLS FOR CAREER SUCCESS IN SCIENCE

Develop career skills (resume, cover letter, interview, job search, networking, professionalism) necessary to create a career path.
This course is evaluated on a Complete/Fail basis.
Eight lectures/workshops (each one hour); one term (Classes may be delivered over eight weeks or two days)
Prerequisite(s): Registration in Level I or above of any program in the Faculty of Science
Students intending to register in a Co-op program in Level III must complete this course prior to the start of Level III and, therefore, are strongly encouraged to complete this course in Level I or II.

SCIENCE 2D00 - SKILLS FOR CAREER SUCCESS IN BIOCHEMISTRY

Develop career skills (resume, cover letter, interview, job search, networking, professionalism) necessary to create a career path.
This course is evaluated on a Complete/Fail basis.
Eight lectures/workshops (each one hour); one term (Classes may be delivered over eight weeks or two days)
Prerequisite(s): Registration in Level II or above of an Honours Biochemistry program or Honours Biology and Pharmacology Co-op program (B.H.Sc.)
Antirequisite(s): SCIENCE 2C00
Students intending to register in a Co-op program in Level III must complete this course prior to the start of Level III and, therefore, are strongly encouraged to complete this course in Level II.

SCIENCE 2EP3 A/B S - APPLIED PLACEMENT

This course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. In addition to successfully completing a minimum of 60 hours of placement work, students must complete specific academic components that will be evaluated.
Students are responsible for arranging a suitable placement and supervision, and are required to submit an online application, and confirmation of a placement supervisor to the Office of Undergraduate Research thirty days prior to the date classes begin each Term (see the Sessional Dates section of this Calendar). More information and the online application can be found on the Office of Undergraduate Research (OUR) website.
Occasional lecture/tutorial; may be completed over one or two terms
Prerequisite(s): Registration in Level II of any program in the Faculty of Science and permission of the Director, Office of Undergraduate Research (OUR) or delegate
Not open to students with credit or registration in any Level III or IV department- or program-based applied placement, internship, practicum, thesis or independent study/project course.
This course is administered by the Office of Undergraduate Research (OUR).

SCIENCE 2P03 - IMPACTFUL INITIATIVES IN HEALTH

The IMPACT (Interdisciplinary, Mentorship, Practice, Applied, Community, Transformative) initiative collaboratively engages undergraduate and graduate students from various Faculties, McMaster alumni, healthcare partners, and real community clients to understand and address challenges experienced by people living with disabilities associated with the conditions of arthritis,

cerebral palsy, dementia, expressive aphasia, multiple sclerosis, amyotrophic lateral sclerosis, Parkinsons disease, and visual impairment related to diabetes. Students will learn and mobilize their applied and conceptual knowledge of science to collaboratively create customized devices that help real community clients with activities critical to their health to improve their quality of life. Lectures/tutorials (three hours); one term

Prerequisite(s): Grade 12 Biology U or BIOLOGY 1P03; and registration in Level II or above of any Arts & Science program, the Honours Bachelor of Health Sciences program, an Honours Biochemistry program, or any program in the Faculty of Science; or permission of the instructor

Antirequisite(s): SCIENCE 1P03 Students will be required to participate in collaborative interdisciplinary design reviews (minimum of four hours) outside of lecture/tutorial time.

SCIENCE 2RP3 A/B S - RESEARCH PLACEMENT

Students will gain practical research experience, as directed by a faculty member, in a wide range of scientific lab/field settings or as part of a faculty member's research program. During this course, the student will learn introductory research skills/techniques and will use these techniques to make a meaningful contribution to the supervisor's research program. Students are expected to commit to approximately 5-10 hours per week (on average) for one term. Students will also be required to attend departmental seminars/colloquia of their interest (3 seminars per term).

Students are responsible to arrange a suitable research experience and supervision, and are required to submit an online application, and confirmation of an academic supervisor to the Office of Undergraduate Research thirty days prior to the date classes begin each Term (see the Sessional Dates section of this Calendar). More information and the online application can be found on the Office of Undergraduate Research (OUR) website.

Occasional lecture/tutorial; may be completed over one or two terms

Prerequisite(s): Registration in Level II of any program in the Faculty of Science and permission of the Director, Office of the Undergraduate Research (OUR) or delegate

Not open to students with credit or registration in any Level III or IV department- or program-based applied placement, internship, practicum, thesis or independent study/project course. This course is administered by the Office of Undergraduate Research (OUR).

SCIENCE 3C00 - ADVANCED JOB SEARCH SKILLS FOR SCIENCE CO-OP STUDENTS

This course will develop advanced skills in conducting a successful job search and prepare students for

their first work term. Using case studies and drawing on current best practice in career education, students will further develop their professional acumen and maximize their accomplishments during their time in co-op.

This course is evaluated on a Complete/Fail basis.

Eight, one hour seminars (four in person, four asynchronous); one term, only available in Fall Term

Prerequisite(s): SCIENCE 2C00; and registration in a co-operative education program in the Faculty of Science

Completion of SCIENCE 3C00 is required before the first work placement.

SCIENCE 3D00 - ADVANCED JOB SEARCH SKILLS FOR CO-OP STUDENTS

This course will develop advanced skills in conducting a successful job search and prepare students for their first work term. Using case studies and drawing on current best practice in career education, students will further develop their professional acumen and maximize their accomplishments during their time in co-op.

Eight, one hour seminars (four in person, four asynchronous); one term, only available in Fall Term

Prerequisite(s): SCIENCE 2C00 or 2D00; and registration in B.H.Sc. Biochemistry - Biomedical Research Specialization Co-op program or B.H.Sc. Biology and Pharmacology Co-op Program

Antirequisite(s): SCIENCE 3C00

Completion of SCIENCE 3D00 is required before the first work placement.

This course is evaluated on a Complete/Fail basis.

SCIENCE 3EP3 A/B S - APPLIED SCIENCE PLACEMENT

This course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. In most cases, these placements require an academic and a site placement supervisor (typically, off-campus). In addition to successfully completing a minimum of 60 hours of placement work, students must complete an academic component that will be evaluated.

Students are responsible to arrange a suitable placement and supervision, and are required to submit an application, including a detailed learning contract to the Science Career & Cooperative Education office thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). More information and the application form can be found at https://www.science.mcmaster.ca/scce/experiential-learning/experiential-education.html.

May be completed over one or two terms

Prerequisite(s): Credit or registration in SCIENCE 2C00; and registration in Level III or above of a program in the Faculty of Science; and permission of the academic supervisor and the Director, Science Career & Cooperative Education or delegate

Students with credit or registration in any department- or program-based applied placement, internship or practicum course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively different for consideration.

SCIENCE 3EX6 A/B S - APPLIED SCIENCE PLACEMENT

This course provides students with the opportunity to explore career options and integrate academics with a community, volunteer or professional experience. In most cases, these placements require an academic and a site placement supervisor (typically, off-campus). In addition to successfully completing a minimum of 120 hours of placement work, students must complete an academic component that will be evaluated.

Students are responsible to arrange a suitable placement and supervision, and are required to submit an application, including a detailed learning contract to the Science Career & Cooperative Education office thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). More information and the application form can be found at https://www.science.mcmaster.ca/scce/experiential-learning/experiential-education.html.

Two terms

Prerequisite(s): Credit or registration in SCIENCE 2C00; and registration in Level III or above of a program in the Faculty of Science; and permission of the academic supervisor and the Director, Science Career & Cooperative Education or delegate

Students with credit or registration in any department- or program-based applied placement, internship or practicum course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively distinct for consideration.

SCIENCE 3IE0 - UNDERGRADUATE SCIENCE INTERNSHIP

Full-time, academically relevant, paid, 4-month internship approved by the Science Career & Cooperative Education office. Students secure work placements, in consultation with the Science Career & Cooperative

Education office, with participating companies through an application and interview process. Students wishing to extend the duration of their SCIENCE 3IE0 internship to 8, 12 or 16 months, with permission of the Director, Science Career & Cooperative Education; will enrol in SCIENCE 3IF0, 3IG0, 3IH0 in the subsequent terms.
This course is evaluated on a Complete/Not Complete basis.
Four months in length
Prerequisite(s): Completion of SCIENCE 2C00 and all mandatory orientation activities; and registration in Level II or III of an Honours program in the Faculty of Science, with at least 9 units of course work left to complete; and permission of the Director, Science Career & Cooperative Education
Course fee is payable to McMaster University within first month of internship.

SCIENCE 3IF0 - UNDERGRADUATE SCIENCE INTERNSHIP

Extends SCIENCE 3IE0 to an eight month internship.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3IE0; and registration in Level II or III of an Honours program in the Faculty of Science, with at least 9 units of course work left to complete; and permission of the Director, Science Career & Cooperative Education
Course fee is payable to McMaster University within first month of internship.

SCIENCE 3IG0 - UNDERGRADUATE SCIENCE INTERNSHIP

Extends SCIENCE 3IE0 to a 12-month internship.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3IF0; and registration in Level II or III of an Honours program in the Faculty of Science, with at least 9 units of course work left to complete; and permission of the Director, Science Career & Cooperative Education
Course fee is payable to McMaster University within first month of internship.

SCIENCE 3IH0 - UNDERGRADUATE SCIENCE INTERNSHIP

Extends SCIENCE 3IE0 to a 16-month internship.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3IG0 and registration in Level II or III of an Honours program in the Faculty of Science, with at least 9 units of course work left to complete; and permission of the Director, Science Career & Cooperative Education
Course fee is payable to McMaster University within first month of internship.

SCIENCE 3RP3 A/B S - RESEARCH PRACTICUM

Students will conduct research, as directed by a faculty member, in a wide range of scientific lab/field settings. Students will complete an academic component in addition to their research. Serves as excellent preparation for a Level IV Thesis or Independent Study experience.
Students are responsible to arrange a suitable research experience and supervision, and are required to submit an application, including a detailed learning contract and confirmation of an academic supervisor to the Science Career & Cooperative Education office thirty days prior to the date classes begin in each Term (see the Sessional Dates section of this Calendar). More information and the application form can be found at https://www.science.mcmaster.ca/scce/experiential-learning/experiential-education.html.
Minimum of 6 hours per week is required over the duration of the research experience (scheduling to be arranged by supervisor); one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Science; and permission of the academic supervisor and the Director, Science Career & Cooperative Education or delegate. Credit or registration in SCIENCE 2C00 is recommended.
Students with credit or registration in any department- or program-based independent study or research seminar course within the University, who wish to complete more than one opportunity, must demonstrate each experience is substantively distinct for consideration.

SCIENCE 3WT0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office. Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students compete for employment with participating companies through an application and interview process, as well as conduct a personalized job search. Upon completion of the co-op work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is evaluated on a Complete/Not Complete basis.
Students will register in this course in Level III in both, the Winter Term (January to April) and Spring/Summer Term (May to August)
Prerequisite(s): SCIENCE 3C00; and registration in Level III of an Honours Co-op program in the Faculty of Science; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

SCIENCE 3WW0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office. Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students compete for employment with participating companies through an application and interview process, as well as conduct a personalized job search. Upon completion of the co-op work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is graded on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3C00; and registration in Level III of the B.H.Sc. Biochemistry Biomedical Research Specialization Co-op Program or B.H.Sc. Biology and Pharmacology Co-op Program; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

SCIENCE 4AR6 - INQUIRY IN EQUITY, JUSTICE AND ANTI-RACISM IN SCIENCE

In this course, students will build on themes introduced in SCIENCE 2AR3. Specifically, they will carry out inquiry-based research into topics that examine the intersections of equity, justice and anti-racism with science. Students will receive guidance and mentorship on their projects from a faculty member in the Faculty of Science. Supervisors from other Faculties may be approved on an individual basis by the course coordinator. Students are responsible for securing a suitable project supervisor in consultation with the course coordinator at least one month prior to the date classes begin (see the Sessional Dates section of this Calendar).
In-person; one term
Prerequisite(s): SCIENCE 2AR3 or permission of instructor(s)

SCIENCE 4WT0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office. Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students
compete for employment with participating companies through an application an interview process, as well as conduct a personalized job search. Upon completion of the coop work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is graded on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3WT0; and registration in Level IV of an Honours Co-op program in the Faculty of Science; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

SCIENCE 4WW0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office.
Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students compete for employment with participating companies through an application and interview process, as well as conduct a personalized job search. Upon completion of the co-op work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 3WW0; and registration in Level IV of the B.H.Sc. Biochemistry Biomedical Research Specialization Co-op Program or B.H.Sc. Biology and Pharmacology Co-op Program; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

SCIENCE 5WT0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office. Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students compete for employment with participating companies through an application and interview process, as well as conduct a personalized job search. Upon completion of the co-op work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is graded on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 4WT0; and registration in Level V of an Honours Co-op program in the Faculty of Science; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

SCIENCE 5WW0 - SCIENCE CO-OP WORK TERM

Full-time, academically relevant, paid work experiences, approved by the Science Career & Cooperative Education office.
Students enrolled in Co-op programs must be registered in full-time studies, including all prescribed courses, during the academic terms of their program (a minimum of 18 units in a full-term; and at least 9 units in a half-term) and will be charged per unit registered. An additional Science Co-op fee will be charged for each work term of a Co-op program. Students compete for employment with participating companies through an application and interview process, as well as conduct a personalized job search. Upon completion of the co-op work term, all students must submit a Final Work Term Report for evaluation and receive a successful employer evaluation.
This course is evaluated on a Complete/Not Complete basis.
Prerequisite(s): SCIENCE 4WW0; and registration in Level V of an Honours Co-op program in the Faculty of Science or the B.H.Sc. Biochemistry Biomedical Research Specialization Co-op Program or B.H.Sc. Biology and Pharmacology Co-op Program; and completion of all mandatory orientation activities; and permission of Director, Science Career & Cooperative Education

Science Communication

Courses in Science Communication are administered by the School of Interdisciplinary Science (SIS).
A.N. Bourns Science Building, Room C501, ext. 21181

Email: sis@mcmaster.ca
https://sis.mcmaster.ca/undergraduate/sis-open-science-courses/
Courses
If no prerequisite is listed, the course is open.

SCICOMM 2A03 - FOUNDATIONS IN SCIENCE COMMUNICATION

In this course, students learn and practice the basics of effective written, visual and oral science communication. They create written reports and summaries, graphics and data visualizations, short talks and other communications on a range of scientific topics. They also engage with the growing field of science communication research.
Lecture (two hours), tutorials (two hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): ISCI 1A24 A/B
Not open to students with credit in LIFESCI 2AA3.
This course may be offered in-person or online. Students are encouraged to check scheduling information and the course outline to confirm the course offering details. This course is administered by the School of Interdisciplinary Science (SIS).

SCICOMM 2M03 - ENGAGING YOUR WORLD: SCIENCE FOR THE GLOBAL CITIZEN

Examines the linkage between science and society. Topics include: How can science address the key challenges in our society? How does society impact the way that science is conducted? Examines basic scientific theories and concepts and highlights the application and interpretation of science in the context of popular media and policy. Since policies on issues relevant to human health and our environment are informed by the work of scientists, we want to establish a common ground of understanding about how science is conducted, how knowledge changes, and how we can be better consumers of scientific information.
Lecture (two hours), tutorials (two hours); one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): SCIENCE 2M03
This course is administered by the School of Interdisciplinary Science (SIS).

SCICOMM 2NM3 - MEDIA NUMERACY: TELLING STORIES WITH NUMBERS

As public discourse moves to a 'post-truth' era, the evaluation of numerical information used in support of narratives is an essential skill in a democratic society. Course develops simple, practical numeracy skills to interpret and compare the stories told by text and numbers in articles selected from the popular media. Content delivered through class discussion and presentations.
Three hours (lectures); one term
Cross-list(s): PHYSICS 2NM3
This course is administered by the Department of Physics and Astronomy.

SCICOMM 3P03 - COMMUNICATING SCIENCE FOR PUBLIC AUDIENCES

In this course, students apply principles of inclusive science communication to engage diverse audiences with science and its applications. Students explore different audiences, purposes and venues for science communication, critique poor science communication, and create text and visuals that inform and inspire.
Lectures (two hours), virtual tutorials (two hours); one term
Prerequisite(s): One of ISCI 1A24 A/B, LIFESCI 2AA3, SCICOMM 2A03; and registration in Level III or above
Cross-list(s): LIFESCI 3P03
This course is administered by the School of Interdisciplinary Science (SIS). Life Sciences students interested in this offering should refer to LIFESCI 3P03

SCICOMM 3PP3 - COMMUNICATING SCIENCE FOR PROFESSIONAL AUDIENCES

In this course, students practice communicating science in different formats for varied professional audiences, such as other scientists, clinicians, investors, regulatory bodies and policymakers. They also critically analyze how professional science communication can influence public perceptions of science.
Lectures (two hours), virtual tutorials (one hour); one term
Prerequisite(s): One of ISCI 1A24 A/B, LIFESCI 2AA3, SCICOMM 2A03; and registration in Level III or above of an Honours program
Antirequisite(s): ISCI 2A18 A/B
Cross-list(s): LIFESCI 3PP3
Life Sciences students interested in this offering should refer to LIFESCI 3PP3.

SCICOMM 4A03 - INDEPENDENT PROJECT IN SCIENCE COMMUNICATION

In this course, students work with an academic supervisor on a research or creative project in science communication. More information and the online application can be found on the School of Interdisciplinary Science (SIS) website (https://sis.mcmaster.ca/undergraduate/life-sciences/experiential-education/independent-project-science-communication/). Students are responsible for arranging a suitable independent project and supervision and are required to submit an online application thirty days prior to the date classes begin in each term (see the Sessional Dates section of this Calendar). Normally students will complete 60 hours of independent study work through the duration of the course.
Prerequisite(s): One of LIFESCI 3P03, 3PP3, SCICOMM 3P03, 3PP3; and registration in Level IV or above of an Honours program and permission of the supervising faculty member and the School of Interdisciplinary Science (SIS)

Smart Engineering Technology

Courses in Smart Engineering Technology are administered by the W. Booth School of Engineering Practice and Technology.

SMRTTECH 3CC3 - CLOUD COMPUTING AND INTERNET OF THINGS

This course covers advanced sensor and actuator technology, robotics and vision systems, selection and integration of components for autonomous or collaborative smart systems, as well as components that enable data access of smart systems using IoT communication protocols, internet technologies, network security, and cloud computing.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 1CP3, 1PR3, PROCTECH 2EE3, 2IC3 and registration in level III or above of the Automation Systems Engineering Technology Co-op program

SMRTTECH 3DE3 - DIGITAL ELECTRONICS

This course covers the theory and principles of electronic devices and digital circuits. Attention is devoted to topics related to logic gates, flip-flops, encoders, decoders, advanced digital systems, power switching and control, and digital control of power electronics.
Three lectures, one lab (three hours); first term
Prerequisite(s): PROCTECH 2EE3, ENGTECH 2MT3 and registration in level III of the Automation Systems Engineering Technology Co-op program

SMRTTECH 4AI3 - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

This course deals with concepts of Artificial Intelligence and Machine Learning. It covers supervised classification based on artificial neural networks - deep Learning, as well as unsupervised learning - clustering, regression, optimization and reinforcement learning. In addition the course covers application in artificial intelligent systems.
Three lectures, one lab (three hours); first term
Prerequisite(s): ENGTECH 2MT3, 1PR3, 4EE0, SMRTTECH 4ID3, SMRTTECH 4ID3 and registration in level IV of the Automation Systems Engineering Technology Co-op program, OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program
Antirequisite(s): SFWRTECH 4AI3, MANTECH 4AI3, ENGTECH 4AI3

SMRTTECH 4ES3 - EMBEDDED SYSTEMS

This course teaches the design and implementation of embedded hardware and software systems. Topics covered include design of real-time embedded systems, hardware, interfacing a variety of external devices, control systems, real-time operating systems, and real-time issues pertinent to embedded control systems.
Three lectures, one lab (three hours); second term
Prerequisite(s): PROCTECH 2EE3, ENGTECH 1CP3, 1PR3, SMRTTECH 3DE3 and registration in level IV of the Automation Systems Engineering Technology Co-op program and permission from the Department
Co-requisite(s): SMRTTECH 4ID3

SMRTTECH 4HM3 - HUMAN MONITORING AND SMART HEALTH SYSTEMS

This project based course covers human monitoring and health data acquisition, monitoring of respiratory activities and other vital signs, wearable and contactless sensors, multi-sensor platform for circadian rhythm analysis, signal processing, networked and mobile systems for vital signs monitoring through wired and wireless Local Area Networks, cloud, and the Internet of Things (IoT).
Three lectures, one lab (three hours every other week), one tutorial (one hour); first term
Prerequisite(s): SMRTTECH 3DE3, ENGTECH 4EE0 and registration in level

IV of the Automation Systems Engineering Technology Co-op program; or registration in level IV of the Biotechnology Co-op program

SMRTTECH 4ID3 - IOT DEVICES AND NETWORKS

This course teaches how the Internet of Things IoT works. Students learn about IoT networks and how things connect to networks, including whether the connection and processing is local (fog computing), is on the network edge (edge computing), or is remote (cloud computing). In addition students learn IoT data networks, connection types, layer models and IoT network protocols and standards.
Three Lectures, one lab (3 hours); second term
Prerequisite(s): SMRTTECH 3CC3, 3DE3, and registration in level IV of the Automation Systems Engineering Technology Co-op program and permission from the Department, OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program
Co-requisite(s): SMRTTECH 4ES3

SMRTTECH 4SC3 - SMART CITIES AND COMMUNITIES

This course covers deployment of city and community networks, computation of data extracted from connected devices on the city, and sharing of analyzed data across agencies. The course also covers city wide system monitoring and predictive modeling to optimize and improve services such as parking and public transportation, low energy consumption, increase safety, reduce traffic congestion, and protect infrastructure.
Three lectures, one lab (three hours every other week); first term
Prerequisite(s): SMRTTECH 4ES3, SMRTTECH 4ID3, ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program

Social Psychology

Courses in Social Psychology are administered by the Social Psychology Office.
Kenneth Taylor Hall, Room 212, ext. 22241
https://socialpsychology.mcmaster.ca/

Department Note

Students study various aspects of Social Psychology from a multidisciplinary perspective to gain an understanding of how individuals behave and psychologically thrive, how small groups and communities interact, and how societies form practices and priorities. Students will learn how to locate themselves in the complex fabrics of their cultures, their geographies and their power relationships. This program is ideal for students who are interested in many social science perspectives on how people develop over the lifespan, how they behave in different environmental contexts, and how psychological health plays a role in these dynamics.

Courses

If no prerequisite is listed, the course is open.

SOCPSY 1Z03 - AN INTRODUCTION TO SOCIAL PSYCHOLOGY

This course offers an introduction to social psychology from a social sciences perspective. The course will explore the various ways people think about, affect, and relate to one another.
Three hours; one term

SOCPSY 2B03 - PSYCHOLOGY OF WELL-BEING

An exploration of what social psychological perspectives and research can contribute to the quest for physical, mental, emotional and spiritual well-being.
Three hours; one term
Prerequisite(s): Registration in Level II or above in Honours Social Psychology

SOCPSY 2C03 - SOCIAL PSYCHOLOGY OF POPULAR CULTURE

This course investigates, through three mediums of popular culture (film, television, music), what popular culture has to offer as a type of social science. What does popular culture have to show us about gender, authority, sexuality, image, family, institutions, social arrangements, hope, beauty, money, success, protest and many other topics as well?
Three hours; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): SOCSCI 2V03

SOCPSY 2D03 - MAKING AND BREAKING RULES

An exploration of social psychological perspectives and research in the arenas of law, justice, crime and deviance.
Three hours; one term
Prerequisite(s): Registration in Level II or above in Honours Social Psychology

SOCPSY 2E03 - PSYCHOLOGY OF INTERGROUP RELATIONS

This course explores social psychological theories and research on intergroup attitudes and behaviour. Topics include stereotyping, prejudice, discrimination, conflict, and cooperation.
Three hours; one term
Prerequisite(s): Registration in Level II or above; one of SOCPSY 1Z03, PSYCH 1X03, PSYCH 1F03, or SOCIOL 1Z03. Priority will be given to students registered in Honours Social Psychology.

SOCPSY 2F03 - PSYCHOLOGY OF CLOSE RELATIONSHIPS

This course explores social psychological theories and research on romantic relationships, friendships, and family relations. Topics include relationship initiation, maintenance, and dissolution, and links between relationship processes and psychopathology.
Three hours; one term
Prerequisite(s): Registration in Level II or above; one of SOCPSY 1Z03, PSYCH 1X03, PSYCH 1F03, HLTHAGE 1CC3, or SOCIOL 1Z03
Priority will be given to students registered in Honours Social Psychology.

SOCPSY 2K03 - RESEARCH METHODS IN SOCIAL PSYCHOLOGY

This course is designed to develop those skills necessary to pursue and understand research. Several general methods of research will be examined.
Three hours; one term
Prerequisite(s): Registration in Level II or above in Honours Social Psychology.
Antirequisite(s): CMST 2A03, GEOG 2MA3, HLTHAGE 2A03, SOCIOL 2Z03, SOC SCI 2K03

SOCPSY 2YY3 - THEORIES IN SOCIAL PSYCHOLOGY

An overview of the history and development of various social psychological perspectives and theories.
Three hours; one term
Prerequisite(s): Registration in Level II or above in Honours Social Psychology
Antirequisite(s): SOC SCI 3YY3, SOCPSY 3YY3

SOCPSY 3A03 - MENTAL HEALTH

An exploration of social psychological approaches and research to mental health. Topic areas may range from the social and cultural factors that affect definitions of normal/abnormal to those that affect who experiences mental

health issues and/or receives treatment.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Social Sciences
Priority will be given to students registered in Honours Social Psychology.

SOCPSY 3B03 - UNDERSTANDING LIVED EXPERIENCES

An exploration of individuals' experiences of everyday life using the theories and methods of social psychology. Changing foci may include experiences of sport and physical activity, health or illness, or stigma, marginalization and exclusion.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Social Sciences.

SOCPSY 3C03 - REGIMES OF SOCIAL CONTROL

An exploration of social psychological approaches and research as they apply to an understanding of the law, the criminal justice system and/or other regimes of social control in society.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Social Sciences.
Priority will be given to students registered in Honours Social Psychology.

SOCPSY 3E03 - BIG IDEAS/GREAT THINKERS IN SOCIAL PSYCHOLOGY

An exploration of social psychology through the lens of individuals whose work has contributed significantly to our understanding of the relationship between individuals and society.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours program in Faculty of Social Sciences
Antirequisite(s): SOCPSY 2L03

SOCPSY 3F03 - WHO AM I? SELF AND IDENTITY

An exploration of one of the central themes in social psychology how we define ourselves. The course emphasizes the relational roots of self and the social processes underlying how identities are formed and change.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours program in the Faculty of Social Sciences
Antirequisite(s): SOCPSY 2M03

SOCPSY 3H03 - INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

This course explores the psychology of work. Topics include the organizational effectiveness and dynamics involved in hiring, training, performance, leadership, and team behaviour.
Three hours; one term
Prerequisite(s): Registration in Level III or above; SOCPSY 1Z03.

SOCPSY 3K03 - RESEARCH EXPERIENCE

The student will work in partnership with a faculty member on a research project relevant to social psychology.
Three hours; one term
Prerequisite(s): Registration in Level III or above in Honours Social Psychology (Research Specialist Option) and approval in advance by Program Director.
SOCPSY 3K03 may repeated to a total of six units.

SOCPSY 3L03 - ADVANCED RESEARCH METHODS

Students will learn how to design a research project and compose an effective research proposal that would be suitable for a fourth-year thesis project or independent project in the health or social sciences.
Three hours; one term
Prerequisite(s): Registration in Level III or above of Honours Social Psychology; SOCSCI 2J03, SOCPSY 2K03.
Antirequisite(s): HLTHAGE 3G03, SOCIOL 3O03
Cross-list(s): HLTHAGE 3B03

SOCPSY 3M03 - COUNSELLING & PSYCHOTHERAPY

This course explores theoretical and clinical perspectives on couple and family counselling, cognitive behavioural therapy, interpersonal psychotherapy, narrative therapy, trauma-informed therapy, and dialectical behaviour therapy.
Three hours; one term
Prerequisite(s): Registration in Level III or above; one of SOCPSY 1Z03, PSYCH 1X03, PSYCH 1F03, or HLTHAGE 1CC3
Priority will be given to students registered in Honours Social Psychology.

SOCPSY 3OP3 - POLITICAL PSYCHOLOGY

Political psychology is an inter-disciplinary approach that draws on a range of social psychological concepts to understand political behaviour and dynamics. Addresses issues such as political knowledge, misinformation and opinion formation, political polarization, emotion and enmity, international and inter-societal conflict, and strategies for conflict reduction. Students will also be introduced to basic notions of the experimental design.
Three hours; one term
Prerequisite(s): SOCPSY 1Z03 and one of POLSCI 1AA3, 1AB3; or Level III or above in any Political Science or Social Psychology program.
Cross-list(s): POLSCI 3OP3
This course is administered by the Department of Political Science.

SOCPSY 3RR3 - IMPRISONMENT

An exploration of the history, politics, and consequences of incarceration on individuals and society.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours Program in the Faculty of Social Sciences
Cross-list(s): SOCIOL 3RR3

SOCPSY 3Y03 - APPLIED SOCIAL PSYCHOLOGY

Students engage in experiential learning to explore the areas in which social psychologists apply their methods, theories, principles and research findings, including education, the justice system, the media and health care.
Three hours; one term
Prerequisite(s): Registration in Level III or above in Honours Social Psychology.

SOCPSY 3ZZ3 - SMALL WORLDS: CHILDREN AND CHILDHOOD

An exploration of children and childhood from a social psychological perspective, including consideration of childhood as a social construction, socialization and experiences of childhood from a global perspective.
Three hours; one term
Prerequisite(s): Registration in Level III or above of an Honours Program in the Faculty of Social Sciences

SOCPSY 4A03 - ADVANCED RESEARCH EXPERIENCE

The student will work in partnership with a faculty member on a research project relevant to social psychology. Students will have an opportunity to practice more advanced research skills than in SOCPSY 3K03.
Three hours; one term
Prerequisite(s): Registration in Level IV in Honours Social Psychology - Research Specialist Option; SOCPSY 3L03; a Grade Point Average of at least 10.0 and approval in advance by the Program Director.

SOCPSY 4B03 - SPECIAL TOPICS IN SOCIAL PSYCHOLOGY

Topics of contemporary interest to social psychologists, with emphasis on current research. Students should consult the Social Psychology office for information about topics to be covered.
Three hours (lectures and discussion); one term
Prerequisite(s): Enrolment in Level IV of any Faculty of Social Sciences Honours Program.
Priority will be given to students registered in Honours Social Psychology. This course can be repeated to a maximum of 6 units, if on a different topic.

SOCPSY 4D03 - CONTEMPORARY SOCIAL ISSUES

An in-depth look at how social psychological perspectives can illuminate social issues, with foci ranging from sexuality and gender to racism, terrorism and climate change.
Three hours; one term
Prerequisite(s): Registration in Level IV Honours Social Psychology
Antirequisite(s): SOCPSY 3D03

SOCPSY 4E03 - SPECIAL TOPICS IN SOCIAL PSYCHOLOGY

Topics of contemporary interest to social psychologists, with emphasis on current research. Students should consult the Social Psychology office for information about topics to be covered.
Three hours; one term
Prerequisite(s): Enrolment in Level IV of any Faculty of Social Sciences Honours program
Priority will be given to students registered in Honours Social Psychology. This course can be repeated to a maximum of 6 units, if on a different topic.

SOCPSY 4F03 - SOCIAL PSYCHOLOGY OF CRIME AND THE MEDIA

Social psychological perspectives on the influence of media reporting and portrayal of crime in entertainment media on societal perceptions and knowledge of crime,
the law, and criminal justice. Topics include media creation and reinforcement of the 'perpetrator' and 'victim' typologies, normalization of violence, celebrity crime, and the media's impact on social, political, and legal systems.
Three hours; one term
Prerequisite(s): Enrolment in Level IV of any Faculty of Social Sciences Honours Program. Priority will be given to students registered in Honours Social Psychology.

SOCPSY 4G03 - CHILD CLINICAL PSYCHOLOGY

This course explores theoretical and clinical perspectives on disorders presenting in childhood, including autism spectrum disorder, ADHD, and learning, mood, and anxiety disorders.
Three hours; one term
Prerequisite(s): Enrolment in Level IV in Honours Social Psychology

SOCPSY 4H03 - ADVANCED TOPICS IN CLOSE RELATIONSHIPS

This seminar course explores advanced topics in close relationship research such as relationship interventions and mental health.
Three hours; one term
Prerequisite(s): Registration in Level IV in Honours Social Psychology.

SOCPSY 4IS3 - INDEPENDENT RESEARCH

Directed study under supervision of McMaster faculty member, involving analysis of published materials, field notes and/or other data. Results to be written up in the form of a scholarly paper.
One term.
Prerequisite(s): Registration in Level IV Honours Social Psychology and approval of Independent Research Form in advance by Program Director.
Priority will be given to B.A. Honours Social Psychology students rather than to Research Specialist students.

SOCPSY 4IS6 A/B - INDEPENDENT RESEARCH

Directed study under supervision of McMaster faculty member, involving analysis of published materials, field notes and/or other data. Results to be written up in the form of a scholarly paper.
Two terms.
Prerequisite(s): Registration in Level IV Honours Social Psychology and approval of Independent Research Form in advance by Program Director.

SOCPSY 4MM3 - PUBLIC SOCIAL PSYCHOLOGY

This course examines major figures in social psychology who have had an impact on the public and transformed our culture. It also examines current public debates and controversies about social psychology or particular social psychologists.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level IV Honours Social Psychology
Cross-list(s): SOCIOL 4MM3

SOCPSY 4ZZ6 A/B - SOCIAL PSYCHOLOGY RESEARCH PROJECT

This capstone course allows students to integrate knowledge and skills in a group research project in their area of interest.
Prerequisite(s): Registration in Level IV Honours Social Psychology; and SOCSCI 2J03, SOCPSY 2K03, 2YY3

Social Sciences

Courses using the subject code SOCSCI are administered by the Faculty of Social Sciences.
Kenneth Taylor Hall, Room 129, ext. 23772
http://socialsciences.mcmaster.ca

Notes

1. Students are strongly recommended to complete SOCSCI 2EL0/SOCSCI 2EL3. Completion of SOCSCI 2EL0/SOCSCI 2EL3 is required to participate in an internship.
2. Level I students who have completed at least 9 units may request permission to take SOCSCI 2EL3 in the spring/summer term. Requests can be directed to socscfac@mcmaster.ca or in person at Kenneth Taylor Hall 129.
3. Students enrolled in a three- or four-year undergraduate degree program in the Faculty of Social Sciences have the opportunity to take Social Sciences courses towards an affiliated certificate in Business Studies; Disability

Management; or Leadership and Management in the Not-For-Profit Sector (to be last offered in 2025-26). Students enrolled in a three-year degree program may take a maximum of six of these courses, and students enrolled in a four-year degree program may take a maximum of eight of these courses. Students who successfully complete one of the following sets of six courses may apply to have their courses recognized by Mohawk College for the awarding of an Affiliated Certificate when they graduate from their McMaster degree program. If granted, this certificate will be issued by Mohawk College.

Courses for the Business Studies Certificate

- SOCSCI 2AC3 - Financial & Managerial Accounting for Social Sciences
- SOCSCI 2BA3 - Introduction to Business Analysis for Social Sciences
- SOCSCI 2BU3 - Introduction to Business for Social Sciences
- SOCSCI 2EN3 - Entrepreneurial Training for Social Sciences
- SOCSCI 2HR3 - Human Resources Management for Social Sciences *****
- SOCSCI 2MR3 - Introduction to Marketing for Social Sciences

Courses for the Disability Management Certificate

- SOCSCI 2CP3 - Disability Management Capstone Project
- SOCSCI 2FD3 - Foundations of Disabilities
- SOCSCI 2IS3 - Intervention Strategies Working with Disabilities
- SOCSCI 2LI3 - Legal Implications and Brain Disorders
- SOCSCI 2PN3 - Pharmacology for Non-Medical Health Professionals
- SOCSCI 2WF3 - Working with Families with Disabilities

Courses for the Certificate in Leadership and Management in the not-for-Profit Sector (last offered 2025-26, except SOCSCI 2HR3)

- SOCSCI 2BR3 - Board and Staff Responsibilities for the Not-for-Profit Sector
- SOCSCI 2HR3 - Human Resources Management for Social Sciences *****
- SOCSCI 2LC3 - Leadership and Communications for the Not-For-Profit Sector
- SOCSCI 2OP3 - Operational Planning for the Not-For-Profit Sector
- SOCSCI 2RD3 - Resource Development for the Not-For-Profit Sector
- SOCSCI 2SP3 - Strategic and Long Range Planning for the Not-for-Profit Sector

**This course is part of both certificates*

SOCSCI 1SS3 - INQUIRY IN THE SOCIAL SCIENCES

The systematic investigation of any subject requires a set of widely applicable and transferrable skills. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions. The content theme will be drawn from Social Sciences issues and will vary depending on the subject expertise of the instructor.
Three hours; one term
Prerequisite(s): Registration in Social Sciences I, Economics I, Honours Health and Society I, or Sociology My Own McMaster pathway program
Not open to students with credit in INQUIRY 1HU3, 1SC3, 1SS3.

SOCSCI 1T03 - LIFE, THE UNIVERSITY, AND EVERYTHING

In this course, students will build the core academic abilities and habits that are crucial for success in student life and in the transition into and through university. Through a unique blend of online and active in-person learning, students will explore issues and ideas from each of the programs in the social sciences in order to develop their academic interests and plan for success.
Three Hours (web modules, weekly tutorials); one term
Prerequisite(s): Registration in Social Sciences I, Economics I or Honours Health and Society I; or registration in Level II Social Sciences General BA with permission of the department.

SOCSCI 2AC3 - FINANCIAL & MANAGERIAL ACCOUNTING FOR SOCIAL SCIENCES

An introduction to financial and managerial accounting with a focus on topics relevant to managerial decision making. Focuses on understanding financial statements, and includes an emphasis on costing, budgeting, and control.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences; Grade 11 M or U Math is recommended
Not open to students with credit or registration in COMMERCE 1AA3, 2AB3, 4AK3.
Not open to Continuing students.

SOCSCI 2BA3 - INTRODUCTION TO BUSINESS ANALYSIS FOR SOCIAL SCIENCES

The foundation of Business Analysis is planning, stakeholder analysis, structure and cultural awareness of an enterprise. Prepare for Business Analysis projects through needs analysis and business plan development using industry standard strategies such as project charter, interview and focus group techniques.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing students.

SOCSCI 2BR3 - BOARD AND STAFF RESPONSIBILITIES FOR THE NOT-FOR-PROFIT SECTOR

This course examines the characteristics of non-profit organizations and the relevance of an organization's mission within a changing environment. It will also consider the roles and 70 responsibilities of the Chief Executive Officer and the Board of Directors, management styles appropriate to voluntary organizations, and techniques for productive meetings.
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences.
Not open to Continuing Students.

SOCSCI 2BU3 - INTRODUCTION TO BUSINESS FOR SOCIAL SCIENCES

An overview of the functional areas of business and how they interact. This course is designed to provide an understanding of the role of business in Canada, focusing on the basics of management, organizational theory and structure.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences
Not open to students with credit in COMMERCE 1B03, 1E03.
Not open to Continuing Students.

SOCSCI 2CC3 - CHILDREN AND FAMILY IN CANADA

This course is designed to look at the evolution of the family in Canadian society and how our children are contextualized within different family forms. Topics include life cycle development, sexism, hurrying children, self-esteem, prejudice and discrimination and sexual abuse.
On-line web modules, tutorials and testing; one term
Prerequisite(s): Registration in Level II or above
Antirequisite(s): SOCSCI 2003

SOCSCI 2CP3 - DISABILITY MANAGEMENT CAPSTONE PROJECT

Students will examine a topic that contributes to the field of brain disorders management or mental health and disability management. While using qualitative or quantitative research methods to investigate their topic, students will apply problem-based learning.
Three hours; one term; online
Prerequisite(s): Credit or registration in SOCSCI 2FD3 and registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2FD3 - FOUNDATIONS OF DISABILITIES

This course examines the major disabilities within Canadian culture including physical, developmental, organic, acute, chronic, and acquired disabilities. There will be a focus on the symptoms associated with each disability with special attention to the relationship each disability may or may not have to mental illness.
Three hours; one term; online
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2HR3 - HUMAN RESOURCES MANAGEMENT FOR SOCIAL SCIENCES

Develops comprehensive knowledge and the skills required to carry out Human Resources functions. Includes a variety of methods such as case studies and simulations to enhance learning activities.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences
Not open to students with credit or registration in COMMERCE 2BC3.
Not open to Continuing students.

SOCSCI 2IS3 - INTERVENTION STRATEGIES WORKING WITH DISABILITIES

Treatments for people with various types of disabilities will be examined. Components of this course will be used to access community resource professionals currently working with people with various types of disabilities; labs will also be used by students to learn practice-based structural interviewing.
Three hours; one term; online
Prerequisite(s): Credit or registration in SOCSCI 2FD3 and registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2LI3 - LEGAL IMPLICATIONS AND BRAIN DISORDERS

This course will investigate the law as it pertains to brain disorders and outline the significance of acting in compliance with the Statutes of Ontario.
Three hours; one term; online
Prerequisite(s): Credit or registration in SOCSCI 2FD3 and registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2MR3 - INTRODUCTION TO MARKETING FOR SOCIAL SCIENCES

Examines how environmental forces shape an organization's marketing program. Students will learn to create marketing plans that reflect current consumer behaviour patterns.
Three hours; one term
Prerequisite(s): Registration in Level II or above of a program in the Faculty of Social Sciences
Not open to students with credit or registration in COMMERCE 1MA3 or 2MA3
Not open to Continuing students.

SOCSCI 2O03 - CANADIAN CHILDREN

This course deals with a spectrum of issues related to Canadian children such as family, socialization, identity formation, moral development, abuse and strategies for a better future.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above in any program
Antirequisite(s): SOCSCI 2CC3

SOCSCI 2P03 - CANADIAN ADOLESCENTS

This course deals with a spectrum of issues related to Canadian adolescents such as identity formation, sexuality, peer groups and power and the social politics of career formation.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in Level II or above in any program

SOCSCI 2PN3 - PHARMACOLOGY FOR NON-MEDICAL HEALTH PROFESSIONALS

This course will identify medications and their use in treating various forms of disability and mental illness. Students will learn to classify medications and will understand the various families of medications. The content is not intended to train students to deliver medication, but to familiarize them instead with the use of medications in the treatment of various disabilities.
Three hours; one term; online
Prerequisite(s): Credit or registration in SOCSCI 2FD3 and registration in Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2SS3 - INQUIRY THINKING AND RESEARCH SKILLS

The systematic investigation of any subject in the Social Sciences requires fundamental research skills. In this course, students develop transferrable research skills including, how to formulate effective research questions, gather and interpret evidence, reach well-reasoned conclusions, and communicate findings. By participating in active learning classroom sessions, students hone their skills while undertaking a student-driven research project based on a shared course theme. The theme will vary depending on the subject expertise of the instructor.
Prerequisite(s): Registration in Level 2 of a program in the Faculty of Social Sciences or Permission of the department.
Antirequisite(s): SOCSCI 1SS3
Three Hours; one term
Enrollment Cap: 30
Reserve Capacities: SS2: 100%

SOCSCI 2WF3 - WORKING WITH FAMILIES WITH DISABILITIES

In this course students will explore and evaluate modern intervention techniques of community health care in providing services to families who have a member with a disability. Particular attention will be to review community resources for families and best practices related to family intervention.
Three hours; one term; online
Prerequisite(s): Credit or registration in SOCSCI 2FD3 and registration in

Level II or above of a program in the Faculty of Social Sciences
Not open to Continuing Students.

SOCSCI 2WT0 - SOCIAL SCIENCES CO-OP WORK TERM

Full-time, non-credit, paid work opportunities of four months, completed as a part of a Social Sciences Co-op program.
Normally 26 to 40 hours per week.
Prerequisite(s): SOCSCI 2JS1 and registration in a Social Sciences Co-op program option.

SOCSCI 3IF0 A/B S - FULL-TIME INTERNSHIP

Full-time, non-credit, paid work opportunities of four, eight, twelve, or sixteen months allowing students to explore careers, develop employability skills and make important contacts for both now and after graduation.
Normally 26 to 40 hours per week
Prerequisite(s): Registration in a program in the Faculty of Social Sciences; credit in SOCSCI 2EL0 or HUMAN 2CP2; and permission of the Internship Program Manager
SOCSCI 3IF0 may be repeated.

SOCSCI 3IP0 A/B S - PART-TIME INTERNSHIP

Part-time, non-credit, paid work opportunities of four, eight, twelve, or sixteen months allowing students to explore careers, develop employability skills and make important contacts for both now and after graduation.
Normally 5 to 25 hours per week
Prerequisite(s): Registration in a program in the Faculty of Social Sciences; credit in SOCSCI 2EL0 or HUMAN 2CP2; and permission of the Internship Program Manager
SOCSCI 3IP0 may be repeated.

SOCSCI 3JS1 - CO-OP JOB SEARCH II

Students will focus on intermediate strategic and personal management skills necessary to manage the co-op job search process, including a focus on applying skills and experience from previous work terms.
Online; one term
Prerequisite(s): SOCSCI 2JS1, 2WT0 and registration in a Co-op program in the Faculty of Social Sciences.

SOCSCI 3WT0 - SOCIAL SCIENCES CO-OP WORK TERM

Full-time, non-credit, paid work opportunities of four months, completed as a part of a Social Sciences Co-op program.
Normally 26 to 40 hours per week.
Prerequisite(s): SOCSCI 3JS1 and registration in a Co-op program option in the Faculty of Social Sciences.

SOCSCI 4JS1 - CO-OP JOB SEARCH III

Students will focus on the strategic and personal management skills necessary to manage the co-op job search process, including an emphasis on consolidating multiple previous experiences and applying to more advanced positions.
Online; one term
Prerequisite(s): SOCSCI 3JS1, 3WT0 and registration in a Co-op program option in the Faculty of Social Sciences.

SOCSCI 4SI3 - INNOVATION FOR SOCIAL IMPACT

This course provides students from Humanities, Social Sciences, and Business the opportunity to learn and apply social innovation skills in the non-profit sector. In the classroom, students will gain an understanding of key social innovation concepts including impact assessment, systems mapping, design thinking, collective impact, and theory of change while also learning about the unique characteristics and work environment of the non-profit sector. In the community,
students will engage with a non-profit partner to help them conceptualize, develop, and/or implement a social innovation.
Three hours (lectures); one term
Prerequisite(s): Registration in Level IV or above in any Bachelor of Commerce, Social Sciences, or Humanities program or instructor permission.
Cross-list(s): COMMERCE 4SI3, HUMAN 4SI3
This course is administered by the DeGroote School of Business

SOCSCI 4WT0 - SOCIAL SCIENCES CO-OP WORK TERM

Full-time, non-credit, paid work opportunities of four months, completed as a part of a Social Sciences Co-op program.
Normally 26 to 40 hours per week.
Prerequisite(s): SOCSCI 4JS1 and registration in a Co-op program option in the Faculty of Social Sciences.

Social Work

Courses in Social Work are administered by the School of Social Work.
Kenneth Taylor Hall, Room 319, ext. 23795
http://www.socialwork.mcmaster.ca

School Notes

1. SOCWORK 1AA3 and 1BB3 are available to all students.
2. The following courses are available to students in a Labour Studies program or for elective credit for students enrolled in Level III or above of a non-Social Work program. SOCWORK 1AA3 and 1BB3 are prerequisites. Space for such students is limited and places are assigned on a first come basis. Not all courses will be offered every year.
   - SOCWORK 3BO3
   - SOCWORK 3C03 - Social Aspects of Health and Illness
   - SOCWORK 3I03 - Social Work and Indigenous Peoples
   - SOCWORK 3O03 - Social Work and Sexualities
   - SOCWORK 3S03 - Social Work, Disability and Dis/Ableism
   - SOCWORK 3T03 - Poverty and Homelessness
   - SOCWORK 4C03 - Critical Perspectives on Race, Racialization, Racism and Colonialism in Canadian Society
   - SOCWORK 4G03 - Selected Topics
   - SOCWORK 4I03
   - SOCWORK 4J03 - Social Change: Social Movements and Advocacy
   - SOCWORK 4QQ3 - Indigenizing Social Work Practice Approaches
   - SOCWORK 4R03 - Feminist Approaches to Social Work and Social Justice
   - SOCWORK 4TI3 - Trauma Informed Practice
   - SOCWORK 4U03 - Immigration, Settlement and Social Work
   - SOCWORK 4W03 - Child Welfare
   - SOCWORK 4Y03 - Critical Issues in Mental Health & Addiction: Mad & Critical Disability Studies Perspectives for SW
3. The following course is available to students enrolled in level III or above of a non-Social Work program. Space for such students is limited and places are assigned on a first come basis. This course will not be offered every year.
   - SOCWORK 3B03

Courses

All courses are open only to Social Work students unless otherwise specified. (See Notes 1, 2, and 3 above.)

SOCWORK 1AA3 - SO YOU THINK YOU CAN HELP? INTRODUCTION TO SOCIAL WORK I

- critical exploration of ideas and values influencing "helping" in social work. Focus on how helping is experienced by people intended to benefit from it.

Lectures and discussions; one term
Antirequisite(s): SOCWORK 1A06 A/B
This course is available to all students.

SOCWORK 1BB3 - RE-IMAGINING HELP: INTRODUCTION TO SOCIAL WORK II

- critical exploration of alternative understandings and practices of 'helping' in social work rooted in inclusive engagement with service users/communities and respect for their knowledge.

Lectures and discussions; one term
Antirequisite(s): SOCWORK 1A06 A/B
This course is available to all students.

SOCWORK 2A06 A/B - THEORY, PROCESS AND COMMUNICATION SKILLS FOR SOCIAL WORK

Knowledge, value base and intervention methods of social work practice; basic skill development in interpersonal communication and interviewing.
Lectures, discussions, group work, exercises; two terms
Prerequisite(s): Enrolment in a Social Work program
Antirequisite(s): SOCWORK 2C03, 2C06, 2D03

SOCWORK 3C03 - SOCIAL ASPECTS OF HEALTH AND ILLNESS

Exploration of issues of health and illness, care delivery, the social determinants of health and contemporary challenges faced by social workers in health care settings.
Lectures, discussion and selective use of community resources; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3 and registration in Level III or above of any program

SOCWORK 3DD6 A/B S - FIELD PRACTICUM I

Field practicum to develop basic intervention and interviewing skills, particularly in the formation of relationships with individuals, families, groups and communities. Students participate in defining learning goals and experiences.
This course is evaluated on a Pass/Fail basis.
Field experience equivalent to 15 hours per week; two terms; Option of equivalent summer block placement in combination with SOCWORK 3D06 A/B taken in the summer. Priority for summer block given to B.S.W. students.
Prerequisite(s): SOCWORK 2A06 A/B, SOCWORK 2BB3, and SOCWORK 2CC3; and permission of the School
Co-requisite(s): *SOCWORK 3D06 A/B S*
Credit in this course is dependent on receiving a Pass and a minimum grade of C+ in SOCWORK 3D06 A/B S.

SOCWORK 3F03 - SOCIAL WORK WITH GROUPS

Students will develop effective, ethical group practice skills including assessment from multiple perspectives, facilitation and intervention skills, evaluation, to address the needs of diverse populations.
Lectures, discussion, exercises, group work; one term
Prerequisite(s): Enrolment in a Social Work program
Antirequisite(s): SOCWORK 3A03, 3N03, 3R03, 4N03

SOCWORK 3O03 - SOCIAL WORK AND SEXUALITIES

Examination of issues related to sexuality across the life course e.g. sexual development, sexual and gender identities/expressions, reproduction, relational and political dynamics associated with sexuality.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program

SOCWORK 4C03 - CRITICAL PERSPECTIVES ON RACE, RACIALIZATION, RACISM AND COLONIALISM IN CANADIAN SOCIETY

This course involves critical analysis of the social relations of race, racism, racialization, and colonialism in Canadian society. Students will have the opportunity to examine various theoretical frameworks including post/anti/neocolonial and decolonizing studies, critical race theory, Indigenous studies, African studies, analyses of whiteness and antiracism/anti-oppression.
Prerequisite(s): Registration in a Social Work Work or Labour Studies program; or SOCWORK 1AA3 or SOCWORK 1BB3 and registration in Level III or above of any program
Not open to students with credit or registration in SOCWORK 4Z03 - Selected Issues in Social Welfare Policy, if the issue was Racial and Cultural Issues in Canadian Welfare.

SOCWORK 4G03 - SELECTED TOPICS

Critical examination of social work practice in respect to selected social issues. Topics will vary from year to year and the School should be consulted for details for any particular year.
Lectures, Discussion, Exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program
SOCWORK 4G03 may be repeated, if on a different topic.

SOCWORK 4J03 - SOCIAL CHANGE: SOCIAL MOVEMENTS AND ADVOCACY

Students engage in experiential learning in the community with mentors to examine current theories and practice in the area of social change.
Lectures, discussion, exercises and group work; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program

SOCWORK 4TI3 - TRAUMA INFORMED PRACTICE

The course considers the historical, psychological/socio/political impact of trauma. Focusing on trauma theory, analysis and skill development, this course will cover various intersections of trauma that will enable social workers to understand and work from a client centered approach. Students are encouraged to critically examine the politics of trauma practices.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work program; or SOCWORK 1AA3 or SOCWORK 1BB3 and registration in Level III or above of any program
Not open to students with credit in SOCWORK 4G03 if the topic was Trauma Informed Practice.

SOCWORK 4U03 - IMMIGRATION, SETTLEMENT AND SOCIAL WORK

Examination of social and political factors impacting the lives of immigrants and refugees as they settle in Canada; critical assessment of social work responses.
Lectures, discussion, exercises; one term

Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program
Not open to students with credit in SOCWORK 4G03 if the topic was Immigration and Settlement.

SOCWORK 4W03 - CHILD WELFARE

This course analyzes the Canadian child welfare system, its policies and programs and teaches skills for working with children, families and substitute caregivers.
Lectures, discussions, skills development; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program

SOCWORK 4X03 - SOCIAL WORK WITH FAMILIES

Examination and application of family theory and practice models including a critical look at societal definitions of and expectations for families.
Lectures, discussion, exercises; one term
Prerequisite(s): Credit or registration in SOCWORK 3D06 A/B S and 3DD6 A/B S; or permission of the instructor
Antirequisite(s): SOCWORK 3M03

SOCWORK 4Y03 - CRITICAL ISSUES IN MENTAL HEALTH & ADDICTION: MAD & CRITICAL DISABILITY STUDIES PERSPECTIVES FOR SW

Critical review of contemporary theoretical frameworks, policies and programs in mental health and addiction and the implications for social work research and practice in Canada.
Lectures, discussion, exercises; one term
Prerequisite(s): Registration in a Social Work or Labour Studies program; or SOCWORK 1AA3 or 1BB3; and registration in Level III or above of any program
Not open to students with credit in SOCWORK 4G03 if the topic was Mental Health and Addiction.

SOCWORK 4ZZ3 - SOCIAL WELFARE: PRACTICE IMPLICATIONS AND ADVOCACY

Provides an overview of Canada's social service system from an historical and contemporary perspective. Explores the purpose and values underlying the development of social welfare programs. Engages in critical analysis of practice implications and policy advocacy for social workers.
Lectures and discussion, one term.
Prerequisite(s): Credit or registration in SOCWORK 3D06 A/B S and SOCWORK 3DD6 A/B S. The School of Social Work strongly suggests that students complete SOCWORK 3D06 A/B S and 3DD6 A/B S before taking this course.
Antirequisite(s): SOCWORK 2B06; SOCWORK 2B03

Society, Culture & Religion

Courses in Society, Culture & Religion are administered by the Department of Religious Studies.
University Hall, Room 123, ext. 23109
http://religiousstudies.mcmaster.ca

Department Notes

1. Former Religious Studies (RELIGST) courses are now listed as Society, Culture & Religion (SCAR). Students having credit in RELIGST courses may not take the corresponding course under SCAR for additional credit.
2. Students are advised to consult both the Department (University Hall, Room 123) and the Undergraduate Timetable for a list of the courses offered in the current year.
3. All Society, Culture & Religion students will be assigned a faculty mentor upon entering the program. It is the responsibility of the student to consult with the mentor at least once each academic year to discuss their academic goals and course option.

Courses

If no prerequisite is listed, the course is open.

SCAR 1B03 - WHAT ON EARTH IS RELIGION?

An introduction to the academic study of religion and religions focusing on key themes and on how scholars approach religiosity both historically and in contemporary global cultures. Topics covered may include truth and truth-claims, ritual and practice, myth and history, authority and power, community and conformity.
Lectures and discussion (three hours); one term

SCAR 1GL3 - THE GOOD LIFE

Covering major religious and philosophical traditions from Atheism to Zoroastrianism, this course will survey various efforts to identify how to live a good or meaningful life.
Three hours (lecture and discussion); one term

SCAR 1SC3 - THE BIG QUESTIONS: INTRODUCTION TO SOCIETY, CULTURE & RELIGION

This course focuses on the research of current faculty and senior graduate students in the Religious Studies Department to introduce some of the issues contemporary scholars are grappling with in the academic study of religion.
Three hours (lecture and discussion); one term

SCAR 2AA3 - INTRODUCTION TO MODERN STANDARD ARABIC

This course introduces students to the basics of the Arabic language. Students will learn the Arabic alphabet, pronunciation, verb forms, and basic grammar. No prior knowledge of Arabic is necessary.
Lectures and discussion (four hours); one term
Cross-list(s): ARABIC 2AA3
NOTE: this course is intended for students with no background in Arabic. Students with any background in Arabic must contact the instructor for an assessment/placement test to determine the appropriate level of Arabic: 2AA3, 2AR3, or 3AA3.

SCAR 2AB3 - ANCIENT ARCHAEOLOGY

Archaeological discoveries have revolutionized the way in which we read the Bible. This course explores archaeology and ancient texts, both canonical and non-canonical, in light of each other with a view to reconstructing key moments in the history of Judaism and Christianity.
Two lectures, one tutorial; one term

SCAR 2AM3 - ABRAHAM IN JUDAISM, CHRISTIANITY, AND ISLAM

This course looks at the early depictions of the central figure of Abraham, as well as Sarah and Hagar, Isaac and Ishmael, in what scholars often refer to as the three Abrahamic Faiths.
Lectures and discussion (three hours); one term

SCAR 2AP3 - APOCALYPSE, THEN AND NOW

How did ancient Jews and Christians portray the end of the world? How do such depictions affect current religious and secular portrayals of the end of the

world in modern writing and cinema?
Lectures and discussion (three hours); one term

SCAR 2AR3 - INTRODUCTION TO MODERN STANDARD ARABIC II

This course builds on the fundamentals covered in SCAR 2AA3. The course expands students' vocabulary, reading fluency, composition skills, and knowledge of grammatical constructions.
Lectures and discussion (four hours); one term
Prerequisite(s): One of ARABIC 2AA3, RELIGST 2AA3, SCAR 2AA3; or permission of the instructor
Cross-list(s): ARABIC 2AR3

SCAR 2BB3 - IMAGES OF THE DIVINE FEMININE

An examination of some of the ways the divine has been portrayed as feminine in diverse cultures.
Three hours (lectures and discussion); one term
Cross-list(s): GENDRST 2BB3

SCAR 2BE3 - RELIGION AND ECOLOGY

How do Jewish and Christian scriptures portray humanity's relationship to the earth and other living creatures? Can modern people find resources within ancient writings to help live more peaceably and justly with all aspects of our world?
Lectures and discussion (three hours); one term

SCAR 2BF3 - BUDDHISM AND FILM

- survey of depictions of Buddhism in select films from around the world.

Three hours (lecture and discussion); one term

SCAR 2BM3 - MAGIC AND RITUAL POWER

This course examines various reference to magic preserved in the sacred texts and how sacred texts as material objects have been perceived to possess supernatural powers.
Lectures, discussion (three hours); one term

SCAR 2BN3 - SEX AND THE CITY IN BUDDHISM: THE URBAN LIFE OF BUDDHIST NUNS IN NORTH INDIA

- survey of sex, celibacy, family, married monks, pregnant nuns, monastic motherhood, entrepreneurial ecclesiastics, and other hopelessly romanticized topics in scholarly portrayals of Buddhism.

Two lectures; one tutorial; one term

SCAR 2CA3 - RELIGION AND THE ARTS

An exploration of the encounters between religious traditions and practices and the performing and visual arts.
Two lectures, one tutorial; one term

SCAR 2CH3 - WHAT IS CHRISTIANITY?

An exploration of the question with reference to literary works, films, and visual arts - both ancient (above all the Bible) and contemporary.
Three hours (lecture and discussion); one term

SCAR 2EE3 - PROPHETS, PRIESTS, AND SORCERERS

This course analyzes various religious experts that appear in the Biblical texts in their ancient cultural contexts. Religious expertise of antiquity and their skills will be compared to contemporary figures that access, interpret, and transmit divine knowledge.
Lectures, discussion; one term

SCAR 2ER3 - RELIGION, THE BODY, AND THE MACHINE

This course will focus on the religious ethics of embodiment in various technological contexts of contemporary life (e.g. bioengineering and eugenics, medically assisted suicide, designer babies, cosmetic enhancement, and artificial intelligence).
Lectures and discussion (three hours); one term

SCAR 2F03 - STORYTELLING IN ASIAN RELIGIONS

An in-depth study of selected examples of story literature in China, Japan, India and Tibet with attention to the way religion is represented.
Two lectures, one tutorial; one term

SCAR 2FF3 - PIRATES, PILGRIMS AND ENSLAVED IN THE MEDITERRANEAN, 1450-1750

This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HISTORY 2HH3
This course is administered by the Department of History.

SCAR 2G03 - RELIGIOUS THEMES IN MODERN CULTURE

An introduction to religious themes, imagery and issues through a study of selected works of modern literature (novels, short stories, poetry, drama), music, art, and film.
Lectures and discussion (three hours); one term

SCAR 2GB3 - GREAT BOOKS IN ASIAN RELIGIONS

This course introduces foundational books of the major religious traditions of Asia, including Buddhism, Hinduism, Taoism, Confucianism and Shinto, in their historical and cultural contexts.
Two lectures, one tutorial; one term

SCAR 2GG3 - WHO WAS JESUS?

- study of the Gospels. Special attention will be given to the possible literary relationships among the Gospels as well as to the distinctive features of their Jesus stories.

Two lectures, one tutorial; one term

SCAR 2GR3 - EVIL

An examination of understandings of reason and evil in ancient Greek, medieval Christian and modern times, and of how these understandings are related to accounts of the nature of God.
Lectures and discussion (three hours); one term

SCAR 2HA3 - RELIGION AND HEALTH IN ANTIQUITY

This course examines health care in ancient Jewish and Christian texts. It focuses on rituals led by priests and prophets as well as various household rituals.
Participants explore how concepts of health, magic, and religion are connected in antiquity.
Two lectures, one tutorial; one term.

SCAR 2HB3 - INTRODUCTION TO THE JEWISH SCRIPTURES/OLD TESTAMENT

An introduction to the writings of the Hebrew Bible/Old Testament in their historical setting, to their role as scripture in Jewish and Christian tradition, and to various methodologies used in their modern academic study.
Two lectures, one tutorial; one term

SCAR 2HC3 - INTRODUCTION TO BIBLICAL HEBREW I

Hebrew Bible. The student will begin to read in the Hebrew Bible.
Two lectures (four hours); one term
Cross-list(s): HEBREW 2A03

SCAR 2HD3 - INTRODUCTION TO BIBLICAL HEBREW II

An introduction to more grammar, syntax and vocabulary of the language of the Hebrew Bible. The knowledge acquired should enable the student to read the simple prose and poetry of the Hebrew Bible.
Two lectures (four hours); one term
Prerequisite(s): HEBREW 2A03 or permission of the instructor
Cross-list(s): HEBREW 2B03

SCAR 2HI3 - INTRODUCTION TO HINDUISM

An introduction to the Hindu traditions from pre-classical to contemporary times. Course will focus on diversity in traditions and practices.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

SCAR 2HR3 - HUMOUR AND RELIGION

This course explores the relationship between religion and humour.
Lectures and discussion (three hours); one term

SCAR 2HW3 - HISTORY OF WRITING IN BUDDHIST ASIA

The origins and development of many writing systems in Asia are inextricably linked to the transmission of Buddhism. This course will survey Asian writing systems and select Buddhist writings (biographies, legal texts, mantras, past-life stories, poetry, sutras, tantras) from India, China, Tibet, and Japan.
Two lectures, one tutorial; one term
Prerequisite(s): None

SCAR 2IR3 - BOLLYWOOD AND INDIAN RELIGIONS

- survey of depictions of Indian religious traditions in select South Asian films.

Lectures and discussion (three hours); one term

SCAR 2J03 - INTRODUCTION TO JUDAISM

Survey of major facets of Jewish religion and identity from antiquity to the present, including foundational texts, major historical developments and central beliefs and practices.
Two lectures, one tutorial; one term

SCAR 2K03 - WHAT IS BUDDHISM?

- survey of the developments of the essential concepts, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.

Two lectures, one tutorial; one term

SCAR 2M03 - DEATH AND DYING: COMPARATIVE VIEWS

- comparative survey of the diversity of social and ritual practices, religious beliefs, and emotional responses surrounding death in a variety of non-Western cultural contexts.

Two lectures, one tutorial; one term

SCAR 2MH3 - MOTHERHOOD

- survey of depictions of motherhood in one or more religious tradition.

Two lectures, one tutorial; one term
Prerequisite(s): None

SCAR 2MT3 - ASIAN MEDITATION TRADITIONS

- study of the historical traditions and modern transformations of Asian religious practices of meditation and mental cultivation.

Lectures and discussion (three hours); one term

SCAR 2MW3 - RELIGION, MAGIC AND WITCHCRAFT

Selected issues in the study of religion, magic and witchcraft, science and the supernatural. Perspectives from history, psychology and sociology also will be discussed.
Lectures and discussion (three hours); one term
Prerequisite(s): Three units of Level I Anthropology and registration in Level II or above in any program
Cross-list(s): ANTHROP 2R03
This course is administered by the Department of Anthropology.

SCAR 2N03 - DEATH AND DYING: THE WESTERN EXPERIENCE

Drawing on theoretical perspectives and evidence from anthropology and sociology, this course examines death and dying in Western contexts, focusing on biomedical, social and cultural themes.
Two lectures, one tutorial; one term

SCAR 2NH3 - GODS, GHOSTS, AND GANDHARVAS: A SURVEY OF NON-HUMAN REALMS IN ASIAN RELIGIONS

This course will provide a survey of various non-human realms and their inhabitants in Asian Religions.
Lectures, discussion (three hours); one term

SCAR 2NT3 - THE NEW TESTAMENT

This course provides an historical introduction to the writings that make up the Christian New Testament.
Two lectures, one tutorial; one term

SCAR 2Q03 - WHAT IS ISLAM?

The origins and early history of Islam with an emphasis on the Koran and the early Muslim community.
Two lectures, one tutorial; one term

SCAR 2QQ3 - CULTS, CONSPIRACIES AND CLOSE ENCOUNTERS

Why are people often attracted to 'alternative' perspectives and religious movements? This course explores the evolution and social impact of cults, conspiracies, and close encounters, including the historical, cultural, political, and religious dynamics that inform all three, using a variety of critical methods.
One lecture (Two hours), one tutorial; one term

SCAR 2RD3 - RELIGION AND DIVERSITY

This course examines religious practices and traditions in the context of multicultural, diverse societies. Issues to be focused on may include: the intersection of particular religious practices and beliefs and civil rights, medical ethics, and legal issues.
Lectures and discussion (three hours); one term

SCAR 2RN3 - SCIENCE, RELIGION, AND HUMAN FUTURES

This course explores historical, contemporary, and speculative encounters between science, technology, and religion. Students are introduced to a broad range of topics, including techno-immortality, artificial intelligence (AI), space colonization, and dystopian futures.
One lecture (two hours); one tutorial; one term

SCAR 2RS3 - RELIGION AND THE STARS

This course explores religious practices and beliefs concerning the stars and planets.
Two lectures, one tutorial; one term

SCAR 2SA3 - ENCOUNTERING THE SACRED

This course introduces ethnographic approaches to the study of Asian religions. Students will conduct their own ethnographic research on a local religious figure or community.
Three hours (lecture and discussion); one term
Cross-list(s): ANTHROP 2SA3

SCAR 2SB3 - INTRODUCTION TO SANSKRIT II

This course will continue the study of Sanskrit grammar.
Lectures, discussion (four hours); one term
Prerequisite(s): SANSKRIT 2A03 or SCAR 2SK3
Cross-list(s): SANSKRIT 2B03

SCAR 2SG3 - SPIRITS, GHOSTS, AND DEMONS

This course examines ghosts, demons, and spirits in a range of cultural, contemporary, and historical settings. Special attention is paid to historical and contemporary moral panics, as well as how ghosts, demons, and spirits influence human health and well-being.
Two Lectures, one tutorial; one term

SCAR 2SK3 - INTRODUCTION TO SANSKRIT I

Introduction to the Sanskrit alphabet and basic grammar. No previous knowledge of Sanskrit is required.
Lectures, discussion (four hours); one term
Prerequisite(s): none
Cross-list(s): SANSKRIT 2A03

SCAR 2SP3 - SPORT AND/AS RELIGION

An examination of relationships between sport and religion, including ritual aspects of sport, connections between social collectivities and sports teams, and sport as meaning-making activity.
Lectures and discussion (three hours); one term
Cross-list(s): ANTHROP 2EE3

SCAR 2TA3 - ISLAM IN NORTH AMERICA

This course will explore the history and different expressions of North American Islam. Students will compare and contrast the different manifestations of Islam in North America.
Two lectures, one tutorial; one term
Cross-list(s): SOCIOL 2TA3

SCAR 2TT3 - JAPANESE POPULAR CULTURE AND RELIGION

An introduction to the study of Japanese popular culture in the contemporary period and the religious traditions and world-views that inform it through textual, visual and other multi-media sources, including manga and anime.
Two lectures, one tutorial; one term

SCAR 2UD3 - UTOPIAS, DYSTOPIAS

Utopias and dystopias have become widespread in modern culture. This course discusses the origin and character of utopias and dystopias through an examination of their presentation in various works of modern literature, movies, and TV series.
Two lectures, one tutorial, one term

SCAR 2WW3 - HEALTH, HEALING AND RELIGION: WESTERN PERSPECTIVES

An overview of the intersection of religious beliefs and practices with concepts of health, wellness, and possibilities for healing in both traditional and contemporary Western contexts.
Two lectures, one tutorial; one term

SCAR 2WX3 - HEALTH, HEALING AND RELIGION: COMPARATIVE VIEWS

- comparative survey of the intersection of religious beliefs and practices with concepts of health, wellness, and possibilities for healing in a variety of non-Western cultural contexts, both traditional and contemporary.

Two lectures, one tutorial, one term

SCAR 2YY3 - THE BIBLE AND FILM

An examination of the use of the Bible in a variety of films. Genres may include biblical epic, horror, sci-fi, Western, comedy, film noir, animated feature, music video. Topics include the depiction of biblical themes, images and values in motion pictures as well as their transformation.
Two lectures, one tutorial; one term

SCAR 3AA3 - INTERMEDIATE MODERN STANDARD ARABIC

An intermediate course enhancing skills in modern standard Arabic through reading materials with the goal of improving comprehension in both written and spoken contexts.
Four hours (lectures); one term
Prerequisite(s): One of ARABIC 2AR3, RELIGST 2AR3, or SCAR 2AR3; or permission of the Instructor
Cross-list(s): ARABIC 3AA3

SCAR 3AR3 - CULTURE AND RELIGION

This course introduces key theorists and theories, classic and current topics, and issues of methodology and writing in the study of religion and culture.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ANTHROP 3AR3

SCAR 3BE3 - BUDDHIST ETHICS

This course provides an overview of Buddhist ethics with several in-depth studies of Buddhist attitudes towards topics of interest in contemporary ethical debates.
Three hours (lecture and discussion); one term

SCAR 3BW3 - GENDER IN ANCIENT EASTERN MEDITERRANEAN

This course analyzes gender roles in Biblical literature and other texts of Ancient Near East and Mediterranean regions. By examining how gender is depicted in different genres of literature and material artifacts, we will learn about ancient authors' understanding of gender identities.
Lectures, discussion (three hours); one term
Cross-list(s): GENDRST 3BW3

SCAR 3C03 - ISLAM IN THE MODERN WORLD

The spread of Islam, Islam as a minority community, the role of women in Islam and fundamentalism.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

SCAR 3CC3 - RELIGION AND POLITICS

The relationship between religion and politics is explored by way of readings by Locke, Rousseau and Schmitt, and case studies concerning the place of religion in public life.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): POLSCI 3LA3

SCAR 3DD3 - JEWS AND JESUS

- study of Judaism in the Greco-Roman world. The course will explore selected questions in political history, the development of sects and parties, the role of the temple, apocalypticism, and the Dead Sea Scrolls.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HISTORY 3DD3

SCAR 3DR3 - RESEARCH PRACTICUM: DIGITAL RESEARCH METHODS FOR ANCIENT MANUSCRIPTS

Students will participate in cutting-edge research and acquire skills in digital research methods and tools, including AI, for reading, reconstructing, translating, and analyzing ancient and medieval manuscripts.
Lectures and discussion; one term
Prerequisite(s): None

SCAR 3E03 - JAPANESE FILM AND RELIGION

An exploration of Japanese religion and culture in a wide variety of visual media, including film, anime, and television. Topics will include Buddhism, Shinto, New Religions, asceticism, ghosts, shamanism, ancestor worship, and Japanese identities.
Two lectures, one tutorial; one term

SCAR 3EE3 - SACRED JOURNEYS

Formerly RELIGST 3EE3

- study of the significance of travel in various religious traditions, focusing on shrines, pilgrimages, and the inter-relationships between secular and sacred travel.

Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): ANTHROP 3SS3

SCAR 3EP3 - JEWISH ETHICS AND POLITICS

This course explores connections between Jewish philosophical traditions, political issues, and ethical questions.
Three hours (lecture and discussion); one term

SCAR 3ET3 - ETHICS OF HOPE AND DESPAIR

This course explores how ethical value is shaped and contested now in the face of disasters near and far. Grounded in ethnographic studies of specific ethical traditions (religious and secular), course topics may include the problem of suffering, the cultivation of virtue, and the looming climate apocalypse.
Seminar (three hours); one term
Prerequisite(s): Three units of Level I Anthropology or three units of Level I SCAR or permission of the instructor
Cross-list(s): ANTHROP 3ET3

SCAR 3F03 - APPROACHES TO THE STUDY OF RELIGION

An exploration of some of the ways religious phenomena are studied. Attention is also given to the history of the academic study of religion.
Three hours (lectures and discussion); one term
Prerequisite(s): Six units of Religious Studies or Society, Culture and Religion courses above Level I

SCAR 3FF3 - GENDER AND RELIGION

An examination of gender in one or more religious traditions.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): GENDRST 3FF3

SCAR 3GH3 - INTERDISCIPLINARY GLOBAL HEALTH FIELD COURSE: MATERNAL AND INFANT HEALTH IN MOROCCO

This global health field course provides an integrated linguistic, cultural, historical, and public health experience in Morocco. Introduces students to the determinants of health in the third world and considers social, religious, epidemiological, economic, technological, legal, historical, and family issues that impact birth, pregnancy, women's health, and health of newborns and children.
Prerequisite(s): Permission of the instructor
Co-requisite(s): ARABIC 3GH3
Cross-list(s): ANTHROP 3GH3
Available as a study-abroad experience in the Spring only. This course is intended for students who are entering Level III or above in the following Fall/Winter Session. Students interested in this course must contact Dr. E. Amster by February 15 for application instructions. There is an additional cost associated with this course. This course is administered by the Department of Religious Studies.

SCAR 3GM3 - GODS AND MONSTERS, ANCIENT AND MODERN

This course discusses depictions of the non-human in ancient Greek mythology, poetry, and theatre and their various parallels in modern literature, theatre, and film.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above

SCAR 3GP3 - GOD AND PHILOSOPHY

- study of conceptions of religious belief, knowledge, and God in the history of modern thought up to the 20th century. Authors may include Descartes, Kant, Freud, and Buber.

Two lectures, one tutorial; one term
Antirequisite(s): SCAR 2LL3

SCAR 3HC3 - INTERMEDIATE HEBREW I

- reading course in classical (biblical) Hebrew. Sample texts will be read from some or all of the following: the Hebrew Bible, Mishnah, ancient Hebrew inscriptions and the Dead Sea Scrolls.

Two lectures (four hours); one term
Prerequisite(s): HEBREW 2B03 or permission of the instructor
Cross-list(s): HEBREW 3A03

SCAR 3HD3 - INTERMEDIATE HEBREW II

Further sample texts will be read from some or all of the following: the Hebrew Bible, the Mishnah, ancient inscriptions and the Dead Sea Scrolls.
Two lectures (four hours); one term
Prerequisite(s): HEBREW 2B03 or permission of the instructor
Cross-list(s): HEBREW 3B03

SCAR 3I03 - INDEPENDENT STUDY IN SOCIETY, CULTURE AND RELIGION

To allow flexibility for a student to take a Level II course for Level III credit when a Level II course covers material not covered in any way by our Level III courses.
Three hours (lecture and discussion); one term
Prerequisite(s): Permission of the Undergraduate Affairs Committee and Department Chair

SCAR 3IL3 - ISLAMIC LAW

The course will trace the origins and development of Islamic law and examine the different schools within the Sunni and Shi'i (Ja'fari) sects. The course will also consider the application of Islamic law in modern times and the calls for its reform by Muslim thinkers.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

SCAR 3JJ3 - SOCIAL JUSTICE

Some of the central founding influences on conceptions of social justice in the contemporary 'west' are religious texts and figures. An exploration of contested examples and their ongoing importance in everyday discourses and practices of the ethics of justice.
Lectures, discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

SCAR 3LL3 - BEING HUMAN IN THE ANTHROPOCENE

What is the nature of human nature and its fulfilment? A study of recent philosophical, scientific and religious anthropology.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

SCAR 3PA3 - THE APOSTLE PAUL: THE FIRST CHRISTIAN?

- study of the controversial role played by Paul in the definition and expansion of early Christianity, based on the Acts of the Apostles and Paul's own extant correspondence.

Two lectures, one tutorial; one term

SCAR 3R03 - DEATH AND THE AFTERLIFE IN EARLY JUDAISM AND CHRISTIANITY

An examination of the variety of ways in which physical death and the afterlife were understood in biblical and post-biblical Judaism as well as in the New Testament and early Christianity. Among the topics to be considered are the netherworld, immortality and resurrection, as well as the relationship of these concepts to issues of faith and morality.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above

SCAR 3RB3 - ETHNICITY, RACE, AND RELIGION

This course will examine the variety of ethnic discourses that exist within the Bible. In what ways did biblical writers construct ethnic identity and how has the Bible been used in modern racial ideologies?
Lectures and discussion (three hours); one term

SCAR 3RC3 - RACE, RELIGION, AND COLONIALITY

We will read accounts of how notions of race and religion emerged in the modern age of colonial expansion, and contemporary theories of antiracism and decolonization.
Lectures, discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

SCAR 3RL3 - RELIGION AND LAW

The notion of law has deep roots in religious thought and writing. This course will survey the historical development of law in the western world in connection with various religious traditions, with a focus on Judaism and Christianity. It will also address some contemporary issues and tensions between religion and law in pluralistic, secular societies.
Three hours (lecture and discussion); one term
Cross-list(s): ARTSSCI 3RL3

SCAR 3S03 - THE EAST ASIAN RELIGIOUS TRADITION

Readings in East Asian religious texts in translation will concentrate on themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level III and above
Cross-list(s): ARTSSCI 3S03

SCAR 3SA3 - ADVANCED READINGS IN SANSKRIT

This course introduces students to selected readings in Sanskrit texts.
Lectures, discussion (four hours); one term
Prerequisite(s): SANSKRIT 2B03 or SCAR 2SB3
Cross-list(s): SANSKRIT 3A03

SCAR 3SB3 - ADVANCED READINGS IN SANSKRIT

Intermediate course with readings in selected Sanskrit texts.
Lectures, discussion (four hours); one term
Prerequisite(s): SANSKRIT 2B03 or SCAR 2SB3
Cross-list(s): SANSKRIT 3B03

SCAR 3SM3 - SECULAR MODERNITY?

Modernity, including modern politics and modern thought, has long been characterized as secular, and scholars speak of a 'return of religion' in our

times. But was modernity ever secular? Through history, theory, ideology, and art, we will recover a more complicated relationship between religion and modernity than usually imagined.
Lectures, discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

SCAR 3U03 - THE BUDDHIST TRADITION IN INDIA

- study of the origins and early development of Indian Buddhism, largely through readings in Buddhist scripture (pre-Mahayana and Mahayana) in translation.

Two lectures, one tutorial; one term

SCAR 3US3 - USES AND ABUSES OF THE BIBLE

This course examines the ways the Bible has been invoked over the centuries to support or challenge cultural, social and political ideals, goals, and policies.
Three hours (lecture and discussion); one term

SCAR 3UU3 - ZEN BUDDHISM

An examination of myth, history, doctrine, monastic culture, and ritual practices in Zen Buddhism.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above, and three units from the Asian Religions Field of Study

SCAR 3XI3 - SELECTED TOPICS IN MYSTICISM

An examination of mysticism in one or more religious traditions. Topic may vary by instructor.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in Level II or above

SCAR 3Y03 - LOVE

- discussion of the variety of accounts of love in Western civilization from the time of the ancient Greeks and the rise of Christianity to modernity.

Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level II or above

SCAR 3ZZ3 - JUDAISM IN THE MODERN WORLD

Jews and Judaism in a century of catastrophe and renewal. The progress of Emancipation; Jews in Canada and the U.S.; the Jewish catastrophe in Europe; the Jewish state; Jewish identities in literature and the arts.
Two lectures, one tutorial; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): HISTORY 3ZZ3

SCAR 4AE3 - ACADEMIC ENGAGEMENT IN SOCIETY, CULTURE & RELIGION

This course offers students the opportunity to engage with scholars of Religious Studies through public lectures, published writings, etc., and to reflect on their own cultivation of scholarly approaches to the study of religion. The course is run primarily as an independent study with small group discussions and various writing assignments.
Independent Study
Prerequisite(s): Enrolment in any one of the following: Level IV Combined Honours B. A., Society, Culture & Religion or Religious Studies and Another subject; Level IV Honours Society, Culture & Religion or Religious Studies B.A; Level III Society, Culture & Religion or Religious Studies B.A.

SCAR 4Q03 - ADVANCED READINGS IN SOCIETY, CULTURE AND RELIGION

Independent study of special topics in Society, Culture and Religion One term
Prerequisite(s): Registration in Level III or above of an Honours Society, Culture and Religion program and permission of the instructor
RELIGST 4Q03 may be repeated, to a total of six units, if on a different topic

SCAR 4R06 A/B - HONOURS THESIS

Students in this course will work closely with a faculty member who will supervise the students research and honours thesis.
Two terms
Prerequisite(s): Registration in Level IV of an Honours Society, Culture and Religion program with a minimum C.A. of 9.5; and permission of the instructor

SCAR 4SC3 - SOCIETY, CULTURE & RELIGION SEMINAR

Students read the work of, and engage with, a different faculty member from the department each week.
One lecture, one term
Prerequisite(s): Enrolment in level III or above in Society, Culture, and Religion or by permission of the instructor

Sociology

Courses in Sociology are administered by the Department of Sociology.
Kenneth Taylor Hall, Room 627, ext. 24481
http://www.sociology.mcmaster.ca

Department Notes

1. Prior to registration, students should consult the Department of Sociology's website or individual course outlines for fuller course descriptions and any changes in the list of courses offered in the upcoming year.
2. SOCIOL 1Z03 and several other courses are divided into independent sections.
3. Priority is given in all Level III courses to Sociology students, and in all Level IV courses to Honours Sociology students.
4. All Level IV courses are normally only open to students registered in a Level IV Honours Sociology program on a first come basis. SOCIOL 4M03, 4MM6 A/B S, and 4N03 require permission of the instructor.
5. Students transferring their degree program to Sociology are required to complete SOCIOL 2Z03 and 3FF3, the required methods courses. Students seeking an exemption, based on equivalent methods courses in other programs not listed by Sociology as antirequisites, must apply for permission from the department.
6. With some exceptions (noted below), the courses on the following lists are open to students in Level IV of an Honours Sociology program:

Courses

If no prerequisite is listed, the course is open.

SOCIOL 1C03 - CANADIAN SOCIETY: SOCIAL PROBLEMS, SOCIAL POLICY, AND THE LAW

An examination of Canadian social policy and the law in intimate relationships and families, work, immigration, health, and the criminal justice system.
Two lectures, one tutorial, one term

SOCIOL 1Z03 - AN INTRODUCTION TO SOCIOLOGY

- survey of the areas of research which interest the sociologist. Interpretation of human action from the standpoint of the group.

Two lectures, one tutorial, one term
Antirequisite(s): SOCIOL 1A06 A/B

SOCIOL 2BB3 - SOCIOLOGY OF DEVIANCE

An introduction to the sociological study of deviance covering key concepts, ideas, methods and different forms of deviant behaviour.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2CC3 - CONSTRUCTING DEVIANCE

An exploration of how individuals and behaviours are defined as deviant and the consequences of these definitional processes.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2DD3 - IMMIGRATION AND THE CANADIAN MOSAIC

This course overviews contemporary international migration and immigrant integration with emphasis on Canada. Topics include migration theories, immigration policies, socioeconomic integration, and the second generation.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2EE3 - DECOLONIZING CANADA: INDIGENOUS-SETTLER RELATIONS

An overview of Indigenous-settler relations in Canada, including the history of colonization and the sociological aspects of contemporary identities, inequalities, conflicts, and social movements.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03, or one of INDIGST 1A03 or 1AA3, and enrollment in Level II or above

SOCIOL 2FF3 - THE SOCIOLOGY OF 'RACE' AND ETHNICITY

An introduction to the study of "race" and ethnicity. The course examines theoretical, empirical, and policy issues related to racism, discrimination, identity, multiculturalism, and social integration.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2GG3 - SOCIOLOGY OF EDUCATION

An exploration of formal schooling and the broader education system in Western society with an emphasis on application of sociological theory to educational practices.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2HH3 - SOCIOLOGY OF GENDER

An introduction to the sociology of gender, including empirical and theoretical dimensions. The course will emphasize social construction, social institutions, and cultural dimensions.
Lectures and discussion (three hours); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2JJ3 - RACE, CLASS, GENDER, AND SEXUALITY

The sociology of race, class, gender and sexuality examines structural and cultural inequalities through an intersectional lens.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2KK3 - INTRODUCTION TO CLASSICAL SOCIOLOGICAL THEORY

An exploration of theories developed up to the early 20th century (including the ideas of Marx, Durkheim, Weber, and the early theorists of gender or "race").
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and registration in any Sociology program

SOCIOL 2LL3 - INTRODUCTION TO CONTEMPORARY SOCIOLOGICAL THEORY

An exploration of theories developed from the early 20th century to the present (such as the work of neo-Marxists, symbolic interactionists, feminists, and globalization theorists).
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and SOCIOL 2KK3 and registration in any Sociology program

SOCIOL 2PP3 - SOCIOLOGY OF FAMILIES

An introduction to theoretical, historical, contemporary, and comparative perspectives on intimate relationships, households, and families.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2QQ3 - DYNAMICS AND TRANSITIONS IN INTIMATE RELATIONSHIPS AND FAMILIES

An analysis of diversity in intimate relationships and families, including relationship formation and dissolution, caregiving, paid and unpaid labour, and social policy.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2R03 - PERSPECTIVES ON SOCIAL INEQUALITY

This course will introduce the student to major theories of social inequality, such as the Marxian, Weberian and structural-functionalist perspectives.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2RR3 - CASE STUDIES OF SOCIAL INEQUALITY

This course will introduce the student to the empirical literature on social inequality. Depending on the year, the focus will be on class, status, power and elites, income, education, region, age, gender and race/ethnicity.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2SS3 - SOCIOLOGY OF WORK AND OCCUPATIONS

This course examines the nature and meaning of work in relation to labour market, economic, and demographic changes in Canada over the last century.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2T03 - SOCIOLOGY OF SPORT

This course provides a detailed theoretical and empirical examination of how sport is culturally organized, experienced and mediated.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
Antirequisite(s): KINESIOL 1H03, KINESIOL 3P03
Not open to students with credit or registration in SOCIOL 3J03 if the topic was Sociology of Sport. Priority will be given to students registered in a Sociology program.

SOCIOL 2TA3 - ISLAM IN NORTH AMERICA

This course will explore the history and different expressions of North American Islam. Students will compare and contrast different expressions of Islam in North America.
Two lectures, one tutorial; one term
Cross-list(s): RELIGST 2TA3

SOCIOL 2UU3 - INDIGENOUS ONTOLOGIES AND WAYS OF KNOWING

This course will examine the ways in which Indigenous peoples understand themselves as social beings and societies. Indigenous theories and ways of knowing will be drawn from various Indigenous societies throughout North America.
Lectures and discussion (three hours); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03, or one of INDIGST 1A03, 1AA3 or INDIGST 1B03, and enrollment in Level II or above

SOCIOL 2VV3 - LAW AND SOCIETY

This course considers theoretical perspectives on the role of law in society and sociological research addressing areas such as criminal law, family law, environmental law, immigration law, and media law.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 2WW3 - MEDIA AND POWER

This course examines how the production and content of various media are linked to powerful organizations and challenged by subordinated groups through struggles over media policy or resistance through alternative media.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
Antirequisite(s): SOCIOL 2L03

SOCIOL 2Z03 - INTRODUCTION TO SOCIOLOGICAL RESEARCH

This course is designed to develop those skills necessary to pursue and understand research. Several general methods of sociological research will be examined.
Three hours (lectures and discussion); one term
Prerequisite(s): Registration in a Sociology or Social Work program
Antirequisite(s): ANTHROP 2Z03, CMST 2A03, GEO 2HR3, GEOG 2MA3, GERONTOL 2C03, HLTHAGE 2A03, 2A06, 3Z06, HEALTHST 2B03, SOCPSY 2K03

SOCIOL 3A03 - ADVANCED ANALYSIS OF CLASSICAL SOCIOLOGICAL THEORY

An advanced examination of classical sociological theory. Work to be discussed might include Marx, Weber, Durkheim, Mead, Cooley, Du Bois and Freud.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2KK3 and 2LL3 and registration in Level III or above of any Honours Sociology program

SOCIOL 3B03 - SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION

An examination of selected topics in the sociology of education.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2GG3
SOCIOL 3B03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 3D03 - SPECIAL TOPICS IN THE SOCIOLOGY OF THE FAMILY

An advanced course allowing detailed study of selected topics in the sociology of the family.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2PP3 or 2QQ3
SOCIOL 3D03 may be repeated, if on a different topic, to a total of six units. Priority will be given to students registered in a Sociology program.

SOCIOL 3FF3 - INTRODUCTION TO QUANTITATIVE RESEARCH METHODS

This course introduces the basic principles of statistics used in sociological research. The focus will be on selecting, applying, and interpreting statistics for data analyses.
Three hours (lectures and labs); one term
Prerequisite(s): SOCIOL 2Z03 and registration in Level III of any Honours Sociology program
Antirequisite(s): SOCIOL 3H06 A/B. Not open to students with credit or registration in any Statistics courses with the exception of STATS 1L03, STATS 2D03, STATS 3U03*

SOCIOL 3G03 - SOCIOLOGY OF HEALTH CARE

Selected issues concerning forms of providing health care.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
Priority will be given to students registered in a Sociology program.

SOCIOL 3K03 - SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS

Same as SOCIOL 3J03.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
SOCIOL 3K03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 3KK3 - GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES

An examination of genocide and other extreme crimes against humanity.
Lectures and discussion (three hours); one term
Prerequisite(s): Registration in Level III or above
Antirequisite(s): SOCSCI 2C03
Cross-list(s): POLSCI 3KK3
Priority will be given to students registered in a Political Science or Sociology program.
This course is administered by the Department of Political Science.

SOCIOL 3MH3 - SOCIOLOGY OF STRESS AND MENTAL HEALTH

This course will emphasize the unique perspective sociology offers in the larger interdisciplinary discussion of stress and mental health.
Three hours (lectures and discussion); one term.
Prerequisite(s): One of SOCIOL 1C03 or SOCIOL 1Z03 and enrollment in Level III or above.
Not open to students with credit in SOCIOL 3HH3.
Capacity: 100 students

SOCIOL 3MM3 - POLITICAL SOCIOLOGY

This course examines the field of political sociology, including power, the state, policy, and social change.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
Enrolment priority will be given to students registered in a Sociology program.

SOCIOL 3NN3 - POPULAR CULTURE AND INEQUALITY

How the production, reception, and consumption of art and popular culture are shaped by and reinforce race, class, and gender inequalities.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 3O03 - QUALITATIVE RESEARCH METHODS

This course will provide a detailed study of selected qualitative methods in Sociology.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2Z03 and registration in Level III or above of any Honours Sociology program
Antirequisite(s): GERONTOL 3R03, HLTHAGE 3A03, HLTHAGE 3B03

SOCIOL 3P03 - ADVANCED ANALYSIS OF CONTEMPORARY SOCIOLOGICAL THEORY

An advanced examination of contemporary sociological theory, with a possible focus on schools of theoretical thought like critical theory, symbolic interactionalism, or feminist theory.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2KK3 and SOCIOL 2LL3 and registration in Level III or above of any Honours Sociology program
Antirequisite(s): SOCIOL 3A06

SOCIOL 3QQ3 - EMPLOYMENT AND CAREERS AFTER A SOCIOLOGY DEGREE

This course draws on sociological analysis of work, occupations, and organizations to prepare students for seeking employment and developing careers.
Lectures and discussion (three hours); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level III or above of any Sociology program
Antirequisite(s): SOCIOL 4HH3

SOCIOL 3RI3 - RACIAL POLITICS AND RESISTANCE

This course introduces students to conceptual and empirical perspectives on racism and racial inequality and draws from Canadian and international experiences.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above
Antirequisite(s): SOCIOL 3Z03

SOCIOL 3RR3 - IMPRISONMENT

An exploration of the history, politics, and consequences of incarceration on individuals and society.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level III or above of any Sociology or Honours Social Psychology program, or permission of the Department
Cross-list(s): SOCPSY 3RR3

SOCIOL 3SS3 - SOCIOLOGY OF JUDGEMENT

An exploration of sociological perspectives on judgement and connections to inequality, power, and authority.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level III or above

SOCIOL 3U03 - SOCIOLOGY OF SEXUALITIES

An exploration of the social aspects of sexuality and consideration of how sexual experiences are shaped by, and interpreted through, historically specific social contexts.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03
Priority will be given to students registered in a Sociology program.

SOCIOL 3UU3 - POWER, CONFLICT, AND THE LAW

This course focuses on sociological analysis emphasizing how the legal system reflects the interests of powerful classes or groups and is the basis for social conflict.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level II or above

SOCIOL 3VV3 - THE INDIAN ACT: A SOCIAL PROBLEM

An overview of Indigenous policy in Canada, with a focus on the Indian Act (the earliest race-based legislation in Canada) and its legal and sociopolitical ramifications.
Three hours (lectures and discussion); one term
Prerequisite(s): Three units of Level II Indigenous Studies; or one of SOCIOL

1C03 or SOCIOL 1Z03 and enrolment in Level III or above; or permission of the Department.
Cross-list(s): INDIGST 3VV3
SOCIOL 2EE3 or 2UU3 and/or a background in Indigenous Studies is recommended.
This course is administered by the Department of Indigenous Studies.

SOCIOL 3W03 - HISTORICAL METHODS IN SOCIOLOGY

An examination of methods for incorporating historical data and archival sources into sociological argument.
Three hours (lectures and discussion); one term
Prerequisite(s): SOCIOL 2Z03

SOCIOL 3YY3 - SOCIOLOGY OF GLOBALIZATION

An exploration of globalization using a sociological perspective focusing on issues such as the global economy, migration, transnational families, and global identity formations.
Three hours (lectures and discussion); one term
Prerequisite(s): One of SOCIOL 1C03 or 1Z03 and enrollment in Level III or above of any Sociology program, or permission of the Department

SOCIOL 4A03 - ETHNIC/RACIAL TENSIONS

The course will investigate the processes by which racial and/or ethnic tensions develop in various societies.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the department

SOCIOL 4AA3 - SELECTED TOPICS IN THE SOCIOLOGY OF THE FAMILY

An intensive examination of selected problems in the sociology of the family.
Lectures and discussion (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department
SOCIOL 4AA3 may be repeated, on a different topic, to a total of six units.

SOCIOL 4BB3 - SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION

This advanced course offers an intensive examination of selected problems involving the relationship between schooling and society.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the department
Not open to students with credit in SOCIOL 4J03 or SOCIOL 4K03 if on a similar topic.

SOCIOL 4CM3 - CRITICAL ANALYSIS OF MEDIA

This course examines critical theoretical perspectives and research focusing on power, control, inequality, and conflict in relation to media production and media content.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program or permission of the department
Antirequisite(s): SOCIOL 4TT3

SOCIOL 4DD3 - SOCIAL MOVEMENTS AND SOCIAL CHANGE

This seminar examines sociological understandings of contentious politics, activism, and social change.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4E03 - SELF AND IDENTITY

- consideration of theoretical and empirical questions relating to self and identity viewed from historical, cross-cultural and cross-disciplinary perspectives.

Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4EE3 - SELECTED TOPICS IN THE SOCIOLOGY OF CULTURE

- sociological examination of topics related to the production, dissemination, consumption and/or interpretation of culture. Community service learning may be a component of this course.

Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Sociology program;
enrolment in Level IV of the Honours Social Psychology program; or permission of the Department
SOCIOL 4EE3 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4FF3 - APPLICATIONS OF QUANTITATIVE METHODS IN THE SOCIAL SCIENCES

This course introduces students to more advanced language and methods of quantitative analyses in the social sciences, including an introduction to a statistical software program.
Lectures and labs (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology (Specialist Option) program or permission of the Department

SOCIOL 4G03 - ADVANCED TOPICS IN THE SOCIOLOGY OF HEALTH AND ILLNESS

An examination of the social bases of illness. In different years consideration may be given to topics such as gender, social class and occupational and environmental health issues.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department
SOCIOL 4G03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4GG3 - SPECIAL TOPICS IN THE SOCIOLOGY OF DEVIANCE

An advanced course allowing detailed study of selected topics in the sociology of deviance. Topics will vary from year to year.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department
SOCIOL 4GG3 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4J03 - SELECTED TOPICS IN SOCIOLOGY I

Topics of contemporary interest to sociologists, with emphasis upon current theory and research. Students should consult the Department concerning the topics to be examined.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department
SOCIOL 4J03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4KK3 - SOCIOLOGY THROUGH COMMUNITY ENGAGEMENT AND SERVICE

Students are offered a reciprocal opportunity to acquire knowledge and develop skills while providing service and assistance to the community.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program

SOCIOL 4LL3 - SELECTED TOPICS IN THE SOCIOLOGY OF IMMIGRATION

This course focuses on a timely sociological topic on immigrants and immigrant children (the second generation), including labour market integration, transnationalism, and gender and migration.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department

SOCIOL 4M03 - DIRECTED RESEARCH I FOR HONOURS STUDENTS

Directed study of a research problem through published materials and/or field inquiry and/or data analysis. Students will be required to write up the results of their inquiry in scholarly form.
One term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program and permission of the Instructor

SOCIOL 4MM3 - PUBLIC SOCIAL PSYCHOLOGY

This course examines major figures in social psychology who have had an impact on the public and transformed our culture. It also examines current public debates and controversies about social psychology or particular social psychologists.
Lectures and discussion (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology (B.A.) program; or permission of the Department
Cross-list(s): SOCPSY 4MM3

SOCIOL 4MM6 A/B S - DIRECTED RESEARCH FOR HONOURS STUDENTS

Directed study of a research problem through published material and/or field inquiry and/ or data analysis. Students will be required to write up the results of their inquiry in scholarly form.
Two terms
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of the Honours Sociology (Specialist Option) program and permission of the instructor

SOCIOL 4N03 - DIRECTED RESEARCH II FOR HONOURS STUDENTS

Same as SOCIOL 4M03.
One term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; and permission of the Instructor

SOCIOL 4NN3 - MEETING THE CHALLENGE OF A CHANGING CLIMATE

Climate change is underway. This seminar examines perceptions of climate change, the social upheaval it causes, and efforts to come to terms with climate change.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program or permission of the department

SOCIOL 4QQ3 - WOMEN, SEXUALITY AND THE WELFARE STATE

This seminar provides a sociological focus on gender, sexuality, social policy, and the welfare state.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department

SOCIOL 4R03 - INDIVIDUAL AND SOCIETY

An intensive examination of selected problems involving the relationship of individuals to social structures.
Lectures and discussion (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4RD3 - THE SOCIOLOGICAL INDIAN: WHAT IS RECONCILIATION AND DECOLONIZATION AND WHY DOES IT MATTER?

This seminar will examine how Indigenous peoples are represented in sociology from the late 19th century to the present and will discuss the ever-changing discourse of Indigeneity in the discipline.
Three hours (seminar); one term.
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; enrolment in Level IV of the Indigenous Studies program; or permission of the department. SOCIOL 2EE3 or 2UU3 and/or a background in Indigenous Studies is recommended.
Capacity: 25 students

SOCIOL 4RE3 - HANDS-ON RESEARCH EXPERIENCE

This capstone course provides a unique opportunity for hands-on research experience. It enables students to integrate and apply sociological knowledge and skills in a research project in their area of interest. Under the guidance of a faculty member, students will develop original research questions, design a qualitative or quantitative research study, and reflect on the ethics of research. The course typically culminates with a research proposal and presentation.
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program or permission of the department

SOCIOL 4RR3 - INDIGENOUS PEOPLES AND CANADA

An intensive examination of selected aspects of Indigenous-settler relations in Canada. Topics may include colonization/decolonization, racism/anti-racism, identity politics, Indigenous and treaty rights, Indigenous-settler alliances, and healing and reconciliation (among others). This course also offers unique opportunities for community engagement.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or enrolment in Level IV of the Indigenous Studies program; or permission of the Department
SOCIOL 2EE3 and/or a background in Indigenous Studies is recommended.

SOCIOL 4SI3 - SOCIAL MEDIA, SEX, AND INEQUALITY IN INTIMATE RELATIONSHIPS

This seminar explores how social media and new technologies are transforming intimate relationships, diversity in sexual relationships, and inequalities experienced in intimate relationships and families.
Three hours (seminar); one term.
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program.
Antirequisite(s): SOCIOL 3D03
Capacity: 25 students

SOCIOL 4SR3 - TOPICS IN THE SOCIOLOGY OF RELIGION

This course will examine sociological perspectives on Islam. Particular attention will be paid to issues of Muslim authority, identity and religious practices in the diaspora.
Seminar (three hours); one term
Cross-lists(s): RELIGST 4SR3
This course is administered by the Department of Religious Studies.

SOCIOL 4SS3 - THE SOCIOLOGY OF THE 1960S

Drawing on the sociology of social movements, culture and reputations, this course looks at the decade of the 1960s in Canada and the United States.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or permission of the Department

SOCIOL 4U03 - SPECIAL TOPICS IN THE SOCIOLOGY OF WOMEN

An intensive examination of selected problems concerning women. Depending upon the instructor, topics may include: stratification, inequality, political participation, sexuality, health and work.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department
SOCIOL 4U03 may be repeated, if on a different topic, to a total of six units.

SOCIOL 4UU3 - GLOBAL FAMILY AND SEXUAL POLITICS

This course examines how globalization affects the ways in which family and sexualities are imagined, regulated and experienced through a sociological lens.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4V03 - WORK IN FLUX: THE GIG ECONOMY, THE CORPORATE LADDER, AND CHANGING LABOUR MARKETS

An advanced course allowing detailed study of one or more topics of special interest.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4W03 - SOCIAL PROBLEMS

The focus of the course will be theories concerning social problems or an empirical examination of specific issues that have become the object of public debate and discussion.
Lectures and discussion (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in the Honours Social Psychology program; or permission of the Department

SOCIOL 4XX3 - YOUTH IN SOCIETY: CHALLENGE AND CHANGE

This course focuses on the social attributes and surrounding conditions associated with at-risk youth in educational, criminal justice, and mental health care institutions The class may involve an academic placement component with the North Hamilton 'Pathways to Education' project.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program; or enrolment in Level IV of the Honours Social Psychology program; or permission of the Department

SOCIOL 4YY3 - FEMINISM AND SOCIAL POLICY

The course will examine the historic and more contemporary challenges, but also successes, that women and feminists have faced in transforming public policy in Canada and globally.
Lectures and discussion (three hours); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program or permission of the department. SOCIOL 2HH3 is recommended.

SOCIOL 4ZZ3 - SELECTED TOPICS IN LAW AND SOCIETY

This course addresses particular areas of sociological investigation into the law.
Three hours (seminar); one term
Prerequisite(s): SOCIOL 3FF3 and enrolment in Level IV of any Honours Sociology program or permission of the department.
SOCIOL 4ZZ3 may be repeated, if on a different topic, for a total of six units.

Software Engineering

Courses in Software Engineering are administered by the Department of Computing and Software.
Information Technology Building, Room 202, ext. 24614
http://www.cas.mcmaster.ca

Department Notes

Please note that not all elective courses will be offered in each academic year.

SFWRENG 2AA4 - SOFTWARE DESIGN I - INTRODUCTION TO SOFTWARE DEVELOPMENT

Software life cycle, quality attributes, requirements documentation, specifying behavior; classes and objects, interface specification; creational, structural, and behavioral software design patterns; implementation in code, reviews, testing and verification.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): SFWRENG 2DM3; SFWRENG 2S03 or 2OP3; SFWRENG 2XA3 or 2XC3; registration in any Software Engineering program
Antirequisite(s): COMPSCI 2ME3, MECHTRON 3K04, SFWRENG 3K04

SFWRENG 2C03 - DATA STRUCTURES AND ALGORITHMS

Basic data structures: stacks, queues, hash tables, and binary trees; searching and sorting; graph representations and algorithms, including minimum spanning trees, traversals, shortest paths; introduction to algorithmic design strategies; correctness and performance analysis. Implementation of data structures and algorithms.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): SFWRENG 2DM3; registration in any Software Engineering program
Antirequisite(s): COMPSCI 2C03, COMPENG 3SM4

SFWRENG 2DA4 - DIGITAL SYSTEMS AND INTERFACING

Memory, binary arithmetic, hierarchical design. Hardware/software co-design and application-specific processors. Interfacing to I/O devices.
Three lectures, one lab (three hours); first term
Prerequisite(s): Registration in any Software Engineering program
Co-requisite(s): SFWRENG 2DM3
Antirequisite(s): COMPENG 2DI4, ELECENG 2DI4

SFWRENG 2DM3 - DISCRETE MATHEMATICS WITH APPLICATIONS I

Functions, relations and sets; the language of predicate logic, propositional logic; proof techniques, counting principles; induction and recursion, discrete probabilities, graphs, and their application to computing.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): MATH 1ZC3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 2DM3, SFWRENG 2E03, 2F03

SFWRENG 2FA3 - DISCRETE MATHEMATICS AND APPLICATIONS II

Predicate logic and formal proofs, grammars and automata, modular arithmetic, and their applications to computing.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): SFWRENG 2DM3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 2FA3, SFWRENG 2E03, 2F03

SFWRENG 2GA3 - COMPUTER ARCHITECTURE

Instruction-set architecture, computer arithmetic, datapath and control, pipelining, memory hierarchies, I/O systems, multiprocessor systems, measures of performance. Introduction to assembly programming.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): SFWRENG 2DA4 or MECHTRON 2TA4; SFWRENG 2S03 or 2XC3 or MECHTRON 2MP3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPENG 3DR4, 4DM4, COMPSCI 2GA3, SFWRENG 3GA3

SFWRENG 2OP3 - OBJECT-ORIENTED PROGRAMMING

Principles of object-oriented programming: Classes, objects, interfaces, references, methods and fields; types of inheritance, overriding, polymorphism, overloading, covariance and contravariance, exception handling, generics, closures; design by contract; use of standard APIs.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): ENGINEER 1D04 or 1P13, or IBEHS 1P10; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPENG 2SH4, COMPSCI 2S03, SFWRENG 2S03

SFWRENG 2XC3 - SOFTWARE ENGINEERING PRACTICE AND EXPERIENCE: DEVELOPMENT BASICS

Imperative low-level programming, with documentation, testing, benchmarking, profiling and debugging, revision control. Acquiring professional software development skills via practical experience with interaction with UNIX-like systems, shell interaction and programming, pipes and filters.
One lecture, two labs (two hours each); first term.
Prerequisite(s): ENGINEER 1D04 or 1P13 or IBEHS 1P10 A/B; registration in any Software Engineering program
Antirequisite(s): COMPENG 2SH4, COMPSCI 1XC3, 2XA3, 2S03, MECHTRON 2MP3, SFWRENG 2MP3, 2S03, 2XA3

SFWRENG 3A04 - SOFTWARE DESIGN III - LARGE SYSTEM DESIGN

Sustainable architectures; design for change and expansion; software architecture design space; object oriented analysis and design; architectural styles; methodology of making architecture decisions; project organization.
Three lectures, one tutorial (two hours); second term
Prerequisite(s): SFWRENG 3BB4; registration in any Software Engineering program

SFWRENG 3BB4 - SOFTWARE DESIGN II - CONCURRENT SYSTEM DESIGN

Processes, threads, concurrency; synchronization mechanisms, resource management and sharing; objects and concurrency; design, architecture and testing of concurrent systems.
Three lectures, one tutorial (two hours); first term
Prerequisite(s): SFWRENG 2AA4, 2FA3; registration in any Software Engineering program
Antirequisite(s): COMPSCI 2SD3, 3SD3

SFWRENG 3DB3 - DATABASES

Data modeling, integrity constraints, principles and design of relational databases, relational algebra, SQL, query processing, transactions, concurrency control, recovery, security and data storage.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): SFWRENG 2C03 and 2DM3 and registration in any Software Engineering program, or MECHTRON 2MD3 or SFWRENG 2MD3 and registration in Level IV or above of any Mechatronics program
Antirequisite(s): COMPSCI 2DB3, 3DB3

SFWRENG 3DX4 - DYNAMIC SYSTEMS AND CONTROL

Modelling of dynamic continuous physical phenomena in both continuous and discrete time. Control theory, stability analysis and feedback controller design. Application of computer control to continuous processes. System identification.
Three lectures, one lab (three hours); second term
Prerequisite(s): SFWRENG 3MX3; registration in any Software Engineering program

Antirequisite(s): ELECENG 3CL4, ENGINEER 3L03, IBEHS 4A03, MECHENG 4R03, MECHTRON 3DX4, SFWRENG 3DX3

SFWRENG 3FP3 - FUNCTIONAL PROGRAMMING

Functional programming; lists and algebraic data types, pattern matching, parametric polymorphism, higher-order functions, reasoning about programs; lazy and strict evaluation; programming with monads; domain-specific languages.
Three lectures, one tutorial; one term
Prerequisite(s): SFWRENG 2DM3, 2FA3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 3FP3, 4FP3
Offered on an irregular basis.

SFWRENG 3GB3 - GAME DESIGN

Game concepts. Creative and expressive play. Storytelling and narratives. User interfaces for games. Gameplay. Core mechanics. Game Balancing. Software architecture of games. Level design. Genres. Physics Engines.
Three lectures, one tutorial (two hours every other week); one term
Prerequisite(s): COMPSCI 2ME3 or SFWRENG 2AA4 or 3K04; registration in any Software Engineering or Mechatronics Engineering or Honours Computer Science program
Offered on an irregular basis.

SFWRENG 3GC3 - COMPUTER GRAPHICS

Mathematical foundations, the graphics pipeline, geometrical transformations, 3D visualization, clipping, illumination and shading models and the impact of graphics on society.
Three lectures, one tutorial (two hours every other week); one term
Prerequisite(s): Registration in a program in Software Engineering
Antirequisite(s): COMPSCI 3GC3
Offered on an irregular basis.

SFWRENG 3K04 - SOFTWARE DEVELOPMENT

Software design process. Professional responsibility. Using specifications. Documentation. Module Specification. Module interfaces. Module internal documentation. Coding styles. Portability. Software inspection. Software testing.
Three lectures, one lab (three hours); first term
Prerequisite(s): One of COMPENG 2SI3, 2SI4, ELECENG 2SI4; registration in any Computer Engineering program
Antirequisite(s): COMPSCI 2ME3, MECHTRON 3K04, SFWRENG 2AA4, 3MD3, 3MD4

SFWRENG 3MD4 - SAFE SOFTWARE-INTENSIVE MEDICAL DEVICES

Comprehensive overview of and experience with system development and assurance for safety critical software-intensive systems in general, and safe, secure and effective medical devices in particular: System requirements, validation, system design including hardware and software components, software design, implementation, and verification.
Three lectures, one lab (two hours); one term
Prerequisite(s): COMPENG 2SI3, 2SI4 or COMPSCI 2C03 or MECHTRON 2MD3 or SFWRENG 2C03 or 2MD3; PHYSICS 1E03 or 2B03
Antirequisite(s): MECHTRON 3K04, SFWRENG 3K04, 3MD3

SFWRENG 3MX3 - SIGNALS AND SYSTEMS

Linear systems, signals, filters; time and frequency domains; single input-single output systems; discrete and continuous time; sampling theorem; Fourier series; Fourier, Laplace, and Z-transforms; stability.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): MATH 2Z03; registration in any Software Engineering or Honours Computer Science program
Antirequisite(s): ELECENG 3TP3, MECHTRON 3MX3, IBEHS 3A03

SFWRENG 3O03 - LINEAR OPTIMIZATION

Modelling and solutions for engineering and science problems using linear optimization, including networks, transportation, assignment, and scheduling problems. Solution methods include combinatorial algorithms such as simplex methods, primal-dual formulations, branch and bound formulations for mixed integer programming, and heuristics.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): SFWRENG 2C03 or 2MD3 or MECHTRON 2MD3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4O03

SFWRENG 3RA3 - SOFTWARE REQUIREMENTS AND SECURITY CONSIDERATIONS

Software requirements gathering. Critical systems requirements gathering. Security requirements. Traceability of requirements. Verification, validation, and documentation techniques. Software requirements quality attributes. Security policies. Measures for data confidentiality. Design principles that enhance security. Access control mechanisms.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): SFWRENG 2AA4 or SFWRENG 3K04 or MECHTRON 3K04; SFWRENG 2FA3 or SFWRENG 2MD3 or MECHTRON 2MD3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 3RA3, 3SR3, 4EF3, SFWRENG 3R03, 4EF3; not open for students in a Computer Science program

SFWRENG 3S03 - SOFTWARE TESTING

Measurement fundamentals, software measures and metrics, cost and effort estimation, testing strategy, testing plan, testing documentation, slicing and debugging, test coverage, functional testing techniques, system testing techniques, automated testing, maintenance fundamentals, regression testing.
Three lectures, one tutorial (two hours every other week); second term
Prerequisite(s): SFWRENG 3BB4 or COMPSCI 3SD3 or 2SD3; registration in any Software Engineering or Honours Computer Science program

SFWRENG 3SH3 - OPERATING SYSTEMS

Processes and threads, synchronization and communication; scheduling, memory management; file systems; resource protection; structure of operating systems.
Three lectures, one lab (three hours every other week); second term
Prerequisite(s): One of MECHTRON 3K04, SFWRENG 2AA4, 3K04; and one of MECHTRON 2MD3, SFWRENG 2MD3, 2C03 or COMPENG 2SI4; registration in any Software Engineering or Mechatronics Engineering or Computer Engineering program
Antirequisite(s): COMPSCI 3SH3

SFWRENG 3XB3 - SOFTWARE ENGINEERING PRACTICE AND EXPERIENCE: BINDING THEORY TO PRACTICE

Open-ended design of computational solutions to practical problems that involve both theoretical (algorithmic) analysis and implementation; solving

computational problems through an experiential approach.
One lecture, two labs (two hours each); first term
Prerequisite(s): SFWRENG 2AA4, 2C03, 2GA3; registration in any Software Engineering program
Antirequisite(s): SFWRENG 2XB3, COMPSCI 2XB3, 2XC3
Offered on an irregular basis.

SFWRENG 4AA4 - REAL-TIME SYSTEMS AND CONTROL APPLICATIONS

Hard and soft real-time systems. Safety classification. Fail-safe design, hazard analysis. Discrete event systems. Modes. Requirements and design specifications. Tasks and scheduling. Clock synchronization. Data acquisition. Applications in real-time control.
Three lectures, one lab (three hours); first term
Prerequisite(s): SFWRENG 3BB4 or 3SH3; and SFWRENG 3DX3 or 3DX4, or IBEHS 4A03; registration in any Software Engineering program
Antirequisite(s): MECHTRON 4AA4, SFWRENG 4A03, 4AA3, 4GA3

SFWRENG 4AD3 - ADVANCED DATABASES

Advanced topics in database systems technology and design. Topics include: query processing; query optimization; data storage; indexing; crash recovery; physical database design; introductory data mining techniques.
Three lectures, one tutorial; one term
Prerequisite(s): SFWRENG 3DB3 or 4DB3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4AD3
Offered on an irregular basis.

SFWRENG 4AL3 - APPLICATIONS OF MACHINE LEARNING

Overview of data engineering. Human-computation architectures. Supervised approaches (neural networks). Unsupervised approaches (clustering/topic modelling). Human-in-the-loop approaches (reinforcement learning).
Three lectures, one tutorial (one hour); first term
Prerequisite(s): SFWRENG 2C03 or SFWRENG 2MD3 or MECHTRON 2MD3; SFWRENG 2AA4 or MECHTRON 3K04; STATS 3Y03 or IBEHS 3S03 or 4C03; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4AL3, MECHENG 4AI3

SFWRENG 4C03 - COMPUTER NETWORKS AND SECURITY

Physical networks, TCP/IP protocols, switching methods, network layering and components, network services. Information security, computer and network security threats, defense mechanisms, encryption.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): SFWRENG 3BB4 or 3K04, or COMPSCI 3SH3 or SFWRENG 3SH3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 3CN3, 3N03, 4C03, COMPENG 4DK4, 4DN4

SFWRENG 4CN3 - COMPUTATIONAL MODELING FOR COGNITIVE NEUROSCIENCE

Introduction to measures of human brain activity, focusing on non-invasive methods. Assessing human perception and cognition, including: predictive models, computational models of perception, and decoding. Using and contributing to community-maintained data analysis software; data structures for brain data; analysis pipelines and replicability. Practical experience using open-source data analysis tools and public datasets.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): One of STATS 2D03 or 3Y03, IBEHS 3S03 or 4C03, MATLS 3J03; one of ELECENG 3TP3, ENGPHYS3W04, IBEHS 3A03, MECHENG 4R03, MECHTRON 3MX3, SFWRENG 3MX3
Offered on an irregular basis.

SFWRENG 4E03 - PERFORMANCE ANALYSIS OF COMPUTER SYSTEMS

Use of queuing models and simulation to predict computer system performance and find bottlenecks in a system. Types of models, distributions. Markov models. Modelling storage and network behaviour, locks, critical sections, concurrency. Introduction to analytical system reliability.
Three lectures, one tutorial (one hour); second term
Prerequisite(s): STATS 3Y03 or IBEHS 3S03 or 4C03; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4E03

SFWRENG 4F03 - PARALLEL COMPUTING

Parallel architectures, design and analysis of parallel algorithms; distributed-memory, shared-memory and GPU computing; communication cost, scalability; MPI, OpenMP and OpenACC; tuning parallel programs for performance.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): Credit or registration in SFWRENG 3BB4 or SFWRENG 3SH3; registration in any Software Engineering or Mechatronics Engineering program. Completion of SFWRENG 4C03 is recommended.
Antirequisite(s): COMPSCI 4F03
Offered on an irregular basis.

SFWRENG 4G06 A/B - SOFTWARE DESIGN IV - CAPSTONE DESIGN PROJECT

Student teams prepare the requirements, design, documentation, and implementation of a software system taking economic, health, safety, legal, marketing factors into account. Students must demonstrate a working system and convincing test results. Software project management.
Lectures, discussion, group project, seminars (three two-hour slots); two terms
Prerequisite(s): Registration in final level of a Software Engineering program
Antirequisite(s): SFWRENG 4G03, 4H03, 4GP6 A/B.
Cannot be taken concurrently with any co-op work term course.

SFWRENG 4HC3 - HUMAN COMPUTER INTERFACES

Design of user interfaces. Principles of good interface design. Task-oriented design. User experience design. Inclusive design. Communicating with graphics. Modes and mode awareness problem. Human cognition (memory, perception, motor systems). Help systems. Interface design tools.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): Registration in Level III or above of any Software Engineering or Software and Biomedical Engineering program, or of any Mechatronics Engineering or Mechatronics and Biomedical Engineering program, or registration in an Integrated Biomedical Engineering and Health Sciences (IBEHS) program and either COMPENG 2SI3 or 2SI4 or permission of the department
Antirequisite(s): COMPSCI 4HC3; not open for students in a Computer Science program

SFWRENG 4J03 - COMMUNICATIONS SYSTEMS

Architecture of communication systems, modulation/demodulation, Huffman coding, forward error correction code, framing, multiple access control, routing, message forwarding, reliable transmission, sliding algorithms, communication protocol design considerations.
Three lectures, one tutorial (one hour); one term

Prerequisite(s): SFWRENG 2MX3 or 3MX3 or MECHTRON 3MX3 or IBEHS 3A03; registration in any Software Engineering or Mechatronics Engineering or Honours Computer Science program; STATS 3N03 or STATS 3Y03 or IBEHS 3S03 or 4C03 is recommended.
Offered on an irregular basis.

SFWRENG 4TB3 - SYNTAX-BASED TOOLS AND COMPILERS

Lexical analysis, syntax analysis, type checking; syntax-directed translation, attribute grammars; compiler structure; implications of computer architecture; mapping of programming language concepts; code generation and optimization.
Three lectures, one lab (two hours); second term
Prerequisite(s): SFWRENG 2C03, 2FA3, 2GA3, and registration in Level IV or above of a Software Engineering
Antirequisite(s): COMPSCI 3TB3, 4TB3

SFWRENG 4TE3 - CONTINUOUS OPTIMIZATION

Fundamental algorithms and general duality concepts of continuous optimization. Special attention will be paid to the applicability of the algorithms, their information requirements and computational costs. Practical engineering problems will illustrate the power of continuous optimization techniques.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): One of MATH 2Z03 or 2C03; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4TE3
Offered on an irregular basis.

SFWRENG 4TH3 - THEORY OF COMPUTATION

Formal languages, models of computation, decidability, reduction techniques, time and space complexity classes.
Three lectures, one tutorial (one hour); one term
Prerequisite(s): SFWRENG 2C03, 2FA3; registration in any Software Engineering or Mechatronics Engineering program
Antirequisite(s): COMPSCI 4TH3
Offered on an irregular basis.

SFWRENG 4X03 - SCIENTIFIC COMPUTATION

Computer arithmetic and roundoff error analysis. Interpolation, integration, solving systems of linear and nonlinear equations. Eigenvalues and singular value decomposition. Numerical methods for ordinary differential equations.
Three lectures, one tutorial (one hour); first term
Prerequisite(s): Both MATH 1ZB3 and MATH 1ZC3, or both MATH 1AA3 and 1B03; SFWRENG 2C03; registration in any Software Engineering program
Antirequisite(s): CHEMENG 2E04, CIVENG 2E03, COMPENG 3SK3, 3SK4, COMPSCI 3X03, 4X03, ENGPHYS 2CE4, 3NM4, MATH 3NA3, 4NA3, MECHENG 3F04, SFWRENG 3X03, MECHTRON 3X03

Software Engineering General Technology

SFGNTECH 3DM3 - CREATIVITY, INNOVATION AND TECHNOLOGY

This course is a blend of hands-on and theoretical treatment on the subject of creating new technological product and service value in our society.
Three lectures; one term; may be offered in an in-person or virtual format with in-person exams.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 1DM3, 3DM3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 3EE3 - ENGINEERING ECONOMICS

Costing methods for engineering designs and processes; minimum attractive rate of return, return sensitivities, time value of money, internal rates of return, payback period, amortization of equipment and capital cost allowance structures.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 1EE3, 2EE3, 3EE3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 3FS3 - FINANCIAL SYSTEMS

The course focuses on departmental budget methodologies, understanding and interpretation of various financial statement components in terms of their relevance to managerial decision making.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 1FS3, 1FT3, 3FF3, 3FS3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 3MP3 - MANAGEMENT PRINCIPLES

The course examines fundamental management principles of planning, organizing, leading and controlling in technology organizations. Emphasis is placed on understanding and application of human resource management practices to engage people in attaining organizational goals.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 2MP3, 3OB3, 3MP3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4EM3 - LEGAL AND REGULATORY ISSUES

This course is an introduction to the legal, ethical, and regulatory frameworks that professional engineers and related professions must observe in the Province of Ontario.
Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 4EM3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4EN3 - ENTREPRENEURIAL THINKING AND INNOVATION

This course introduces students to the interrelationship of entrepreneurial thinking and innovation at both the industry and firm level.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): SFGNTECH 3EE3 and registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 2EN3, 2ET3, 3ET3, 4EP3, 4ET3, 3EN3, 4EN3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4LM3 - LEAN THINKING AND PRACTICES

The course focuses on lean thinking and approaches to enable the deployment and adaption of tools aimed at minimizing waste, removing non-value added activities, and pursuing incremental improvements across organizations.
Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 4LT3, 4LM3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4MK3 - FUNDAMENTALS OF MARKETING

This course introduces the 4Ps of marketing: product, price, promotion, and place with a Business-to-Business focus. Global and high technology markets and their unique challenges will be presented. Students will learn to make marketing decisions within a strategic framework.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 3MB3, 4MB3, 4MK3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4PM3 - PROJECT MANAGEMENT

Introduction to best practice in the management of technical projects including the use of planning, software and the management of people.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 3MT3, 3PM3, 4PM3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4SE3 - TECHNOLOGY ETHICS AND SUSTAINABILITY

The course explores the social implications and environmental impacts of technologies and the ethical challenges they impose on technology professionals. Critical thinking skills and professional responsibility are examined using real ethical dilemmas to help students develop a professional ethical identity that can be carried forward into their career.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): CIVTECH 4EI3, GENTECH 4SE3, GENTECH 4TE3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4SF3 - STRATEGIC MANAGEMENT

This course examines the 'total' view of the organization and how it relates and interacts with various factors in its environment to game long-term sustainable advantage.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): SFGNTECH 3FS3 and registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 3FT3, 3SF3, 4FT3, 4SF3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4ST3 - CONTEMPORARY ISSUES IN MANAGEMENT

Students are offered a selection of three to four emerging issues of the day as those issues relate to current and emerging technology and management technology practices. These topics could include supply chain management, ERP, knowledge management, 6 sigma methods, etc.
Three lectures; one term; may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 4ST3
This course is evaluated on a Pass/Fail basis.

SFGNTECH 4TC3 - TECHNICAL COMMUNICATIONS

This course introduces students to the best practices for essential written, spoken, and graphic communications used in technology workplaces. Emphasis is placed on how to conduct research, analyze information, and design communication materials that are succinct and customized to the readers' needs.
Three lectures; one term, may be offered in an in-person or virtual format.
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): GENTECH 3TC3, 4TC3
This course is evaluated on a Pass/Fail basis.

Software Engineering Technology

Courses in Software Engineering Technology are administered by the Bachelor of Technology Program.
Engineering Technology Building (ETB), Room 509, ext. 26401
https://www.eng.mcmaster.ca/sept

SFWRTECH 3CS3 - INTRODUCTION TO CYBER SECURITY

Network and software security, cryptography algorithms, including symmetric and public-key encryption, malware, user authentication, firewalls, vulnerabilities, policies and best practices, attack and defense strategies, blockchain technology.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate. Students that do not have a Networking or IT background from college are strongly encouraged to take SFWRTECH 3IT3 before enrolling in this course.
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3IT3 - FUNDAMENTALS OF NETWORKING

Introductory and intermediate topics involving Layers 1-4 in the OSI model including Ethernet, IP addressing, subnetting, routing, VLANs, Spanning-Tree Protocol, and network device configuration.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate.
Antirequisite(s): COMPTECH 3PR3, 3PD3, SFWRTECH 3PR3
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3MA3 - CONTEMPORARY MATH FOR SOFTWARE DEVELOPMENT

Advanced functions, differential calculus, introductory integral calculus, discrete signals, z-transforms.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program

Antirequisite(s): ENGTECH 3MA3
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3OS3 - OPERATING SYSTEMS

Processes, threads and concurrency, process scheduling, memory management. Protection, access and authentication. File system organization and access methods.
Three lectures; one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate.
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3PR3 - PROCEDURAL AND OBJECT ORIENTED PROGRAMMING CONCEPTS

Procedural and Object Oriented programming fundamentals. Concepts are exemplified with C++ and Java programming languages.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate.
Antirequisite(s): COMPTECH 3IT3, 3NT3, SFWRTECH 3IT3
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3RQ3 - SOFTWARE REQUIREMENTS AND SPECIFICATION

Requirements gathering, documentation and validation for computer systems. Modeling paradigms including information, behaviour, domain, function and constraint models. Specification languages.
Three lectures; one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate. Students that do not have a software development background from college are strongly encouraged to take SFWRTECH 3PR3 before enrolling in this course.
This course is evaluated on a Pass/Fail basis.

SFWRTECH 3ST3 - PROBABILITY AND STATISTICS

Probability, random variables and probability distributions, sample distributions and point estimates, confidence intervals, hypothesis testing, nature of inference, analysis of variance, regression analysis.
Three lectures; one term; completely virtual
Prerequisite(s): ENGTECH 3MA3 or SFWRTECH 3MA3, and Registration in the Software Engineering Technology Co-op program.
Antirequisite(s): ENGTECH 3ST3, 3ES3, 2ES3
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4AI3 - ARTIFICIAL INTELLIGENCE

Theories and practice of machine intelligence with focus on statistical learning methods, artificial neural networks, naturally inspired algorithms, deep learning, big data management, and pattern recognition.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
Antirequisite(s): SMRTTECH 4AI3, MANTECH 4AI3, ENGTECH 4AI3
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4AV3 - AUGMENTED AND VIRTUAL REALITY

Technical and experiential design foundation required for implementing immersive environments in virtual and augmented platforms.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 4VD3 and Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4CC3 - PARALLEL PROGRAMMING

Models of parallel computation. Performance measurement. Shared memory and synchronization. Parallel data structures, searching and sorting. Scheduling and work distribution.
Three lectures, one term; completely virtual
Prerequisite(s): ENGTECH 3ET0 and Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4CG3 - COMPUTER GRAPHICS

3D graphics platforms. Languages for computer graphics development: Maya API, Unity, CUDA/Open CL, open source software. Creation of 2D and 3D images. GPU architecture considerations.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 4VD3 and registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4CL3 - CLOUD COMPUTING

This course introduces the fundamental elements of cloud computing such as cloud infrastructure, resource virtualization and management, and cloud security and monitoring mechanisms.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the of Software Engineering Technology Co-op program, or by special permission
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4DA3 - DATA ANALYTICS AND BIG DATA

Linear approaches to regression and classification - selection and shrinkage methods, linear discriminant approaches, big data system implementations.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 3ST3 or ENGTECH 3ST3 or 3ES3, SFWRTECH 4MA3 and registration in the Software Engineering Technology Co-op program, OR ENGTECH 2MA3 and 3ES3, and registration in the Biotechnology Co-op program, OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4DM3 - DATA MINING

Classification, association, prediction and clustering of data. Decision trees. Bayesian probability. Supervised and unsupervised learning.
Three lectures, one lab; one term; completely virtual
Prerequisite(s): SFWRTECH 4DA3 and registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4DS3 - DATA STRUCTURES AND ALGORITHMS

Common abstract data types and associated algorithms. Algorithm design - divide and conquer, greedy algorithms. Algorithm Analysis. Hard problems and NP-completeness.
Three lectures; one term; completely virtual
Prerequisite(s): ENGTECH 3DM3, 3ET0 and registration in the Software Engineering Technology Co-op program Students that do not have a software development background from college are strongly encouraged to take SFWRTECH 3PR3 before enrolling in this course.
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4ES3 - REAL-TIME SYSTEMS

Real Time system characteristics. Dynamic responses of physical processes. Real-time system requirements. Real-time operating systems. Scheduling and concurrency.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program, OR MECHENG 4R03 or IBEHS 4A03 and registration in any Mechanical Engineering Program, OR ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4MA3 - NUMERICAL LINEAR ALGEBRA AND NUMERICAL OPTIMIZATION

System of linear equations, linear least square systems, eigenvalue problems, nonlinear equations, unconstrained and constrained optimization.
Three lectures, one term; completely virtual
Prerequisite(s): ENGTECH 3MA3 or SFWRTECH 3MA3 and Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4NN3 - NEURAL NETWORKS AND DEEP LEARNING

Neural network architectures and training, parallel implementations and implementations using accelerated hardware, convolutional neural networks, recurrent neural networks and deep learning.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4NS3 - ADVANCED CYBER SECURITY

Information security, penetration testing, vulnerability scanning and assessment, malware, system, network, and web-based attacks, social engineering techniques, ethics and legality of hacking. Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 3CS3 and registration in the Software Engineering Technology Co-op program, OR ENGTECH 4EE0 and registration in level IV of the Automation Systems Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4SA3 - SOFTWARE ARCHITECTURE

Architectural structures and views. Modularity. Frameworks, design patterns and components. Distributed architectures. Design of software agents. Modeling, visualization and implementation of architectural components.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 3RQ3 and registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4SS3 - SOFTWARE SECURITY

Preventing software vulnerabilities such as SQL injection, buffer overflows, and cross-site scripting through secure coding practices. Advanced testing and program analysis for low-level and high-level attack prevention, and web application security.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 3CS3 and registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4VD3 - VIDEOGAME DEVELOPMENT TECHNOLOGY

Applications software: Foundations of Autodesk Maya, Pixar's Renderman, Mitsuba, Foundry Nuke, Unity Game Engine. Basics of videogame development technology.
Three lectures, one term; completely virtual
Prerequisite(s): SFWRTECH 4MA3 and Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4VE3 - VISUAL EFFECTS AND TECHNOLOGY FOR ANIMATED PRODUCTION

Applications software: Autodesk Maya, Pixars Renderman, Mitsuba, Foundry Nuke, Unity Game Engine. Texturing, cloning, motion tracking, wire and rig removal, rotoscoping. Visual effects.
Three lectures, one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program
This course is evaluated on a Pass/Fail basis.

SFWRTECH 4WP3 - ADVANCED WEB PROGRAMMING

Advanced technologies for web development, apps for mobile, desktop and cloud based systems, client and server side web APIs.
Three lectures; one term; completely virtual
Prerequisite(s): Registration in the Software Engineering Technology Co-op program or permission of the Chair and registration in level 2 in any program in the DeGroote School of Business for students pursuing the Business Technology Management Certificate. Students that do not have a Networking or IT background from college are strongly encouraged to take SFWRTECH 3IT3 before enrolling in this course.
This course is evaluated on a Pass/Fail basis.

Spanish

Courses in Spanish are administered within the Department of Linguistics and Languages.
Togo Salmon Hall, Room 513, ext. 24388
http://linguistics.humanities.mcmaster.ca/
Former Hispanic Studies (HISPANIC) courses are now listed as Spanish (SPANISH) courses. Students having credit in Hispanic Studies courses may not take the corresponding course under the Spanish designation.

Notes

1. Students should note that the Department has classified its Spanish language courses under the following categories:

Introductory Level Language Course: SPANISH 1Z06 A/B
Intermediate Level Language Courses: SPANISH 1A03, 1AA3, 2Z03, 2ZZ3

2. Not all courses are offered on an annual basis. Students should consult the

timetable for available courses.
3. Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.

Courses

If no prerequisite is listed, the course is open.

SPANISH 1A03 - INTERMEDIATE SPANISH I

The first part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is SPANISH 1AA3.
Three hours; one term
Prerequisite(s): Grade 12 Spanish U or equivalent
Antirequisite(s): SPANISH 2Z03
Not open to students with credit or registration in SPANISH 1AA3.
Not open to native speakers of Spanish.
The Department reserves the right to place students in the course most appropriate to their abilities.

SPANISH 1AA3 - INTERMEDIATE SPANISH II

The second part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied.
Three hours; one term
Prerequisite(s): SPANISH 1A03
Antirequisite(s): SPANISH 2ZZ3
Not open to native speakers of Spanish. The Department reserves the right to place students in the course most appropriate to their abilities.

SPANISH 1Z06 A/B - BEGINNER'S INTENSIVE SPANISH

This course gives students the ability to express themselves reasonably well in Spanish and acquire the basics of Spanish grammar and gain considerable reading skill. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is SPANISH 2Z03.
Three hours; two terms
Antirequisite(s): Grade 12 Spanish U or equivalent
Not open to native speakers of Spanish.
The Department reserves the right to place students in the course most appropriate to their abilities.

SPANISH 2Z03 - INTERMEDIATE SPANISH I

First part of an intensive review of the grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is SPANISH 2ZZ3.
Four hours; one term
Prerequisite(s): SPANISH 1Z06 A/B
Antirequisite(s): SPANISH 1A03
Not open to native speakers of Spanish.
The Department reserves the right to place students in the course most appropriate to their abilities.

SPANISH 2ZZ3 - INTERMEDIATE SPANISH II

Second part of an intensive review of grammatical structures of Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied.
Four hours; one term
Prerequisite(s): SPANISH 2Z03
Antirequisite(s): SPANISH 1AA3

Statistics

Courses in Statistics are administered by the Department of Mathematics & Statistics.
Hamilton Hall, Room 218, ext. 27034
http://www.math.mcmaster.ca/

Department Notes

1. Course codes ending with ***** indicate that course is not necessarily offered every session; consult the Chair of the Department or the Associate Dean of Science (Academic).
2. Courses in Mathematics and Statistics are not open to students registered in the Bachelor of Technology (B.Tech.) program.

Courses

If no prerequisite is listed, the course is open.
See also courses in *Mathematics*.

STATS 1LL3 - INTRODUCTION TO PROBABILITY AND STATISTICS

The algebra of probability, conditional probability and independence, discrete and continuous random variables, mean and variance, graphical displays, descriptive statistics, statistical inference. Three lectures, one tutorial; one term
Prerequisite(s): Grade 11 Functions (or equivalent)
Antirequisite(s): COMMERCE 1DA3
Not open to students with credit in Grade 12 Mathematics of Data Management U or STATS 1CC3, 1L03, 2B03, 2D03, 2MA3, 2MB3.
Not open to students registered in the Faculty of Science or Faculty of Engineering.

STATS 2B03 - STATISTICAL METHODS FOR SCIENCE

Applied statistics, with emphasis on inferential methods relevant to the environmental and life sciences. Use of a computer statistics package.
Three lectures, one lab; one term
Prerequisite(s): One of Grade 12 Data Management U, STATS 1LL3 or registration in Level II or above of a program in the Faculty of Science or registration in an Honours Biochemistry or the Honours Biology and Pharmacology Co-op program
Not open to students with credit or registration in ARTSSCI 2R03, COMMERCE 2QA3, EARTHSC 2MB3, ECON 2B03, ENVIRSC 2MB3, GEOG 2MB3, HTHSCI 2A03, 2GG3, PNB 2XE3, STATS 2D03, 2MB3.

STATS 2D03 - INTRODUCTION TO PROBABILITY

Combinatorics, independence, conditioning; Poisson-process; discrete and continuous distributions with statistical applications; expectation, transformations moment-generating functions joint, marginal and conditional distributions; covariance and correlation; central limit theorem.
Three lectures, one tutorial; one term
Prerequisite(s): One of ARTSSCI 1D06 A/B, MATH 1AA3, 1LT3, 1NN3, 1XX3, 1ZB3, 1ZZ5 or ISCI 1A24 A/B
Not open to students with credit or registration in PSYCH 2RA3.

STATS 2DA3 - AN INTRODUCTION TO DATA SCIENCE METHODS

An introduction to R for data science and prediction methods. Topics include an overview of the R ecosystem, interfaces between R and other programming languages, data handling, programming, model building, data visualization, interactive web apps, the general idea of predictive modeling/algorithms,

resampling methods for assessing uncertainty (bootstrap and cross-validation), and elementary methods for regression (e.g., k nearest neighbors) and clustering (k means).
Three lectures, one lab; one term
Prerequisite(s): MATH 1B03 and one of MATH 1MP3, COMPSCI 1MD3, PHYSICS 2G03, DATASCI 2G03, PNB 2A03
Antirequisite(s): HTHSCI 1M03

STATS 2MB3 - STATISTICAL METHODS AND APPLICATIONS

Estimation; sampling distributions; confidence intervals; hypothesis testing, power; linear regression; graphical and computational methods.
Three lectures, one tutorial; one term
Prerequisite(s): STATS 2D03
Not open to students with credit or registration in ARTSSCI 2R03 or PNB 3XE3.

STATS 3A03 - APPLIED REGRESSION ANALYSIS WITH SAS

Introduction to SAS; linear regression model; least squares method; model fitting and diagnostics; influential analysis; model building; one-way and two-way ANOVA; applications. This course includes a scientific communication component.
Three lectures, one lab; one term
Prerequisite(s): ARTSSCI 2R03 or STATS 2MB3

STATS 3AT3 - ADVANCING TOMORROW'S ACTUARIES

An intensive pre-co-op experience that equips students with technical and professional skills essential for success in the insurance industry. Students will undergo advanced training in technical areas such as Property & Casualty (P&C) Pricing and Reserving, Programming, Insurance Data Manipulation, Modeling, and Predictive Analytics, with application through real-world case studies. Additionally, emphasis is placed on professional skill development, including effective communication, collaboration, critical thinking, and professionalism. The course also offers mentorship, networking opportunities, and an overview of the P&C industry, alongside providing access to an Actuarial Analyst Toolbox to support students in their career journey.
Three lectures, one lab; one term
Prerequisite(s): Registration in Honours Actuarial and Financial Mathematics Co-op
It is recommended that this course be completed prior to the first work term.

STATS 3D03 - MATHEMATICAL STATISTICS

Multivariate distributions; distributions related to normal inference; point estimation; sampling distributions; consistency and limiting distributions; interval estimation; hypothesis testing; single parameter maximum likelihood methods; Rao-Cramer Lower Bound and Efficiency.
Three lectures; one term
Prerequisite(s): STATS 2D03 and one of ISCI 2A18 A/B, MATH 2MC3, 2XA3 (or MATH 2X03), 2ZZ3

STATS 3DA3 - DATA SCIENCE METHODS

This course covers a range of statistical and machine learning methods, including classification, clustering, decision trees, random forest, bagging and gradient boosting for trees and linear models, ridge regression, LASSO, generalized additive models, principal component analysis (singular value decomposition), multiple hypothesis testing, sensitivity and specificity analysis, cross-validation, and bootstrapping. Python will be the primary software used, with R and other environments also used at the discretion of the instructor. This course includes a scientific communication component.
Three lectures, one lab; one term
Prerequisite(s): STATS 2DA3; one of MATH 1MP3, COMPSCI 1MD3, or PNB 2A03; one of ARTSSCI 2R03, STATS 2B03, or STATS 2MB3; and credit or registration in one of MATH 2LA3 or MATH 2R03

STATS 3G03 - ACTUARIAL MATHEMATICS I

Survival distributions, life tables, life insurance, life annuities, net premiums and reserves.
Three lectures, one tutorial; one term
Prerequisite(s): STATS 2D03; and one of MATH 2FM3, 2K03

STATS 3J04 - PROBABILITY AND STATISTICS FOR CIVIL ENGINEERING

Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance, applications to civil and environmental engineering.
Four lectures; one term
Prerequisite(s): Registration in Level II or above of a Civil Engineering program
Antirequisite(s): STATS 3Y03

STATS 3PG3 - PROBABILITY AND GAMES OF CHANCE

Probabilistic treatment of games of chance. Selected topics from: conditional expectation, discrete martingales, Markov chains, game theory, house advantage, craps, video poker, gambler's ruin, slots, betting systems. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): One of ISCI 2A18 A/B, MATH 2MC3, 2XA3 (or MATH 2X03); and STATS 2D03

STATS 3S03* - SURVEY SAMPLING

Survey design; simple random sampling; stratified sampling; proportional allocation; ratio estimation; cluster sampling; systematic sampling and sample size determination. Exposure to real surveys.
Three lectures; one term
Prerequisite(s): STATS 2D03; and one of ARTSSCI 2R03, STATS 2MB3

STATS 3ST3 - ACTUARIAL MODELS IN NON-LIFE INSURANCE

An introduction to short term actuarial models in property and casualty insurance. Topics covered include Theory of Credibility, Pricing and Reserving. Credibility: Limited fluctuation (classical) credibility, Bayesian credibility, Bühlmann and Bühlmann-Straub models. Pricing: Rating factors, exposure, experience rating, calculate premiums using the pure premium and loss ratio methods. Reserving: Techniques for estimating unpaid losses from a run-off triangle (deterministic methods as Chain-Ladder, Bornhuetter-Ferguson) and introduction to stochastic reserving.
Three lectures, one tutorial; one term
Prerequisite(s): STATS 2MB3 or STATS 3A03

STATS 3U03* - STOCHASTIC PROCESSES

Random walk, Markov chains, discrete and continuous parameter Markov processes, branching processes, birth and death processes, queuing processes.
Three lectures; one term
Prerequisite(s): One of ISCI 2A18 A/B, MATH 2MC3, 2XA3 (or MATH 2X03); and STATS 2D03

STATS 3Y03 - PROBABILITY AND STATISTICS FOR ENGINEERING

Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance.
Three lectures; one term
Prerequisite(s): Registration in Level II or above of a program in Engineering above Level I Computer Science, Computer Engineering, Electrical Engineering, Mechanical Engineering, Mechatronics or Software Engineering
Antirequisite(s): STATS 3J04

STATS 4A03 - TIME SERIES

Stationary, auto-regressive and moving-average series, Box-Jenkins methods, trend and seasonal effects, tests for white noise, estimation and forecasting methods, introduction to time series in the frequency domain. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): STATS 3A03, 3D03

STATS 4C03 - GENERALIZED LINEAR MODELS

Normal linear model, exponential family, iteratively-reweighted least squares, logistic regression, Poisson regression and log-linear models, other families of GLM's, analysis of deviance and model checking, residual analysis.
Three lectures; one term
Prerequisite(s): STATS 3A03 and STATS 3D03

STATS 4CI3* - COMPUTATIONAL METHODS FOR INFERENCE

Monte Carlo methods; bootstrap and jackknife methods; multi-parameter maximum likelihood; computation in nonlinear likelihood inference; The EM Algorithm; sufficiency and its applications; optimal hypothesis tests; Bayesian inference; Markov Chain Monte Carlo.
Three lectures; one term
Prerequisite(s): STATS 3D03
Antirequisite(s): STATS 3CI3

STATS 4D03* - INTERMEDIATE PROBABILITY THEORY

Construction of probability spaces and random variables, integration, conditional expectation, law of large numbers, convergence of series, weak convergence, characteristic functions and central limit theorems, martingales.
Three lectures; one term
Prerequisite(s): MATH 3A03 or MATH 3IA3; and STATS 2D03

STATS 4G03 - ADVANCED TOPICS IN ACTUARIAL SCIENCE

Major Topics include: Severity Models, Frequency Models and Aggregate Models in non-life insurance and short term coverages. Survival Models; Mortality Improvement; Long term coverages in health insurance; Recursion; Pensions Plans and Retirement Benefits; Structured Settlements.
Three lectures, one tutorial; one term
Prerequisite(s): STATS 3G03 and 3ST3

STATS 4H03 - ACTUARIAL MATHEMATICS II

Multiple life functions, multiple decrement models, valuation theory for pension plans.
Three lectures, one tutorial; one term
Prerequisite(s): STATS 3G03
Antirequisite(s): STATS 3H03

STATS 4I03* - INFERENCE

Maximum Likelihood Estimation, Cramer-Rao bound, Likelihood Ratio tests, Multi-parameter likelihood methods, Sufficient Statistics, Completeness and MVUE, Exponential Family, Functions of parameters, Uniformly Most Powerful Tests, Generalized likelihood ratio tests, Quadratic forms, Analysis of variance, Introduction to Bayesian Inference.
Three lectures; one term
Prerequisite(s): STATS 3D03

STATS 4M03 - MULTIVARIATE ANALYSIS

Multivariate distributions: Normal, Wishart, T2 and others; regression; correlation; principal components; general linear hypothesis. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): MATH 2LA3 or 2R03; and STATS 3D03 (or 3D06)

STATS 4P03* - ADVANCED APPLIED STATISTICS

Statistical computing; statistical software packages; working with large data sets; exploratory data analysis; graphical methods; statistical consulting practice. This course includes a scientific communication component.
Three lectures; one term
Prerequisite(s): Credit or registration in STATS 3A03 or 3D03

STATS 4T06 A/B - SENIOR RESEARCH PROJECT

- project in statistics to be carried out under the supervision of a faculty member from the Department of Mathematics and Statistics. A written report and oral presentation will be required. This course includes a scientific communication component.

One occasional tutorial; two terms
Prerequisite(s): Registration in Level IV of any Honours Mathematics and Statistics program; and a GPA of at least 9.0; and permission of the Chair of the Department
Not open to students with credit or registration in MATH 4P06 A/B S, PHYSICS 4P06 A/B or ISCI 4A12 A/B

STATS 4W03 - READING IN STATISTICS

Directed reading in areas of statistics of interest to the student and the instructor. This course includes a scientific communication component.
Prerequisite(s): GPA of at least 7.0 and permission of the Chair of the Department
STATS 4W03 may be repeated, if on a different topic.

STATS 5GT3 - GRADUATE LEVEL TOPICS IN STATISTICS

Undergraduate students may seek permission to enrol in selected graduate level offerings. Refer to the Graduate Calendar for course information.
Prerequisite(s): Permission of the Department of Mathematics and Statistics
Undergraduate students will be required to meet all academic obligations of the graduate-level course offering.
STATS 5GT3 may be repeated, if on a different graduate level topic.

Sustainability

Courses with the SUSTAIN designation are administered by the Faculty of Engineering.

SUSTAIN 1S03 - INTRODUCTION TO SUSTAINABILITY

An introduction to sustainability from an interdisciplinary perspective which examines the historical and societal lenses through which sustainability is viewed. Students will learn terminology, theories and concepts to effectively communicate across disciplines and on various topics of sustainability.
One lecture (three hours), one tutorial (one hour); offered in both terms

SUSTAIN 2GS3 - GLOBAL QUESTIONS IN SUSTAINABILITY

All questions surrounding sustainability and sustainable development are interdisciplinary in nature. This course aims to bring together the perspectives from students from all academic areas to explore sustainability as a global concern by gathering insight from academic experts and applying that knowledge to their thoughts and perceptions of what sustainability is and ultimately should be. Through a series of asynchronous lectures students will have a unique opportunity to hear the perspectives of multiple questions of sustainability from academic experts across academia. In following the mantra of Think globally, act locally students will have the opportunity to apply the knowledge acquired in the course towards assessing and proposing solutions to local questions of sustainability.
One lecture (three hours); one term
Antirequisite(s): INSPIRE 2GS3
Not open to students with credit or registration in INSPIRE 3EL3 if the topic was Global Questions in Sustainability.

SUSTAIN 2IS3 - INTERSECTIONALITY AND SUSTAINABLE DEVELOPMENT

Explore complex dimensions of sustainability through a lens of intersectionality - how our individual identities shape our life experiences - with a focus on environmental injustices. Includes interdisciplinary teamwork, simulated case studies and United Nations Sustainable Development Goals.
One lecture (two hours), one tutorial (one hour); one term

SUSTAIN 2S03 - EVALUATING PROBLEMS & SUSTAINABLE SOLUTIONS

Students will learn how to identify problems and evaluate sustainable solutions to societal problems from an interdisciplinary perspective. The course will involve active experiential learning which emphasizes actions on local projects.
One lecture (three hours), one tutorial (one hour); offered in both terms

SUSTAIN 2SD3 - EXPLORING THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Students will learn the breadth of sustainability by engaging with each of the 17 United Nations Sustainable Development Goals. Through interdisciplinary teamwork, students will tackle complex issues of sustainability through simulations, debates and games.
One lecture (three hours), one tutorial (one hour); one term

SUSTAIN 2SS3 - ADVOCATING FOR SUSTAINABILITY

Students will gain knowledge, skills, and abilities to effectively communicate and influence decisions, which they will apply to current sustainability issues within the community. This course is interdisciplinary and experiential.
One lecture (three hours); one term

SUSTAIN 3HC3 - SUSTAINABILITY AND HEALTHCARE

By gaining the perspectives of physicians and healthcare leaders, students will learn about healthcare's relationship to sustainability and how to create a sustainable health system to positively impact planetary and human health.
One lecture (two hours), one tutorial (one hour); one term
Prerequisite(s): Registration in level II or above and completed any 3 unit Sustain course

SUSTAIN 3S03 - IMPLEMENTING SUSTAINABLE CHANGE

Exploring agency, leadership, and strategy effectiveness within the context of sustainability. The course will include interdisciplinary perspectives, experiential learning and community engagement projects.
One lecture (three hours), one tutorial (one hour); first term
Prerequisite(s): Registration in Level III or above and completion of any level II SUSTAIN course

SUSTAIN 3SS3 - COMMUNITY ENGAGEMENT AND PROTOTYPING FOR SUSTAINABILITY

Students will collaborate with each other, community members, and local organizations to develop pilots, prototypes, and engagement initiatives that make cities more sustainable and contribute to the United Nations Sustainable Development Goals. Students will gain knowledge, skills, and abilities that support collaborative approaches to making positive, sustainable change through involvement in local community initiatives.
One lecture (three hours); one term
Prerequisite(s): Registration in Level II or above or permission of the Academic Sustainability Programs Office

SUSTAIN 4S06 A/B - LEADERSHIP IN SUSTAINABILITY

Final-year course where students gain leadership skills and apply them by working in interdisciplinary teams to develop and implement a sustainability-focused project within the community.
One lecture (three hours); both terms
Prerequisite(s): Registration in Level IV or above or permission of the Academic Sustainability Programs Office

Theatre & Film

Courses in Theatre & Film Studies are administered by the School of the Arts.
Togo Salmon Hall, Room 414, ext. 27671
http://sota.mcmaster.ca/

Department Notes

1. The following are courses open as electives to students registered in Level II or above of any undergraduate program.
   - THTRFLM 2CC3 Performance, Art, and Visual Culture in Canada
   - THTRFLM 2FA3 - Film Analysis
   - THTRFLM 2MM3 - Movies and Me
   - THTRFLM 3AA3 - Modernist Theatre and Drama in Europe
   - THTRFLM 3FF3 - Early Cinema History
   - THTRFLM 3L03 - Cinema History from WWII
   - THTRFLM 3VS3 - Visual Storytelling
2. Courses restricted to students registered in programs in Theatre & Film Studies may be available to qualified students in other programs if space permits. Students interested in such courses should request permission from the program counsellor.
3. Students are advised to note carefully the prerequisites for all courses, and take note which courses are offered in alternate years.

Courses

If no prerequisite is listed, the course is open.

THTRFLM 2AA3 - ACTING AS DEVISING I

Students receive studio training in voice and body, and explore how the performer's creative process reflects and challenges the norms that structure contemporary social relationships.
Two studios; one term
Prerequisite(s): Registration in a program in Theatre and Film Studies or IARTS, or permission of the program
Co-requisite(s): WHMIS 1A00 if not already completed; successful completion of WHMIS is required prior to studio work
Cross-list(s): IARTS 2AD3

THTRFLM 2BB3 - DESIGNING FOR DEVISED PERFORMANCE

Students work in studio to learn basic techniques for using visual and sound design as a basis for creating performance pieces.
Two two-hour studios; one term
Prerequisite(s): One of IARTS 1T03, THTRFLM 1T03, or MMEDIA 1A03 or MEDIAART 1A03 and registration in Level II or above of any program
Cross-list(s): IARTS 2BB3

THTRFLM 2CC3 - PERFORMANCE, ART, AND VISUAL CULTURE IN CANADA

An introduction to the history and contemporary practice of performance and visual culture in Northern Turtle Island/Canada from multiple perspectives including exploration of Indigenous performance and art, analysis of the Northern Turtle Island/Canadian theatre and arts economy and arts institutions, with critical reflection on performances and visual culture.
Three hours; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): IARTS 2CC3
Antirequisite(s): ARTHIST 3B03, THTRFLM 2CP3

THTRFLM 2DP3 - DEVISED PERFORMANCE PROCESSES

Devised performance is collectively created work that responds to the world we live in and the social issues we face. Students learn foundational workshop practices for the devising of live performances, integrating design experimentation, acting exercises, and games.
Two two-hour studios; one term
Prerequisite(s): IARTS 1T03 or THTRFLM 1T03; and registration in Level II or above of any program
Antirequisite(s): THTRFLM 3G03
Cross-list(s): IARTS 2DE3

THTRFLM 2FA3 - FILM ANALYSIS

An introduction to an interrelated set of approaches to film study, all of which are defined by their attention to the filmic text and which provide students with a grasp of the fundamentals of film analysis.
Two lectures, plus one weekly film screening; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): IARTS 2FA3, ARTHIST 2FA3

THTRFLM 2MM3 - MOVIES AND ME

An examination of popular film as a social practice, considering both how mainstream movies take up social issues and how audiences interact with films and film culture.
Two hour lecture, one film screening; one term
Prerequisite(s): Registration in Level II or above
Cross-list(s): IARTS 2MM3

THTRFLM 3AA3 - MODERNIST THEATRE AND DRAMA IN EUROPE

This course studies representative dramas and theatre productions that highlight the diversity of plays on the twentieth-century stage.
Two hour lecture, two hour film-screening; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): IARTS 3AA3
Offered on a rotational basis. Consult the Master Timetable for offerings.

THTRFLM 3FF3 - EARLY CINEMA HISTORY

An introduction to the history of narrative film from its beginnings to the Second World War. It focuses on narrative cinema's development from aesthetic, social, technological and economic perspectives while also touching on a selected number of issues in film theory.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): ARTHIST 2FL3, THTRFLM 2FF3
Cross-list(s): ARTHIST 3FL3, IARTS 3EC3

THTRFLM 3L03 - CINEMA HISTORY FROM WWII

An exploration of narrative film from 1941 to the present day, incorporating a study of a variety of narrative cinema styles. Theoretical issues will include questions of cinema's relationship to other art forms, narrative, genre and authorship.
Two lectures, plus one two-hour weekly film screening; one term
Prerequisite(s): Registration in Level II or above of any program
Antirequisite(s): CMST 3XX3
Cross-list(s): ARTHIST 3XX3, IARTS 3CH3

THTRFLM 3OP6 A/B - STAGE DESIGN IN ACTION

Students develop performance pieces through set design, use of lights, sound, projections, and the manipulation of objects, and support the work of upper level iArts thesis projects.
Two Studios plus practicum work (includes evenings and weekends as determined by production schedules); two terms
Prerequisite(s): Registration in Level II or above in any iArts, Theatre & Film Studies, or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3, 3MP6; or permission of the instructor
Cross-list(s): IARTS 3SP6 A/B
Not to be taken concurrently with THTRFLM 4A06 A/B.

THTRFLM 3P03 - GENDER AND VISUAL CULTURE

Students will explore ideas about representation, spectatorship and production in relation to issues of social difference, such as gender, race and class. Emphasis is on visuality in forms such as film, video, television, advertising, et cetera.
Lecture and discussion (two hours), plus one weekly film screening; one term
Prerequisite(s): Registration in Level III or above
Antirequisite(s): CMST 3BB3, WOMENST 3BB3
Cross-list(s): GENDRST 3BB3
Not open to students with credit or registration in WOMENST 3B03, if the topic was Images of Women: Reading Art, Media and Popular Culture. This course is administered by Gender & Social Justice.

THTRFLM 3PS3 - DEVISED THEATRE PRODUCTION: RESEARCH AND DEVELOPMENT

Students will learn research, workshop and planning processes of public performance for a devised theatre production. This preparatory work leads to

the main stage departmental production produced in the Fall term by IARTS 3MP6/THTRFLM 3S06.
Two three-hour studios; one term
Prerequisite(s): Registration in level II or above any iArts, Theatre & Film Studies or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3;or 3MP6; or permission of the instructor.
Cross-list(s): IARTS 3TB3
This course may be repeated to a maximum of 6 units.
Offered during the Spring/Summer term only.

THTRFLM 3QA3 - DOCUMENTARY, POLITICS, AND SOCIAL CHANGE

Critical approaches to the social function of nonfiction film, performance, and media-based practices. Topics may include the ethics and representational politics of documentary film and/or theatre, the role of documentary in witnessing injustice, and the potential for non-fiction practices to contribute to social change.
Three hours lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): IARTS 3QA3

THTRFLM 3RR3 - 'CRIPPING' PERFORMANCE: DEAF, MAD AND DISABLED PERFORMANCE IN CANADA

This course will explore the history and culture of disabled, Mad and Deaf theatre and performance. Delving in Canada's rich 45 year history of disabled, Deaf and Mad theatre, the course will consider intersectionality, access and interdependence as core tenets of this milieu. This course is rooted in understandings of disability justice and will touch on the intermingling of disabled activism with performance and the current push for changes in the Canadian theatre landscape for Deaf, Mad and disabled creators.
Three hours; one term
Prerequisite(s): Registration in level II or above of any program
Cross-list(s): GENDRST 3RR3, IARTS 3RR3

THTRFLM 3S06 - DEVISED THEATRE PRODUCTION

Students will form the core artistic team for the School's November Major Production. This course provides intensive experiential learning to students in a selected aspect of production.
Eight hours (including two two-hour studios, one four-hour rehearsal), plus production hours; one term
Prerequisite(s): Registration in Level II or above of any iArts program, Theatre & Film Studies, or Media Arts program; or one of IARTS 2DE3, 2AD3, or 2BB3; or permission of the instructor
Cross-list(s): IARTS 3MP6

THTRFLM 3SD3 - SCRIPTING DEVISED PERFORMANCE

- practical study of writing for devised theatre. Students will learn techniques for structuring and scripting performance that apply to a variety of different approaches to devised theatre creation.

Three hour studio; one term
Prerequisite(s): Registration in Level II or above of any iArts, Theatre & Film Studies, or Media Arts program; or one of IARTS 2AD3, 2BB3, 2DE3; or permission of the instructor
Cross-list(s): IARTS 3SD3

THTRFLM 3VS3 - VISUAL STORYTELLING

This course examines the theories underlying the visual aesthetics of cinema and theatre. These are analyzed alongside narrative structure and put into practice by students in projects.
Three hour lecture; one term
Prerequisite(s): Registration in Level II or above of any program
Cross-list(s): IARTS 3VS3
Offered on a rotational basis. Consult the Master Timetable for offerings.

THTRFLM 4A06 A/B - THEATRE AND SOCIETY: A PERFORMANCE PROJECT

Students will work in small groups to create and critique public performances.
Two lectures, one lab; total of 4 hours
Prerequisite(s): Registration in Level IV of an Honours program in Theatre & Film Studies and permission of the School of the Arts. Starting in 2010, students proposing an original script must have taken THTRFLM 3SD3
Admission to THTRFLM 4A06 will be based primarily on academic standing. In addition, students must complete a written application on a form provided by the School of the Arts, which must be submitted in March of the academic year prior to registration. Final selection will be made by Theatre and Film Studies faculty.

THTRFLM 4C03 - PERFORMANCE AND SOCIETY

Senior Seminar: Contemporary theories about the relationship of performance and social structures.
Seminar (two hours); one term
Prerequisite(s): Registration in Level III or IV of an Honours program in Theatre & Film Studies
Priority will be given to students registered in Level IV of any Theatre & Film Studies program.
Offered in alternate years.

THTRFLM 4D03 - THEATRE, SOCIETY AND EARLY CINEMA

- study of the relationship between theatre and film, organized by topics that have been the focus of recent scholarship.

Seminar (two hours); one term
Prerequisite(s): Registration in Level III or above of any iArts Honours Theatre & Film Studies, or Honours Art History program
Cross-list(s): IARTS 4D03

VSR

VSR 1A00 - VISITING UNDERGRADUATE STUDENT RESEARCH

This course is for domestic and international students who are coming to McMaster to conduct research as part of their degree studies at their home university. This course is not for credit. Enrollment in this course is by permission only. Course content will be determined by the host program/ supervisor.

WHMIS

WHMIS 1A00 - INTRODUCTION TO HEALTH AND SAFETY

Introduction to safety guidelines at McMaster University, acceptable safety conduct and positive safety attitudes and practices in laboratories and Workplace Hazardous Materials Information System (WHMIS).
This course is evaluated on a Complete/Fail basis.
Web modules
Antirequisite(s): ART 1HS0, ENGINEER 1A00, ENGTECH 1A00, NURSING

1A00, SCIENCE 1A00
This requirement must be completed prior to the start of the first lab. Students who fail the quiz must reattempt it and will not be permitted in any course with a lab component or any Level II ART course until the requirement has been successfully completed.

Wilson

WILSON 1A03 - INTRODUCTION TO LEADERSHIP AND CIVIC STUDIES

This course introduces leadership and civic engagement by examining foundational theories and practices of human social organization and civil society. Informed by such frameworks as Indigeneity, race, gender, class, and Global South perspectives, this course will examine diverse models of leadership, situating these within broad historical and theoretical contexts.
Three hours (lecture, tutorials); one term

WILSON 1B03 - INQUIRY AND CONTEMPORARY ISSUES

This course will introduce students to the fundamentals of inquiry-based learning, including articulating strong research questions, defining a line of inquiry, cultivating research methods and resources, and identifying, defining, and executing a research project related to contemporary issues related to leadership and civic engagement.
Three hours (lecture); one term
Prerequisite(s): Enrolment in Leadership and Civic Studies I

WILSON 2C03 - LEADERSHIP, CIVIC ENGAGEMENT AND CONTEMPORARY COMMUNICATION

This course will examine theories and practices of communication with the aim of engaging diverse publics utilizing multiple modes of address, active listening, collaboration, and persuasion. We will examine how publics, identities, opinions, and belonging are formed and influenced through communicative media, including print, public speaking, and the digital realm.
Three hours (lecture); one term
Prerequisite(s): Enrolment in Level II of Wilson College's Combined Honours program

WILSON 2D03 - DECONSTRUCTING LEADERSHIP: LEADERSHIP AND DIVERSITY

This course examines theories and practices of leadership from diverse, critical perspectives including Indigeneity, class, gender, race, age, and ability. Students will gain a critical, historical understanding of group and social dynamics with the aim of being able to assess and mobilize different civic engagement strategies.
Three hours (lecture); one term
Prerequisite(s): Enrolment in Level II of Wilson College's Combined Honours program

Work and Labour Studies

Courses in Work and Labour Studies are administered by the School of Labour Studies.
Kenneth Taylor Hall, Room 717, ext. 24692
http://www.labourstudies.mcmaster.ca

Note
Some Labour Studies courses may be taken for elective credit by qualified students registered in any program, however, space for such students is limited and permission of the Director is required. Please refer to the individual courses and prerequisites.

Courses
If no prerequisite is listed, the course is open.

WORKLABR 1A03 - AN INTRODUCTION TO WORK AND LABOUR IN CANADA

This course takes a historical approach to introducing students to the field of Labour Studies. It will show how the nature of work has been transformed repeatedly transformed over time, and how workers have organized in response to those changes. The course will also explore how the day-to-day lives of workers in different settings and time periods were affected by changing political landscapes and social forces such as race, immigration, and gender. Lectures and discussions; one term
Antirequisite(s): LABRST 1A03

WORKLABR 1E03 - NAVIGATING THE WORLD OF WORK

Work is central to our quality of life, identities, and well-being. However, finding and keeping work that is meaningful, fair, safe, and sustainable is becoming
more challenging. This course explores the changing nature of today's increasingly global workplaces and labour markets, the way that class, 'race', gender and ability shape our access to work, the laws and regulations that define workplace rights and obligations, and the strategies workers use to navigate these relationships.
Lectures and discussions; one term
Antirequisite(s): LABRST 1C03; LABRST 1E03

WORKLABR 2A03 - UNIONS IN ACTION

How do unions work? How do they go about representing their members and mobilizing workers in the workplace and beyond? How do they grapple with the main issues facing workers, and renew their movement going forward? This course will explore the internal structure of unions, assess what unions do well and where they are less effective. Students will also learn how unions make decisions and try to influence policy-making through participatory exercises and a simulated labour convention.
Lecture and group work/simulation; one term
Prerequisite(s): Registration in a Work and Labour Studies program, or registration in any Level II program or above
Antirequisite(s): LABRST 2A03

WORKLABR 2G03 - LABOUR AND GLOBALIZATION

Neoliberal globalization is often associated with the rise of transnational corporations, free trade agreements, and the imposition of neoliberal policies on governments through the core international economic institutions. These processes sometimes feel far away from our everyday lives and struggles in the workplace. How have these processes impacted the lives of workers in both the Global North and Global South? How have they shaped prospects for resistance? How have workers and workers organizations responded to these challenges? In this course we will examine how globalization has shaped the lives of workers, working conditions, working class politics and democracy. We will also explore how workers have been developing strategies to challenge these processes, including forms of international labour solidarity, transnational union coordination as well as union coordination with unorganized, informal and unemployed workers and social movements.
Lectures and discussion; one term
Prerequisite(s): Registration in any level II program or above
Antirequisite(s): LABRST 2G03
Priority is given to students registered in a Work and Labour Studies program.

WORKLABR 2H03 - SPORTS, WORK AND LABOUR

For a number of reasons - including fame and fortune - athletes are not perceived to be workers. But most professional athletes are in highly precarious employment relationships, are member of unions, engage in collective bargaining, go on strike and get injured on the ice, on courts and playing fields. This course will explore the lives of sports workers to see if the work they do is worth the rewards they receive and the risks they take.
Lectures and discussion; one term
Prerequisite(s): Registration in any program Level II or above.
Antirequisite(s): LABRST 2H03
Priority is given to students registered in a Work and Labour Studies program.

WORKLABR 2J03 - WORK AND RACISM

This course explores individual and systemic racism in the Canadian labour market through the experiences of Aboriginal peoples, immigrants, and racialized, linguistic and cultural minorities. Beginning with colonialism, the course provides historical and contemporary perspectives on racism in job allocation, work relationships, labour struggles, and social welfare systems. It also analyses public policy, employer, union and grassroots solutions to employment-related racial discrimination.
Lectures and discussion; one term
Prerequisite(s): Registration in any Level II program or above
Antirequisite(s): LABRST 2J03
Priority is given to students registered in a Labour Studies program.

WORKLABR 2K03 - TECHNOLOGY AND THE FUTURE OF WORK

This course explores the future of work in the face of the advances in robotics, artificial intelligence, and other technologies, and consider which jobs are most vulnerable to automation and which might be safest. Will the impact of this technological revolution be different than previous ones? It also asks what role policy decisions and new ideas such as the basic income might play, and what are the downsides of our faith in technology in the workplace and beyond
Lectures and discussions; one term
Antirequisite(s): WORKLABR 1D03, LABRST 1D03, LABRST 2K03, ARTSSCI 3BB3

WORKLABR 2M03 - POP CULTURE, MEDIA AND WORK

The medium is the message.' If this famous quote is true, what messages are television, movies and music giving us about the types of work most of us do? This course will explore how workers are portrayed in the dominant media and how these portrayals both reflect and shape our identities and popular culture.
Lectures and discussion; one term
Prerequisite(s): Registration in any program Level II or above
Antirequisite(s): LABRST 2M03
Priority is given to students registered in a Work and Labour Studies program

WORKLABR 2P03 - WORKING IN HEALTHCARE

This course explores the organization of healthcare work including working conditions, divisions of labour and the role of scientific and emotional labour. It examines the history and present status of healthcare unionization and the role of the state in labour relations including strikes, dispute resolution and the dynamics of essential service designation in shaping healthcare workers' ability to influence their work lives.
Lecture and discussion; one term
Prerequisite: Registration in any Level II program or above.

WORKLABR 2W03 - HUMAN RIGHTS AND SOCIAL JUSTICE

An introduction to the growing national and international discussion of human rights, exploring the value and limitations of universal rights, equality under the law and social justice.
Three hours (lectures); one term
Prerequisite(s): One of GENDRST 1A03, 1AA3, PEACEST 1A03, PEACJUST 1A03, 1VM3, WOMENST 1A03, WOMENST 1AA3, or IBH 1BD3; or registration in Level II or above of a program in Indigenous Studies, Work and Labour Studies, Peace Studies, Global Peace and Social Justice or Justice, Political Philosophy and Law
Antirequisite(s): LABRST 2W03
Cross-list(s): GENDRST 2A03, PEACJUST 2B03
This course is administered by Global Peace and Social Justice.

WORKLABR 3A03 - ECONOMICS OF LABOUR MARKET ISSUES

This course applies economic analysis to issues of importance in the labour market. Topics vary and may include: women in the Canadian labour market, discrimination in hiring and promotion, unemployment, job loss and workplace closing, work sharing.
Three lectures; one term
Prerequisite(s): ECON 1A06, or both ECON 1B03 and 1BB3, and registration in a Work and Labour Studies program; or permission of the Director
Antirequisite(s): LABRST 3A03
Cross-list(s):ECON 2A03
Not open to students with credit or registration in ECON 3D03. This course is administered by the Department of Economics.

WORKLABR 3B03 - ECONOMICS OF TRADE UNIONISM AND LABOUR

Topics will include the economics of the labour market, the impact of trade unions on the labour market, economic theories of strikes, trade unions and the state.
Lectures and discussion; one term
Prerequisite(s): ECON 1B03, ECON 1BB3 and registration in a Work and Labour Studies program; or permission of the Director
Antirequisite(s): LABRST 3B03
Cross-list(s):ECON 2T03
This course is administered by the Department of Economics.

WORKLABR 3C03 - LABOUR AND EMPLOYMENT LAW

The law plays a major role in shaping almost every aspect of work, from the workers basic duties on the job, through their right to organize, to how and when unions are allowed to bargain and go on strike. But how does the law frame these workplace issues? What interests - the workers, the employers, the public - does the law try to balance, and which side does it favour?
Lectures; one term
Prerequisite(s): LABRST 2A03 and registration in a Work and Labour Studies program, or registration in Level III or above in Honours Political Science Specialization in Public Law and Judicial Studies, or permission of the Director
Antirequisite(s): LABRST 3C03
Cross-list(s): COMMERCE 4BF3

WORKLABR 3D03 - WORKERS' HEALTH AND WELL-BEING IN A CHANGING WORLD

Pandemics, extreme heat, artificial intelligence how do these impact workers health and well-being? Have laws and policies kept pace with shifts in hazards facing workers? Have workplace policies and practices evolved with regards

to issues like sexual harassment and mental health? Why are some risks and health problems under-recognized, and how have social and economic inequities shaped those dynamics? Through these questions and others, the course will connect lived experience of illness and injury to systemic failures at the workplace and policy levels, and within the larger global economic system. It will also examine rights, resources, and strategies, both individual and collective, that support workers health and well-being.
Lectures and discussion; one term
Prerequisite(s): Registration in Level III or above of a Health, Aging and Society or Work and Labour Studies program or permission of the Director
Antirequisite(s): LABRST 3D03
Cross-list(s): HLTHAGE 3DD3

WORKLABR 3E03 - GENDER, SEXUALITY AND WORK

An examination of the historical and contemporary relations between women and work, and women and unionism. Topics will include the evolution and structure of the gender division of labour, women and the labour market, and the relationship of women to the labour movement.
Lectures and discussion; one term
Prerequisite(s): Registration in a Work and Labour Studies program, or registration in any Level III program or above
Antirequisite(s): LABRST 3E03

WORKLABR 3K03 - ON THE MOVE: WORKERS IN A GLOBAL WORLD

More than ever, people are moving across local, regional, national, and various borders for work. In this course, we will examine the organization of work through a critical lens of im/mobility and migration. What are the social, economic, and political forces compelling workers to move or stay? What effects do these non/movements have on communities, families, and the self? How does im/mobility condition inequality? Beyond North America, case studies from Asia, South America, Africa, and Europe are drawn to develop a deeper understanding into the role of mobility in the organization of work.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in any level 3 program or above
Antirequisite(s): LABRST 3K03
Priority is given to students enrolled in a Work and Labour Studies Program.

WORKLABR 3L03 - LABOUR POLICY AND ADVOCACY

This course explores the way that governments shape and regulate the labour market, the workplace and the lives of workers, and the ways that workers organize collectively to advocate for policy change. Issues explored include un/employment insurance, social assistance, education and training, job creation and industrial policy, employment standards, immigration, pay and employment equity, child care, and retirement.
Three hours (lecture and discussion); one term
Prerequisite(s): Registration in any Level III program or above
Antirequisite(s): LABRST 3L03
Priority is given to students enrolled in a Work and Labour Studies Program.

WORKLABR 3M03 - THEORETICAL APPROACHES TO WORK AND LABOUR STUDIES

This course examines the political, economic and sociological approaches to understanding work and labour in capitalist societies. Key concepts explored include private property, competition, the labour market, the labour process, the state and its role, the production of social inequality (including social class, gender, race, and ability), and the nature of various forms of oppositional consciousness and social movements.
Lectures and discussion; one term
Prerequisite(s): Registration in a Labour Studies program or any Level III program or above
Antirequisite(s): LABRST 2C03; LABRST 3M03
Priority is given to students registered in a Labour Studies program.

WORKLABR 3P03 - WORKERS' RESISTANCE - PAST AND PRESENT

This course explores workers' struggles to protect their livelihoods, assert their rights, and gain some control over their jobs and even the economy and society in general since the beginning of the industrial age. It will examine different kinds of workers' movements, protests and strikes - and how employers and the state
have responded. It will consider how workers' organizations in Canada fit into the larger international and global picture.
Prerequisite(s): Registration in a Work and Labour Studies program or registration in Level III or above in any program
Antirequisite(s): LABRST 3P03
Priority is given to students enrolled in a Work and Labour Studies Program.

WORKLABR 3Q03 - CONNECTING KNOWLEDGE, POLICY, AND ADVOCACY FOR WORKER JUSTICE

How do we learn about our social world? How do we know if our ideas about the world are true? How do we find answers to important questions about our social world? How can our research address pressing problems in the community in practical ways? In this course, students will learn the qualitative research methods needed to address contemporary work and labour issues, exploring both the theoretical and practical considerations involved in data collection, analysis and presentation. Underlying this course is a commitment to social justice, underscoring how we can employ social science inquiry in collaboration with community partners to promote improved conditions at work and beyond.
Prerequisite(s): Registration in Level III or IV of a Work and Labour Studies program or Level III or IV of a Community Engaged program
Antirequisite(s): LABRST 3H03, LABRST 3Q03

WORKLABR 3T03 - POVERTY AND HOMELESSNESS

This course will critically examine social work practices and policies in response to poverty and homelessness including causes, lived experiences, service provision, policy options and activist responses.
Discussion, exercises; one term
Prerequisite(s): Registration in a Social Work program, or SOCWORK 1A06 A/B and registration in Level III or above of any program.
Antirequisite(s): LABRST 3T03
Cross-list(s): SOCWORK 3T03
This course is administered by the School of Social Work.
Not open to students with credit in SOCWORK 4G03 if the topic was Poverty and Homelessness.

WORKLABR 4A03 - WORK AND LABOUR STUDIES PRACTICUM

This course gives students experience outside of the classroom by placing them with an organization that deals with labour issues - a union, a community group, or a government agency. Students will be able to work with their organization, make field observations, and do guided research at their placement which they will use to write a final report.
One Term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program or Permission of the Director
Antirequisite(s): WORKLABR 4A06 A/B, LABRST 4A06 A/B

WORKLABR 4C03 - PUBLIC SECTOR COLLECTIVE BARGAINING

This course examines unionization and collective bargaining for employees in the public, and para-public sectors. The topics covered include the origin and growth of public sector unions, models of public sector bargaining, legal aspects of bargaining rights and impasse resolution, bargaining issues and bargaining outcomes, and empirical studies of the effectiveness of dispute resolution procedures.
Lectures and discussion; one term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program
Antirequisite(s): LABRST 4C03

WORKLABR 4F03 - WORK AND THE ENVIRONMENT

Who bears the cost of environmental degradation? How does our current economic system shape possibilities for environmental justice? Is there such a thing as working-class environmentalism? And how do issues of environmental justice get taken up by trade unions? Struggles for environmental justice include everything from fighting against climate change and fighting for access to clean drinking water, to battles over health and safety in the workplace. In this course we will examine how social relations under capitalism shape our interactions with nature and create patterns of work and inequality. We will also explore the varied ways workers and workers organizations have responded to issues of environmental injustice.
Lectures and seminar discussion; one term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program; or permission of the Director
Cross-list(s): ENVSOCTY 4LW3
Antirequisite(s): GEOG 4LW3, LABRST 4F03

WORKLABR 4G03 - ADVANCED TOPICS IN WORK AND LABOUR STUDIES

Topics of current interest to students in Work and Labour Studies, with emphasis on current theory and research. Students should consult the Labour Studies Office concerning the topics to be examined.
Lectures and seminar discussion; one term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program or permission of the Director
Antirequisite(s): LABRST 4G03
This course is not offered every year.
WRKLAB 4G03 may be repeated if on a different topic, to a total of six units.

WORKLABR 4H03 - WORKING PRECARIOUSLY: LABOUR STRATEGIES, LABOUR RENEWAL

Precarious work is rising. In the Global North, these insecure, often low-waged jobs are now becoming commonplace. How did precarious work arise and how does it affect our lives? How does race, gender, location and citizenship impact who is more likely to be precarious? What processes and policies enable precarious work? What strategies have workers used to challenge precarious work? How effective are they? In this course we will explore the nature of precarious work, its effects, and the range of strategies available to workers and workers' organizations to fight precarity including new forms of unionism, innovative workplace tactics, growing linkages between labour and social movements, and new types of political initiatives.
Lectures and seminar discussion; one term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program or permission of the Director
Antirequisite(s): LABRST 4H03

WORKLABR 4J03 - INDEPENDENT STUDY

Independent study of a research problem to be arranged between student and instructor. It is incumbent on the student to secure arrangements with the supervising instructor and present a written proposal to the Director for approval prior to registration.
One term
Prerequisite(s): Registration in Level IV of an Honours Work and Labour Studies program and permission of the Director
Antirequisite(s): LABRST 4J03

Social Science

Courses using the subject code SOCSCI are administered by the Faculty of Social Sciences.
Kenneth Taylor Hall, Room 129, ext. 23772
http://socialsciences.mcmaster.ca

Notes

1. Students are strongly recommended to complete . Completion of is required to participate in an internship.
2. Students who previously completed SOC SCI 2E03 and 2F03 may substitute these units as Level II Sociology.
3. SOCSCI 2CC3, 2O03, 2P03, and 2R03 may be substituted as units of Level II Sociology; SOCSCI 3Q03 may be substituted as units of Level III Sociology.
4. Students enrolled in a three- or four-year undergraduate degree program in the Faculty of Social Sciences have the opportunity to take Social Sciences courses towards an affiliated certificate in Business Studies, Leadership and Management in the Not-For-Profit Sector, or Applied Behaviour Analysis (ABA). Students enrolled in a three-year degree program may take a maximum of six of these courses, and students enrolled in a four-year degree program may take a maximum of eight of these courses. Students who successfully complete one of the following sets of six courses may apply to have their courses recognized by Mohawk College for the awarding of an Affiliated Certificate when they graduate from their McMaster degree program. If granted, this certificate will be issued by Mohawk College.

Courses for the Business Studies Certificate

- SOCSCI 2AC3 - Financial & Managerial Accounting for Social Sciences
- SOCSCI 2BU3 - Introduction to Business for Social Sciences
- SOCSCI 2EN3 - Entrepreneurial Training for Social Sciences
- SOCSCI 2HR3 - Human Resources Management for Social Sciences *****
- SOCSCI 2MR3 - Introduction to Marketing for Social Sciences
- SOCSCI 2PF3 - Personal Financial Management for Social Sciences

Courses for the Certificate in Leadership and Management in the not-for-Profit Sector

- SOCSCI 2BR3 - Board and Staff Responsibilities for the Not-for-Profit Sector
- SOCSCI 2HR3 - Human Resources Management for Social Sciences *****
- SOCSCI 2LC3 - Leadership and Communications for the Not-For-Profit Sector
- SOCSCI 2OP3 - Operational Planning for the Not-For-Profit Sector
- SOCSCI 2RD3 - Resource Development for the Not-For-Profit Sector
- SOCSCI 2SP3 - Strategic and Long Range Planning for the Not-for-Profit Sector

Courses for the Applied Behaviour Analysis (ABA) Certificate

- SOCSCI 2UA3 - Principles of Applied Behaviour Analysis I
- SOCSCI 2UB3 - Principles of Applied Behaviour Analysis 2
- SOCSCI 2UE3 - Ethical Practice in the Field of Applied Behaviour Analysis
- SOCSCI 2UF3 - Professional Relationships with Families and Teams
- SOCSCI 2UR3 - Single Subject Research Design
- SOCSCI 2US3 - Introduction to Autism Spectrum Disorder

**This course is part of both certificates*

SOCSCI 1HS3 - PATHWAYS INTO THE SOCIAL SCIENCES

This course recognizes a set of specialized, cross-applicable and transferable skills acquired by students in their previous education that facilitate and enhance their transition into a Social Sciences program. Three hours; one term
Prerequisite(s): Completion of a Specialist High Skills Major (SHSM) program in Environment, Business, Health and Wellness; Information and Communications Technology; Hospitality and Tourism; Non-Profit; Justice, Community Safety and Emergency Services; Non-Profit, Education, and Childcare; or an approved similar program.

SOCSCI 1RM3 - HOW DO WE KNOW? DOING SOCIAL SCIENCES RESEARCH

This course provides students with a glimpse of the diverse types of research methods used within the social sciences. Students will learn how we study the things we do, such as economic inequality, access to health care, changing patterns of crime, the interplay of religious practice and civil rights, by providing students with basic concepts and language related to conducting research.
Three hours; one term
Prerequisite(s): Registration in Social Sciences I, Economics I, or Honours Health and Society I and credit or registration in SOCSCI 1SS3; or registration in Level II or above in a program in the Faculty of Social Sciences; or permission of the department

SOCSCI 2EL3 - CAREER PREPARATION IN THE SOCIAL SCIENCES

Students will explore career options and analyze contemporary labour market information relevant to Social Sciences students. They will identify and articulate the skills acquired through academics and extracurricular experiences in order to develop job search strategies and job search materials such as resumés, cover letters, and networking profiles. Students will prepare for the transition to the workplace by examining evolving expectations and norms in contemporary professional settings.
Three hours; lectures and tutorial; one term
Prerequisite(s): Registration in any Social Sciences program and 18 units completed.
Antirequisite(s): HUMAN 2CP2, 2CP3; SOCSCI 2EL0
First offered in 2025

SOCSCI 2EN3 - ENTREPRENEURIAL TRAINING FOR SOCIAL SCIENCES

This course will offer a careful examination of the process of entrepreneurship, concentrating on both theoretical styles and practical approaches.
Three hours; one term
Prerequisite(s): Registration in Level II or above.
Completion of SOCSCI 2BU3 is strongly recommended.
Not open to students with credit in ENGNMGT 5E03.
Not open to Continuing students.

SOCSCI 2J03 - INTRODUCTION TO STATISTICS

An introduction to basic statistical concepts and their application to the analysis of data from the social sciences. The use of spreadsheets is emphasized.
Three hours; one term
Prerequisite(s): Registration in Level II or above of Honours Bachelor of Kinesiology, Music (Music Cognition), Cognitive Science of Language or a Social Sciences program
Antirequisite(s): COMMERCE 2QA3, COMMERCE 1DA3, ECON 2B03, ENVSOCTY 3MB3, LINGUIST 2DD3, STATS 2B03, STATS 2D03.
Not open to students with credit or registration in: ECON 3E03, ECON 3EE3, HTHSCI 2G03, 2GG3, PNB 2XE3, PNB 3XE3, POLSCI 3NN3, SOCIOL 3FF3 or any Level II, III or IV statistics course.

SOCSCI 2JS1 - CO-OP JOB SEARCH I

Students will focus on the strategic and personal management skills necessary to manage the co-op job search process, including issues particular to first-time applicants.
Online; one term
Prerequisite(s): SOCSCI 2EL3 or 2EL0 and registration in a Social Sciences Co-op program.

SOCSCI 2LC3 - LEADERSHIP AND COMMUNICATIONS FOR THE NOT-FOR-PROFIT SECTOR

This course examines personal organizational leadership styles. Students will utilize leadership competencies to effectively lead and manage an organization. Students will learn how to develop team building skills, manage productive meetings and form strategic alliances and partnerships.
Three hours; one term
Prerequisite(s): Registration in Level II or above.
Not open to Continuing students

SOCSCI 2OP3 - OPERATIONAL PLANNING FOR THE NOT-FOR-PROFIT SECTOR

Students learn to implement and manage an annual operating plan, to set priorities, develop a clear direction for action, assign responsibilities, set out costs and indicate how revenue will be generated to fund annual programs. Students will use the plan as a resource for board, staff and volunteers and to track and evaluate progress.
Three hours (seminar); one term
Prerequisite(s): Registration in Level II or above.
Not open to Continuing students

SOCSCI 2RD3 - RESOURCE DEVELOPMENT FOR THE NOT-FOR-PROFIT SECTOR

This course will investigate sources of funding for not-for-profit organizations including grants, foundations, corporate partnerships, government programs and fundraising. Students will learn how to create a resource development plan, and how to identify capacity, vision and ethics in order to assess potential resources available to the organization.
Three hours; one term
Prerequisite(s): Registration in Level II or above.
Not open to Continuing students.

SOCSCI 2SP3 - STRATEGIC AND LONG RANGE PLANNING FOR THE NOT-FOR-PROFIT SECTOR

This course will explore the various models of strategic planning. Based on outcome, evaluation and accountability, students will learn how to select the appropriate model and learn how to conduct environmental analysis in order to manage the organization.
Prerequisite(s): Registration in Level II or above.
Not open to Continuing Students.

SOCSCI 2XL0 - MANAGING SOCIAL DATA IN EXCEL

This zero-unit course will provide students with a working knowledge of key features of Microsoft Excel. In addition to building elementary competencies comfort in interpreting and presenting numerical and financial data, practical exercises will equip students to manage qualitative and social data.
Online, one term
Prerequisite(s): Registration in Level II or above.

SOCSCI 3EP3 - SOCIAL SCIENCES EXPERIENTIAL PROJECT

Students will apply knowledge and skills from one or more Social Sciences disciplines to an experiential project such as a partnered research project, community-engaged project, or non-employment-based work-integrated placement. The project will be conducted under the supervision of a Faculty of Social Sciences faculty member. The student will work with the faculty member to define learning objectives and assessment of those objectives. The total and/or weekly time commitments and workload will typically match those of a standard course and be compatible with the student's course load. Students who have secured an eligible supervisor must contact the Office of the Associate Dean, Undergraduate Studies for details on the application process.
One term
Prerequisite(s): Registration in Level III or IV of any Honours program. Permission of the Careers & Experiential Education Manager of the Faculty of Social Sciences is required.

Aid & Awards

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OFFICE OF THE REGISTRAR, AID & AWARDS
Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
https://registrar.mcmaster.ca/aid-awards/

SENIOR ASSOCIATE REGISTRAR AID & AWARDS
Vacant
ASSISTANT REGISTRAR GOVERNMENT AID PROGRAMS
Rita Mukherjee/B.Sc., M.B.A.

The Office of the Registrar, Aid & Awards delivers government and University aid and award programs that support access, financial wellness and excellence at the post-secondary level. Our academic grant, award, bursary and work programs encourage and support
diversity and inclusivity in the recruitment, retention, and recognition of students, including those from equity-deserving groups. Aid & Awards administers government student aid, such as the Ontario Student Assistance Program (OSAP) and the US Direct Loans
Program, on behalf of various federal and provincial governments.
For more information about our programs and services, visit registrar.mcmaster.ca/aid-awards/.

Regulations for Aid and Awards

The University supports the financial wellbeing of students in the delivery of aid and award programs, ensuring equity, consistency and transparency in administration. The University operates within the Senate approved University Aid and Awards Policy. While all regulations for Aid and Awards are established within this approved policy, the University may choose to offer additional Aid and Award programs, establish regulations through which to administer these programs, and/or modify existing regulations with Senate approval after the Undergraduate Calendar has been published. It is important to note that Financial Awards are not covered by the University Aid and Awards Policy and are not administered through the Aid and Award regulations that follow. The University Aid and Awards Policy is publicly viewable through the University Secretariat website. Financial Awards support students in a manner consistent with the goals of the University, but do not necessarily meet all the policy regulations of established Aid and Award programs. Financial Awards may be administered centrally through the Office of the Registrar, Aid & Awards, through the School of Graduate Studies (SGS), or through designated representatives in University faculties and departments that have established processes to administer their own funds (e.g. Athletics and Recreation). Financial Awards are not Senate-approved awards and thus, are not recognized at convocation or included on University transcripts. Information about Financial Awards is made available through department websites.
The following regulations apply to all Undergraduate Aid and Award Programs (and excludes Financial Awards, as detailed above):

Application Requirements

Some Aid and Awards require students to submit an application:

1. Application records for Aid and Awards, supporting documentation (e.g. transcripts, letters of reference, income tax notices of assessment, student loan entitlements, etc.) and responses to applications shall be handled by the administering office in accordance with the *Freedom of Information and Protection of Privacy Act (FIPPA)*.
2. Requirements for Aid and Awards by application typically include:
    - An online application submitted electronically through AwardSpring with completed consents and declarations or a completed signed paper-based application form
    - A completed common application submitted through AwardSpring for awards requiring a nomination
    - A statement of eligibility
    - An opportunity for applicants, particularly from equity-deserving groups, to voluntarily offer a narrative about their lived experiences
    - A curriculum vitae/academic resume
    - A transcript (McMaster University transcripts may be unofficial)
    - In addition, for the types of awards noted below, at least one academic or personal (non-family member) letter of reference may be required:

i. University-wide Aid and Awards
ii. Aid and Awards with a value exceeding $2000
iii. Renewable Aid and Awards
iv. Aid and Awards at the discretion of the Office of the Registrar, Aid & Awards

3. The University may choose to audit and verify any or all information provided to complete an Aid or Award Application.
4. Application records and supporting documentation are used by the Office of the Registrar, Aid & Awards, Award Chairs and Selection Committees for the sole purpose of administering Aid and Award programs, including, but not limited to, determining student eligibility.
5. All application records and supporting documentation will be retained for a minimum period of twelve months after last use.
6. All application records and supporting documentation remain the property of McMaster University.

Gender Criteria

For the purpose of Aid and Award criteria and eligibility, references to "Woman" or "Female" include all students who identify as Woman/Female and references to "Man" or "Male" include all students who identify as a Man or Male.

Equity-Deserving Groups

Equity-deserving groups include Indigenous persons, members of racialized communities, women, and persons with disabilities.
Indigenous, Black and Latinx students, students with disabilities and women in STEM fields are most underrepresented in universities
as a consequence of individual bias and systemic barriers.

Maximums

To ensure a fair and wide allocation of Undergraduate Aid and Awards, the University restricts the number and value of aid and awards which students may receive for an academic year.
An eligible entering student may receive:

a. One Entrance Award granted solely on academic standing (e.g. the McMaster Award of Excellence); and
b. One Entrance Award, including those supporting Black, Racialized, Indigenous and International students, granted on the basis of academic standing and other forms of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition; and
c. One Entrance Academic Grant or Indigenous Student Entrance Academic Grant; and
d. One Entrance Bursary granted on the basis of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition, and additional bursary funding up to the amount eligible; and
e. Fall/Winter and Summer Work Program funding; and
f. Any number of Financial Awards

An eligible in-course or graduating student may receive:

a. Awards granted solely on academic standing, limited to either one award greater than or equal to $800 (considered a 'major' award) and one academic award less than $800 (considered a 'minor' award), or two academic awards less than $800; and
b. Two awards granted on the basis of academic standing and other forms of earned merit that requires an additional assessment process, including, but not limited to, application, interview and/or audition; and
c. Academic Awards continued from a previous year; and
d. Any number of prizes, which include non-monetary awards such as books and medals, and awards of nominal monetary value (currently $100 or less), whether based on academic standing or an additional assessment process; and
e. One Travel or Exchange Award; and
f. One Academic Grant (including any renewable Entrance, Indigenous Student Entrance, or In-Course Academic Grant continued from a previous year); and
g. One Community Contribution Award; and
h. One or more bursaries based on the student's financial situation up to the amount eligible; and
i. Fall/Winter and Summer Work program funding; and
j. Any number of Financial Awards

T4A tax slips are issued to students for all Aid and Award amounts received during the tax year.
It is important to note that Aid and Award income may affect federal and/or provincial government student aid (e.g. full-time OSAP) entitlements. Students are advised to review the status of their government student aid applications often and refer to the appropriate government website for further information.

Review of Aid and Award Decisions

1. Decisions made by Aid and Award selection committees are final. Students may not appeal these decisions.
2. Students who believe an error occurred at the University, that may have impacted an Aid and/or Award decision, are asked to write to the Senior Associate Registrar, Aid & Awards requesting a review of their file.
3. Students who have compelling personal circumstances that preclude them from receiving initial payment and/or renewal of Aid and/or Award funding may submit a petition for special consideration to request that an exception to the policy and/or regulations be made. Petitions should be submitted to the Senior Associate Registrar, Aid & Awards and should include a cover letter explaining the need for special consideration, as well as any relevant documentation. Petitions must be submitted in a prompt and timely manner and will be accepted no later than one year after the decision being petitioned.

Privacy

1. When providing information to donors and others concerning award recipients (including publications such as convocation programs and award booklets), the release of such information shall comply with the *Freedom of Information and Protection of Privacy Act (FIPPA)* and the University's *Notice of Collection* statement. The University is permitted to publish an individual's name, Faculty, program, plan, level, and Award information. The University may publish the names of recipients of scholarships listed in the Undergraduate Calendar in the University's convocation program and other Award publications.
2. With permission, the University may also release an Aid recipient's first name, last name, Faculty, program, plan, level, Aid received and amount to the donor(s) of the Aid.
3. With permission, the University may also release an academic grant recipient's first name, last name, email id, faculty, program, plan, level, Academic Grant received and amount to the Faculty for the purpose of Faculty award ceremony invitations and Award booklets.
4. From time to time, the Office of the Registrar, Aid & Awards may reach out to Award recipients with requests for thank you letters, invitations to donor luncheons and events, invitations to discuss summer job opportunities or internships, interviews for McMaster University Advancement or Communications and Public Affairs, etc. Responses to these requests and/or attendance at these functions is entirely voluntary. While a response is appreciated, acceptance or rejection of these offers in no way impacts Aid and Award eligibility.
5. Mandatory annual reporting to Undergraduate Council Awards Committee, Undergraduate Council, and Senate include the release of an Award recipient's first name, last name, Faculty, program, plan, level, Award received and amount, submitted Travel Award reports, Aid and Award summary information and recognition of selection committee members.
6. Students with concerns regarding Aid and Award privacy, are asked to write to the Senior Associate Registrar, Aid & Awards.

Aid for Undergraduate Students

Bursaries

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Entrance Bursaries

Entrance Bursary Regulations

1. Entrance Bursaries are non-repayable grants allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or earned merit.
2. Entrance Bursaries are available to students admitted on the basis of high school admission requirements.

3. Entrance Bursaries are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
4. Entrance Bursaries requiring full-time status are available to students enrolled in a full-time OSAP eligible full-time course load or equivalent in both the fall and winter terms.
5. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Bursaries, unless:

i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma), and/or
ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.

6. Entrance Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees, or Protected Persons of Canada regardless of where they completed their high school education.
7. Entrance Bursaries are allocated on the basis of financial need, as demonstrated through a completed full-time Canadian federal and/or provincial government student aid application (e.g. full-time OSAP), for the academic year in which the student is entering Level 1 of their program.
8. Entrance Bursaries are allocated in adherence with the Ministry of Colleges and Universities (MCU) policies, procedures and guidelines in place for the given academic year. The MCU Student Access Guarantee (SAG) currently specifies bursary amounts and payment deadlines for students in high tuition programs (e.g. Engineering, Business).
9. Entrance Bursary funds are limited.
10. Students may receive more than one Entrance Bursary to fill their Student Access Guarantee obligation or to meet the total bursary amount for their level of financial need.
11. In some cases, students may receive more than one Entrance Bursary (e.g. where a student meets a particular donor fund requirement or applies via a separate earned merit application process). In these cases, the bursary is awarded to the eligible student who demonstrates the greatest financial need as determined by the Office of the Registrar, Aid & Awards.
12. Entrance Bursaries may specify a minimum admission average requirement and may consider one or more McMaster University calculated admission averages. An admission audition or portfolio score or equivalent may be included in the calculation of an average. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Bursaries.
13. Entrance Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
14. To be considered for an Entrance Bursary by application, students must submit a completed application by the specified deadline date.
15. Entrance Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
16. The greater calculated financial need is used to break any tie.
17. Students may receive a maximum of one Entrance Bursary by application.
18. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility for the Entrance Bursary to have the Entrance Bursary payment processed.
19. All Entrance Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
20. Entrance Bursaries are typically disbursed September through the end of December.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Entrance Bursary. Students are advised to consult with the Office of the Registrar, Aid & Awards, prior to making any changes to their program of study or course load.
22. Students withdrawing from courses without failure by default in the Fall term may see an adjustment in the value of their Entrance Bursary or see the full amount returned to the University.
23. Any adjustment made to a student's account, in order to return all or a portion of an Entrance Bursary to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
24. Some Entrance Bursaries may be renewable (see In-Course and Renewal Bursary Regulations).
25. The University may choose not to grant an Entrance Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
26. The University may remove specific Entrance Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Entrance Bursaries (e.g. donor funds).
27. Entrance Bursaries supported by donor funds may have additional eligibility requirements.

Entrance Bursaries

Open to Two or More Faculties

THE NABAB KAUR DESHWAR BURSARY

Established in 2021 by Davendra Pal Singh Deshwar and Mamta Deshwar, in honour of his mother, Nabab Kaur Deshwar.

Requirements: To be granted to female undergraduate students entering any program who identify as Indigenous students and demonstrate financial need.

THE RANJIT SINGH DESHWAR BURSARY

Established in 2020 by Davendra Pal Singh Deshwar and Mamta Deshwar, in honour of his father, Ranjit Singh Deshwar.

Requirements: To be granted to undergraduate students entering any Level 1 program who identify as Indigenous or racialized students and demonstrate financial need. Preference will be given to students who identify as Indigenous.

THE BEVAN FAMILY FIRST GENERATION BURSARY

Established in 2008 by George A. Bevan, B.A. (Class of '48) and his wife Simone L. Bevan (B.A. University of Toronto).

Requirements: To be granted to students entering any Level 1 program with a final admission average of 85 percent or greater, and who demonstrate financial need. Preference to be given to students who are the first in their family to attend a post-secondary institution and whose parents are not university graduates.

THE BLENKHORN FAMILY FOUNDATION ACCESS BURSARY

Established in 2024 by the Blenkhorn Family Foundation, whose primary objective is to support high potential, equity-deserving students by providing access to higher education, promoting a lifetime of improved social opportunities, work and life success.

Requirements: To be granted to students entering any program who experience barriers to education and without financial support would otherwise be unable to attend university. The funding is tenable for 3 additional years provided the recipient remains enrolled full-time.

THE DR. JOHN YOONSUN LEE DOWNSVIEW ENTRANCE BURSARY

Established in 2021 in honour of Dr. John Yoonsun Lee. This bursary is made possible by a donation from two Downsview Secondary School alumni to encourage and assist students from North York to attend McMaster University.

Requirements: To be granted to undergraduate students entering any Level 1 program who demonstrate financial need. Preference will be given to students

who graduated from a high school in North York.

THE ROTARY CLUB OF BURLINGTON CENTRAL - BURLINGTON STUDENT BURSARY

Established in 2021 by the Rotary Club of Burlington Central.

Requirements: To be granted to undergraduate students entering any Level 1 program who graduated from a high school in Burlington, Ontario and demonstrate financial need.

THE STEVE AND TINA WILSON FAMILY FOUNDATION TECHNOLOGY BURSARY

Established in 2021 by Steve Wilson, B.COMM. (Class of '85), and Tina Wilson, B.A. Hons. (Class of '86).

Requirements: To be granted to undergraduate students entering Level 1 in any program who permanently reside in the Greater Golden Horseshoe area, demonstrate financial need, and require help with the cost of computer equipment. Preference will be given to students who permanently reside in Hamilton, Ontario.

Open to the Faculty of Engineering

THE FRANK GUE & FAMILY BURSARY

Established in 2020 by the late Frank Gue, M.B.A. (Class of '67), who understood the importance of education, hard work, and giving back to those in need.

Requirements: To be granted to undergraduate students entering the Faculty of Engineering who demonstrate financial need.

THE ZEUNER FAMILY BURSARY

Established in 2018 by Alf Zeuner, B.Eng. (Class of '80) and M.Eng. Engineering Physics (Class of '84) in honour of the Zeuner Family.

Requirements: To be awarded to a student entering a full-time program in the Faculty of Engineering who demonstrates financial need. Preference is to be given to a student who permanently resides in Hamilton. This award is renewable for three years at the same value, provided the student remains enrolled full-time in the Faculty of Engineering.

Open to the Faculty of Health Sciences

THE CHIEDZA-LIGHT BURSARY

Established in 2023 by Matthew Mutamiri, M.Sc. (Class of 2020) and Josephine Mutamiri to give back in honour of the huge support Matthew received during his academic journey at McMaster University.

Requirements: To be granted to undergraduate students entering Level 1 in the School of Nursing who demonstrate financial need. Preference will be given to first-generation Canadians.

THE RON AND GINA FRASER HEALTH SCIENCES BURSARY

The Ronald K. Fraser Foundation and Gina E. Fraser established The Ron and Gina Fraser Health Sciences Bursary with a mandate to fund university tuition for students in the highest financial need who enter full-time study in the Bachelor of Health Sciences Program. The HWSB and HWCSB will participate in the selection of recipients. The bursary is valued at one year of tuition and is available for the four years in the BHSc program and if the recipient decides to pursue a career in medicine (bursary for a further 3 years) or is accepted into the Graduate Program in Biomedical Engineering (bursary for a further 5 years); on the condition of both continued good academic standing and financial need.

Open to the Faculty of Humanities

THE DON AND LOIS GASSE MEMORIAL ENTRANCE BURSARY

Established in 2017 by Dr. Rosanne Gasse, B.A. Hon. (Class of '80), M.A. (Class of '81), Ph.D. (Class of '89), in memory of her parents.

Requirements:To be granted to a student entering Level 1 in the Faculty of Humanities who demonstrates financial need. Preference will be given to an Indigenous student.

THE ROBERT AND RUTH MILLER ENTRANCE BURSARY

Established in 2016 by Ruth Miller (Class of '79), lifetime resident of Burlington who had a career dedicated to education in the Halton School Board; and Robert Miller (Class of '76), who had a career in engineering and business management, to assist students that demonstrate wise use of time, energy and skill.

Requirements: To be awarded to a student entering a Level 1 program in the Faculty of Humanities who graduated from a Burlington high school and demonstrates financial need. Preference to be given to students who graduated from M.M. Robinson High School.

Value: $7,500

Open to the Faculty of Science

THE NANCY ELIZABETH HINICH ENTRANCE BURSARY

Established in 2021 by David Dusan Hinich and family in loving memory of Nancy Elizabeth Hinich (nee McCullough).

Requirements: To be granted to undergraduate students entering Level 1 in the Faculty of Science who demonstrate financial need.

In-Course Bursaries

In-Course and Renewal Bursary Regulations

1. In-Course Bursaries are non-repayable grants, allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or earned merit.
2. In-Course Bursaries are available to full-time and part-time students enrolled in an undergraduate degree program, excluding the Physician Assistant, and M.D., and Nursing Program (at the Mohawk site). Physician Assistant and M.D. can access In-Course Bursaries through the relevant program office. A limited number of bursaries are also available to true part-time students enrolled in diploma and certificate programs offered through McMaster Continuing Education, who have completed at least 50% of that course work on a part-time basis.
3. In-Course Bursaries requiring full-time status are available to students enrolled in an OSAP eligible full-time course load or equivalent in both the fall and winter terms.
4. Second degree students are eligible for In-Course Bursaries
5. In-Course Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees and Protected Persons of Canada.
6. Students who are not Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada, who are enrolled in Level 2 or higher, are eligible to be considered for a limited number of In-Course Bursaries for International students.
7. In-Course Bursaries are allocated on the basis of financial need, as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP), completed standard University need profiles and/or discussions with designated staff on campus (e.g. a Student Loans Officer) who confirm the need for bursary assistance through submission of additional supporting documentation, for the academic year in which the student is being considered.
8. In-Course Bursaries are allocated in adherence with the Ministry of Colleges and Universities (MCU) policies, procedures and guidelines in place for the given academic year. The MCU Student Access Guarantee (SAG) specifies payment deadlines for students in high tuition programs (e.g. Engineering, Business).

9. In-Course Bursaries for non-SAG students are allocated according to financial need based on government student aid entitlements, or equivalent, with higher bursary amounts assigned to students demonstrating higher levels of financial need. Bursary amounts are set by the Office of the Registrar, Aid & Awards annually.
10. In-Course Bursary funds are limited.
11. Students may receive more than one In-Course or Renewal Bursary as part of their Student Access Guarantee allocation or up to the total bursary amount for which they are eligible.
12. In some cases, students may receive more than one bursary (e.g. where a student meets a particular donor fund requirement or applies via a separate earned merit application process). In these cases, the bursary is awarded to the eligible student who demonstrates the greatest financial need as determined by the Office of the Registrar, Aid & Awards.
13. The greater demonstrated financial need is used to break any tie.
14. In-Course Bursaries may consider one or more McMaster University calculated averages (e.g. Cumulative Grade Point Average).
15. In-Course Bursaries may specify a minimum average requirement.
16. In-Course Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submission of an application.
17. To be considered for an In-Course Bursary by application, students must submit a completed application by the specified deadline date.
18. In-Course Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
19. Students must be enrolled in at least the course load used to determine their eligibility for the In-Course Bursary to have the In-Course Bursary payment processed.
20. Students must meet the renewal requirements specified in the terms of their Entrance or In-Course Bursary to receive a renewal payment.
21. All In-Course Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
22. MAPS bursary payments are disbursed in the fall, winter and spring/ summer terms, once the drop and add period for the term has passed. All In-Course Bursaries are typically disbursed no later than mid-February (the MCU winter term payment deadline).
23. Forfeiture of a renewable Entrance or In-Course Bursary also cancels all future instalments of the bursary.
24. Students wishing to defer the benefits of bursary renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
25. Students holding a renewable Entrance or In-Course Bursary who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable bursary to defray the tuition and compulsory fees for those courses should make the request in writing to The Office of the Registrar, Aid & Awards.
26. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the In-Course Bursary. Students are advised to consult with the Office of the Registrar, prior to making any changes to their program of study or course load.
27. Students who withdraw may see an adjustment in the value of their In-Course or Renewal Bursary or see the full amount returned to the University.
28. Any adjustment made to a student's account, in order to return all or a portion of an In-Course or Renewal Bursary to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
29. The University may choose not to grant an In-Course Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
30. The University may remove specific In-Course Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Bursaries (e.g. donor funds).
31. In-Course Bursaries supported by donor funds may have additional eligibility requirements.

In-Course Bursaries

Open to Two or More Faculties

THE 4 WINDS BURSARIES

Established in 1997 by John F. Evans, Q.C. and Patricia Peacock-Evans in recognition of John's long-standing association with McMaster as Chair of The President's Club Executive Committee.

Requirements: The Bursary is named after the island where the family's cottage is located. A variable number of bursaries to be granted to students who demonstrate financial need.

THE ACCESSIBILITY BURSARY

Established in 2015 by Daphne (Class of' 87) to celebrate the work done by her father, Dr. Harry Botterell, in Neurosurgery and Paraplegia both during WWII and thereafter in Canada.

Requirements: To be granted to a student in any program who demonstrates financial need and is registered with Student Accessibility Services.

THE AINSWORTH BURSARIES

Established in 1996. To be granted to undergraduate students in any program who demonstrate financial need.

Requirements: Preference to be given to female students.

THE PHYLLIS MAY AITKEN BURSARY FUND

Established in 1997 by the bequest of Phyllis May Aitken.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE JAMES N. ALLAN FOUNDATION BURSARY

Established in 1996 from funds donated by the James N. Allan Foundation, Dunnville, Ontario, in support of its belief that all students should have the opportunity to achieve their educational goals.

Requirements: To provide assistance to McMaster students who demonstrate financial need. Preference will be given to students from Haldimand Norfolk County.

THE AMEX CANADA BURSARY

Established in 1997 by AMEX Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE AUBURN INDUSTRIAL SERVICES LTD BURSARY

Established in 1997 by Auburn Industries Services Ltd. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Auburn Industrial Services Ltd. Award.

THE JOY BÂBY BURSARY

Established in 1997 by Joy Bâby under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in any program who

demonstrates financial need.

THE BACHELOR OF HEALTH SCIENCES CLASS OF 2011 BURSARY
Established in 2020 by the Bachelor of Health Sciences Class of 2011.
Requirements: To be granted to undergraduate students enrolled in any program who identify as Black students and demonstrate financial need. Preference will be given to students enrolled in a Bachelor of Health Sciences program.

THE CHARLES MURRAY BALL BURSARIES
Established in 1993 by bequest of May Alexandra Ball in memory of her brother Charles Murray Ball.
Requirements: To assist students in any program who demonstrate financial need.

THE BALLIK INDIGENOUS BURSARY
Established in 2021 by Dr. Edward A. Ballik and Mrs. Woon-Ngor Ballik.
Requirements: To be granted to undergraduate students enrolled in any program who identify as Indigenous and demonstrate financial need.

THE BIRGIT AND ROBERT BATEMAN BURSARY
Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Arts and Science program, the Faculty of Social Sciences or the Faculty of Science. Preference to be given to students who are studying Environmental Studies or Environmental Science.

THE BEALE-LINCOLN-HALL EXCHANGE PROGRAM BURSARIES
Established in 1996 by Arnold A. Beale in memory of his parents, F. Arnold Beale and Margaret S. Beale and, Mr. and Mrs. Walter Gould Lincoln and Commander Harley H. Hall., U.S.N.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in a program in Commerce, Biochemistry, Biology, English, Chemistry, Earth Sciences, History, Materials Science, Mathematics, Physics, Engineering Physics or Religious Studies. Preference will be given to students who are participating in one of McMaster's formal exchange programs, and who have demonstrated a lively interest in the humanities and the human and social implications of scientific developments.

THE LARRY BEARE BURSARY
Established in 2011 by Larry Beare, B.A. (Class of '66).
Requirements: To be granted to students who demonstrate financial need.

THE DR. C. HOWARD AND DR. SHIRLEY F. BENTALL BURSARIES
Established in 1999 by Dr. C. Howard Bentall (Class of '37) and Dr. Shirley F. Bentall (Class of '46) under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE BERTRAM BURSARY
Established in 2021 by the H.G Bertram Foundation.
Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need and who are registered with Student Accessibility Services. Preference will be given to students from Dundas or Hamilton.

THE BETZNER FAMILY MEMORIAL BURSARIES
Established in 1996 by the Betzner Family of Dundas, Ontario.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE BIRKS FAMILY FOUNDATION BURSARY FUND
Established in 1987 by The Birks Family Foundation in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students annually who demonstrate financial need.

THE DAVID H. BLANCHARD BURSARY
Established in 2007 by David H. Blanchard, B.A. (Class of '75) because of his belief in the value of education.
Requirements: To be granted to students enrolled in the Faculty of Social Sciences or the Faculty of Science who demonstrate financial need. Preference will be given to students enrolled in the School of Earth, Environment & Society.

THE BOWES FAMILY BURSARIES
Established in 1996 by Eleanor and Terrence Aurini of Cambridge.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to female students.

THE BRANTFORD ALUMNI BRANCH BURSARY
Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Brantford Alumni Branch Award.

THE ERIC JOHN BRETZLER BURSARY
Established in 1997 by family and friends in memory of Eric John Bretzler (Class of '92).
Requirements: To be granted to a student enrolled in any program who demonstrates financial need. Preference will be given to students associated with the McMaster Students Union.

THE PAULA BURKE BURSARY
Established in 2012 in memory of Paula Burke, a teacher who made significant contributions to her community through her work with challenged children.
Requirements: To be granted annually to a student enrolled in any program who demonstrates financial need. Preference will be given to a student who has shown leadership and participation in McMaster student life.

THE ROBERT G BURNET BURSARY
Established in 2022 by Ammar (Class of 2011 & 2016) and Janet (Class of 2011) in memory of Robert G. Burnet (Class of `77), a remarkable cellist, teacher, and friend.
Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need and have performed with the McMaster Symphony Orchestra. Preference will be given to students enrolled in the Music program.

THE BURSARIES FOR IN-COURSE VISA STUDENTS
Established in 1982 by the University.
Requirements: To assist visa students in any program.

THE BURSARIES FOR VISA STUDENTS
Established in 1999.
Requirements: A variable number of bursaries to be granted to visa students in any program who demonstrate financial need.

BURSARY FUND FOR BLACK STUDENTS
Established in 2020 through the generosity of various donors.
Requirements: To be granted to undergraduate students enrolled in any program who identify as Black students
and demonstrate financial need.

BURSARY FUND FOR INDIGENOUS STUDENTS
Established in 2020 through the generosity of various donors.
Requirements: To be granted to undergraduate students enrolled in any program who identify as Indigenous
students and demonstrate financial need.

BURSARY FUND FOR RACIALIZED STUDENTS
Established in 2020 through the generosity of various donors.
Requirements: To be granted to undergraduate students enrolled in any program who identify as racialized
students and demonstrate financial need.

THE BUSINESS MANAGEMENT SERVICES BURSARIES
Established in 1996 by staff of McMaster's Business Management Services who through their leadership, guidance and support, enable the University community to deploy its financial resources to the greatest advantage.
Requirements: A variable number of bursaries to be granted to students in any

program who demonstrate financial need.

THE JAMES CALVIN BURSARIES

Established in 1997 by bequest of James Calvin.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CAMCO INC. BURSARIES

Established in 1997 by Camco Inc. in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE BETTY TAYLOR CAMPBELL BURSARIES

Established in 1998 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medallist in 1936 and a 1990 inductee to the Athletics Hall of Fame.

Requirements: To be granted to students who demonstrate financial need. Preference will be given to the recipient of the Betty Taylor Campbell Scholarship.

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (BURLINGTON) ELEANOR EWING BURSARY

Established in 1997 by the Canadian Federation of University Women (Burlington) under the McMaster Student Opportunity Fund initiative, in honour of Eleanor Ewing, who was instrumental in establishing the Burlington Chapter of the Canadian Federation of University Women.

Requirements: To be granted to a full-time student in any program who demonstrates financial need. Preference to be given to a mature female student.

THE CANON CANADA INC., BUSINESS SOLUTIONS DIVISION BURSARY

Established in 1997 by Canon Canada Inc. - OE Division, and augmented in 2005, in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in an Earth and Environmental Sciences program, the Environment & Society and Environmental Studies program or an Engineering and Society program.

THE CAPE CLASS OF '76 AND MARY KEYES BURSARY

Established in 2009 in honour of Mary Keyes and the Combined Pass Arts & Physical Education Program (CAPE) Class of '76.

Requirements: To be granted to a Level 4 student who demonstrates financial need. Preference will be given to a student who demonstrates athletic achievement in any inter-University sport.

THE ELVA CARROL BURSARY

Established in 1996 by Elva Carrol under the McMaster Student Opportunity Fund initiative.

Requirements: To be awarded to a female athlete who participates on an inter-university team and demonstrates financial need. Preference will be given to the recipient of The Elva Carrol Award.

THE KENNETH AND WENDY CARRUTHERS BURSARY

Established in 2024 by Kenneth Carruthers, B.Eng. (Class of 1967), M.B.A. (Class of 1971) and his wife Wendy, in appreciation for his McMaster education and the career paths it led him to pursue.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering and/or the School of Business who demonstrate financial need.

THE CFUW-HAMILTON BURSARY

Established in 1997 by the CFUW-Hamilton in support of the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student in any academic program who demonstrates financial need.

THE ANNE AND HAROLD CHALK MEMORIAL BURSARIES

Established by bequest of Anne Maria Luise Chalk and Harold Henry Chalk of Ottawa.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE CHAWKERS FOUNDATION BURSARIES

Established in 1996 by The Chawkers Foundation, Ottawa, Ontario in support of its belief that all students should be able to pursue their educational goals.

Requirements: To provide assistance to students who demonstrate financial need.

Value: $1,800

THE ADAM CHIARAVALLE SUSTAINABILITY BURSARY

Established in 2020 by friends and family in memory of Adam Chiaravalle '17, and his unwavering commitment to a sustainable university.

Requirements: To be granted to undergraduate students in any program who demonstrate financial need. Preference will be given to students who demonstrate a commitment to sustainability through academic studies or extra-curricular involvement.

THE CHUNG FAMILY BURSARY

Established in 2007 by Dr. Wilfred Chung, B.Sc. (Class of '75) and family.

Requirements: To be granted to a student in any program who demonstrates financial need.

THE CIBC BURSARIES

Established in 1997 by the Canadian Imperial Bank of Commerce under the McMaster Student Opportunity Fund initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE SAM M. CINO BURSARY

Established in 1997 by Sam Cino in support of McMaster students.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE CITY OF HAMILTON BURSARIES

Established in 1959 by the City of Hamilton to commemorate the visit of Her Majesty Queen Elizabeth II and His Royal Highness Prince Philip to Hamilton in July 1959.

Requirements: To assist Hamilton students who demonstrate financial need.

THE HUGH CLARK BURSARIES

Established in 1997 by Hugh Clark in support of McMaster students.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Hugh Clark Scholarship.

THE CLASS OF '35 BURSARIES

Established in 1985 by the Year '35 in honour of their 50th class reunion and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.

Requirements: To be awarded to a student in good academic standing who is a Canadian citizen or permanent resident.

THE CLASS OF '46 GOLDEN ANNIVERSARY BURSARIES

Established by the Year '46 in honour of their fiftieth reunion on June 1, 1996.

Requirements: A variable number of bursaries to be granted to students enrolled in any program at McMaster who demonstrate financial need and are in good academic standing.

THE CLASS OF '47 GOLDEN ANNIVERSARY BURSARIES

Established in 1997 by the Class of '47 in honour of their 50th Anniversary Reunion.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '49 GOLDEN ANNIVERSARY BURSARIES

Established by the Class of `49 in honour of their 50th Anniversary Reunion in 1999.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '51 GOLDEN ANNIVERSARY BURSARIES

Established by the Class of '51 in honour of their 50th Anniversary Reunion in 2001.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '53 BURSARY FOR PART-TIME STUDENTS

Established in 2004 by the Class of '53.

Requirements: A variable number of bursaries to be granted to part-time students enrolled in any program who demonstrate financial need.

THE CLASS OF '54 BURSARY

Established in 2009 by the Class of '54 in honour of their 55th Anniversary.

Requirements: A variable number of bursaries to be granted to students enrolled in any program and who demonstrate financial need.

THE CLASS OF '57 BURSARIES

Established in 1997 by the Class of '57 in honour of their 40th Anniversary Reunion.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '58 BURSARY

Established by the Class of '58.

Requirements: To be granted to students in Level 2 or above in the Faculties of Social Sciences, Humanities, Science or the School of Nursing who demonstrate financial need. Preference to students with Grade Point Averages of 7.0 or greater.

THE CLASS OF '59, 50TH ANNIVERSARY BURSARY

Established by the Class of '59 in honour of their 50th Anniversary.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '60 GOLDEN ANNIVERSARY BURSARIES

Established by the Class of '60 in honour of its 50th reunion.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '63, 50TH ANNIVERSARY BURSARY

Established in 2008 by the Class of '63 in honour of their 50th Anniversary.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF '65, 50TH ANNIVERSARY BURSARY

Established in 2015 by the Class of '65 in honour of their 50th reunion.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE CLASS OF 1966, 50TH ANNIVERSARY BURSARY

Established in 2016 by the Class of '66 in honour of their 50th reunion.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE COCCO FAMILY BURSARY

Established by Dom Cocco, B.Com. (Class of '83).

Requirements: To be granted to students enrolled in any program who demonstrate financial need and who require assistance with disability-related costs approved by Student Accessibility Services.

THE JANET HOLDER AND NEAL COCKSHUTT BURSARY

Established in 2004 by Janet Holder, M.B.A. (Class of '83) and Neal Cockshutt in honour of Ignatius Cockshutt, founder of Cockshutt Farm Equipment Co. Ltd.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students from Brant County.

THE DORIS PARTRIDGE COLE BURSARY

Established in 1981.

Requirements: This bursary is to be granted to a worthy student in memory of Doris Partridge Cole (Class of '45).

THE COMPUSMART BURSARIES FUND

Established in 1997 by JMG Compusmart in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted annually to students who demonstrate financial need. Preference will be given to McMaster students enrolled in a program in Computer Science or Computer Engineering.

THE CONNOR, CLARK & LUNN BURSARY

Established in 1996 by Connor, Clark & Lunn in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to a McMaster student in any program who demonstrates financial need.

THE CATHERINE COOPER BURSARY

Established in 2018 by her children Kimberly, James, Mat, David, and Nathan, in memory of their mother, Catherine Cooper, who encouraged her children to pursue their goals through lifelong learning.

Requirements: To be granted to students who demonstrate financial need

THE SUSAN COOPER-TWISS BURSARY

Established in 2013 by Susan Cooper-Twiss (Class of '66) to support students in pursuit of their educational goals.

Requirements: To be granted to students enrolled in the Faculty of Social Sciences or Faculty of Humanities who demonstrate financial need.

THE IAN AND JILL COWAN BURSARY

Established in 1997 by Ian Cowan (Class of '71) and Jill (nee Robinson) Cowan (Class of '74) in support of McMaster students.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE CROSS COUNTRY BURSARY

Established in 1997 by coaches, former team members and supporters of the Men's and Women's Varsity Cross Country running teams under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student who demonstrates financial need and who is a member of the varsity men's or women's cross country team.

THE ARCHIBALD R. CROZIER BURSARIES

Established in 1992 in memory of Archibald (Archie) Crozier (Class of '35), former professional football player and Chair of the Ontario Energy Board for 17 years.

Requirements: To be granted to a student who has demonstrated financial need and a sense of social awareness and shown interest in, and concern for, others. It is hoped that recipients, after graduation, will reimburse the fund to the extent of their award so that increasing numbers of students may be assisted.

THE THOMAS DALY AND ANITA LEVIN BURSARIES

Established in 1996 by family, friends and colleagues of Thomas Daly.

Requirements: A variable number of bursaries to be granted to students in any undergraduate program who demonstrate financial need.

THE SAM DARRAGH GENERAL ATHLETIC BURSARY

Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in any academic program who demonstrates financial need and who is a member of any inter university team at McMaster.

THE SAM DARRAGH MEMORIAL BURSARY

Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in intervarsity football.

THE EDWARD FRANK DAVIS MEMORIAL BURSARIES

Established in 1996 by bequest in memory of Edward Frank Davis under the McMaster Student Opportunity Fund initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in Level 1 who demonstrate financial need and a commitment to community involvement. Preference will be given to the recipient of the Edward Frank Davis Memorial Award.

THE GARY AND ESTHER DAVIS BURSARY
Established in 2020 by Gary Davis, B.A. (Class of '74) in memory of his wife, Esther Davis, B.A. Hons. (Class of '72). They loved one another and the experiences they had at McMaster.
Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need.

THE GORDON H. DEAN BURSARIES
Established in 1996 by Gordon H. Dean of Stoney Creek.
Requirements: To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in Level 3 of a program in Arts and Science or Level 3 of a program in the Faculty of Humanities.

THE DR. RUDOLF DE BUDA BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: Preference will be given, if financial need is demonstrated, to the recipient of The Dr. Rudolf de Buda Scholarship.

THE JOHN DEERE BURSARIES
Established in 1997 by John Deere in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE DEBORAH AND TERENCE DEMPSEY BURSARY
Established in 2005 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals.
Requirements: To be granted to students in any Faculty who demonstrate financial need.

THE WILLIAM A. DETENBECK BURSARIES
Established in 1996 by William Detenbeck in honour of the Detenbeck Family.
Requirements: A variable number of bursaries to be granted to students who demonstrate that they are residents of an Indigenous community in Canada and who demonstrate financial need.

THE DETENBECK FAMILY BURSARIES
Established in 2005 by bequest of Patricia Detenbeck (Class of '32).
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE GUNTER DIEHL BURSARY
Established in 2018 by friends and colleagues of Gunter Diehl in honour of his retirement, with thanks for his 40 years of dedicated service to Housing and Conference Services and in recognition of his commitment to foster parenting with the Hamilton Children's Aid Society.
Requirements: Two bursaries valued at $500 each to be granted annually, one to a student living in residence, and one to a student who is current or former crown ward, who demonstrate financial need.

THE DOFASCO INC. BURSARIES
Established in 1996 by Hamilton-based Dofasco Inc., one of Canada's and North America's leading steelmakers in support of students pursuing their post-secondary studies at McMaster.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE DUNDAS BURSARY
Established in 1996 from funds donated by The H.G Bertram Foundation for the purpose of providing students with an opportunity to achieve their educational goals.
Requirements: To provide assistance to McMaster students in financial need. Preference will be given to students from the Dundas area. Preference will be given to the recipient of the Dundas Scholarship.

THE MICHAEL EARL MEMORIAL BURSARY
Established in 1991 by family and friends in memory of Michael Earl. In 1997, the Graduating Class in Psychology further augmented this bursary as part of the McMaster Student Opportunity Fund initiative.
Requirements: This bursary is granted to a student enrolled in a Psychology program who demonstrates financial need.

THE CYRUS EATON FOUNDATION BURSARY
Established in 2000 by the Cyrus Eaton Foundation of Cleveland, Ohio, in support of McMaster students.
Requirements: To be granted to a student in any program who demonstrates financial need. Preference will be given to students from Nova Scotia.

THE GEORGE AND MARGARET EDRUPT BURSARY
Established in 1997 by Sandra Edrupt in honour of her parents George and Margaret Edrupt under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students who demonstrates financial need and are enrolled in either the DeGroote School of Business or any Computer Science program.

THE EVANS, PHILP BURSARIES
Established in 1996 by the partners of Evans, Philp in support of McMaster students.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE EILEEN GRAY FARLEY BURSARY
Established in 1998 by Eileen Gray Farley (Class of '43 and winner of the D.E. Thompson Scholarship) in grateful memory of Mr. D.E. Thompson who established the D.E. Thompson Scholarship of 1909.
Requirements: To be granted to students in any program who demonstrate financial need.

THE DONALD A. FEATHER BURSARY
Established in 2003 by family in honour of Donald A. Feather, B.A. (Class of '64) under the McMaster Student Opportunity Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student in any Faculty who demonstrates financial need.

THE EDITH E. FERRIE BURSARIES
Established in 1965 by the late Edith E. Ferrie. To be granted to students in any program who demonstrate financial need.

THE FIRST ONTARIO CREDIT UNION BURSARY
Established in 1989 by members in celebration of 50 years of service in the Hamilton area.
Requirements: Two or three bursaries to be granted to students in any program who, are from the Regional Municipality of Hamilton-Wentworth, City of Burlington or Town of Haldimand-Norfolk, who have demonstrated financial need.
Value: $700 each

THE FIRST STUDENT CANADA BURSARIES
Established in 1996 by Laidlaw Inc. a major provider of transportation services to school boards, municipalities and the general public throughout Canada and the United States, in support of students pursuing their post-secondary studies at McMaster.
Requirements: A variable number of bursaries to assist students in any program who demonstrate financial need.

THE W.H. FLEMING BURSARIES
Established in 2005 by bequest of W.H. Fleming.
Requirements: To be granted to graduate or undergraduate students in any program who demonstrate financial need.

THE MAUREEN M. FOLLIOTT BURSARY
Established in 2013 by Donald Folliott, B.A. (Class of '64) in memory of his wife Maureen M. Folliott.
Requirements: To be granted to students in any program who demonstrate financial need.

THE FORRESTER/GREGORY BURSARY
Established in 1997 by Shelley Forrester and Douglas Gregory in support of McMaster students.
Requirements: To be granted to a student in any program who demonstrates financial need.

THE JOHN C. FORSTER BURSARIES
Established by bequest of John Clifton Henry Forster of Windsor, Ontario.
Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE EMMA FOX BURSARIES
Established in 1961 by the Wallingford Hall Committee of which Emma Fox was treasurer from 1918 to 1958.
Requirements: To assist female students in any program.

THE WAYNE C. FOX BURSARIES
Established in 1999 by Wayne C. Fox in support of his belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries will be granted to students who demonstrate financial need and are enrolled in the Faculty of Humanities or the Faculty of Social Sciences or the Commerce program at the DeGroote School of Business.

THE ILA MARIA FRANKLIN MEMORIAL BURSARY
Established in 2024 in memory of Ila Maria Franklin by her family in recognition of the need to address the systemic circumstances that separated her from her Indigenous heritage.
Requirements: To be granted to undergraduate students enrolled in Indigenous Studies who demonstrate financial need.

THE GENERAL ELECTRIC CANADA INC. BURSARY
Established in 1997 by General Electric Canada Inc. under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE GWEN GEORGE UNDERGRADUATE BURSARIES
Established in 1997 in loving memory of Gwen George by her family and friends under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students in any undergraduate program who have demonstrated financial need. Preference to be given to students who have demonstrated leadership and service to McMaster University and/or the Hamilton-Wentworth, surrounding or world communities.

THE PETER GEORGE BURSARIES
Established in 2010 by colleagues, friends, and family of Peter George in recognition of his remarkable 45-year tenure at McMaster University, including 15 years as President and Vice-Chancellor.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE DR. GEORGE P. GILMOUR '21 MEMORIAL BURSARY
Established in 2006 by the families of Marnie Gilmour-Fisher (Class of '50) and Gwen Gilmour-Laurie (Class of '54) to honour their father's achievements as Chancellor of Mc-Master University from 1941 to 1950 and President and Vice Chancellor from 1950 to 1961.
Requirements: To be granted to students in any Faculty who demonstrate financial need.

THE GRAND & TOY BURSARIES
Established in 1996 by Grand & Toy in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE LELAND GREGORY BURSARIES
Established in 1997 by the bequest of Leland Andrew Gregory.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE JAMES R. (JAMIE) GREILICH MEMORIAL BURSARY
Established in 1991 in memory of Jamie Greilich (Class of '88) by the Operating Committee on the Disabled through its Awareness Week Activities.
Requirements: To be granted to a disabled student in any program who demonstrates financial need. Students should have registered with Student Accessibility Services.

THE GUARDIAN CAPITAL INC. BURSARIES
Established in 1996 by Guardian Capital in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE GWD FOUNDATION FOR KIDS BURSARY
Established in 2013 by the GWD Foundation for Kids.
Requirements: To be granted to students in any program who demonstrate financial need. Preference will be given to students from Halton Region.

THE DR. KENNETH AND JOAN HALL BURSARY
Established in 2018 by family and friends in honour of the awarding of an honorary degree from McMaster University to Dr. Kenneth Hall.
Requirements: To be granted to students enrolled in Level 2 or above in a Environment & Society or Environmental Sciences program who demonstrate financial need.

THE HAMILTON ALUMNI BRANCH BURSARIES
Established in 1997 by the McMaster Alumni Association, Hamilton Branch, in honour of the long-standing accomplishments of the Hamilton Alumni Branch.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students graduating from a high school in the Hamilton-Wentworth Region.

THE HAMILTON CITIZENS' MEMORIAL BURSARIES
Established in 1947 by the Hamilton Citizens' Committee for War Services.
Requirements: Proceeds to be used to assist undergraduate students who are residents of the Hamilton-Wentworth Region.

THE HAMILTON COMMUNITY FOUNDATION BURSARIES
Established in 1996-97 by Hamilton Community Foundation from the income of funds generously donated by citizens of this community, notably the late sisters Genevieve Chaney and Cordelia Ensign, and the late Mr. Ross F. Webb.
Requirements: A variable number of bursaries to be awarded to full-time students, enrolled in any year of any undergraduate program, who have graduated from publicly-funded secondary schools in Hamilton-Wentworth and who demonstrate financial need. The criteria established for these bursaries are consistent with the intention of the original donors.

THE HAMILTON PORCELAINS BURSARY
Established in 1997 by Hamilton Porcelains Limited in the belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE HAMILTON SPECTATOR BURSARY
Established in 1997 by The Hamilton Spectator in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a McMaster student enrolled in any program who demonstrates financial need.

THE HAMLIN FAMILY FOUNDATION BURSARY
Established in 2004 by The Hamlin Family Foundation under the McMaster Student Opportunity Trust Fund II initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE MARGARET HARGREAVES BURSARIES
Established in 1997 by Susan Hargreaves Walker in loving memory of her mother, Margaret Hargreaves.
Requirements: A variable number of bursaries to be granted to Social Sciences and Humanities students who demonstrate financial need. Preference will be given to mature, female students.

THE MEL AND MARILYN HAWKRIGG PART-TIME STUDENT BURSARIES
Established in 2007 by the McMaster Association of Part-Time Students in honour of Dr. Melvin and Mrs. Marilyn Hawkrigg to mark his retirement as Chancellor of the University (1998-2007).
Requirements: To be granted to students currently enrolled, on a part-time

basis, in a degree, diploma or certificate program who demonstrate financial need.

THE DAMIAN MIGUEL HEADLEY BURSARY
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '89) under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Damian Miguel Headley Award.

THE ISABELLA ROSE HEAP CHAMPAGNE BURSARY
Established in 2023 by Sahar Alipour, MSCAP (Class of '10) and Kyle Plumadore, B.Eng. (Class of '12).
Requirements: To be granted to undergraduate students in any program who demonstrate financial need. Preference will be given to students from Oxford County, Ontario.

THE MIKE AND MURIEL HEDDEN BURSARIES
Established in 1996 by Muriel Hedden in memory of her husband, D.M. (Mike) Hedden, former Vice-President (Administration), who faithfully served McMaster for over 25 years.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE RUDY HEINZL BURSARY
Established in 1996 by family, friends and colleagues upon his retirement as Dean of Student Affairs in recognition of 32 years of dedicated service to students and to the McMaster University Community.
Requirements: To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Rudy Heinzl Award.

THE HELPING HANDS BURSARY
Established in 2022 by a generous donor.
Requirements: To be granted to undergraduate students in any program who are enrolled in Level 2 or higher and demonstrate financial need.

THE HENDERSON FAMILY BURSARY
Established in 2016 by Trevor Henderson, B.A. (Class of '92 & '93), and Meredith (Henderson) Rainey, B.A.Hon. (Class of '95), in memory of their parents Edward and Marilyn.
Requirements: To be awarded to students enrolled in the Faculty of Humanities or the Faculty of Social Sciences who demonstrate financial need.

THE EDWIN W. HILBORN BURSARY
Established in 1965 by bequest of Edwin W. Hilborn.
Requirements: To be granted to a student in any program.

THE MARY A. HILL BURSARY
Established in 1976 by bequest of Mary A. Hill.
Requirements: To be granted to a female student in any program who demonstrates financial need. Preference to be given to one who has graduated from a secondary school in Hamilton.

THE LLOYD ANDREW HILLGARTNER BURSARIES
Established in 1997 by bequest of Lloyd Andrew Hillgartner.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE JANITZA HITCHEN BURSARY
Established in 2006 by Alan Hitchen in memory of his wife, Janitza.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE WILLIAM NEIL HOTRUM BURSARIES
Established in 2004 by Mr. William Neil Hotrum under the McMaster Student Opportunity Trust Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to students who demonstrate financial need. Preference will be given to (i) students from the Hamilton area and (ii) students from a single parent family.

THE INGLIS BURSARIES
Established in 1996 by Paul F. Inglis of Mississauga.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Commerce or Engineering Management who demonstrate financial need. Preference to be given to students enrolled in Engineering Management.

THE INTERNATIONAL SCIENCE AND ENGINEERING FAIR 1995 BURSARY
Established in 2005 by the Board of the International Science and Engineering Fair 1995 under the Ontario Trust for Student Support initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in Level 1 in the Faculties of Science or Engineering who demonstrate financial need. Preference will be given to students who have participated in local science fairs.

THE INTER-RESIDENCE COUNCIL BURSARY
Established in 1996 by the Inter-Residence Council in support of McMaster students.
Requirements: To be granted to a student in any program who demonstrates financial need.

THE MUNICIPAL CHAPTER OF HAMILTON IODE LEGACY BURSARY
Established in 2012 by IODE Hamilton in honour of their national women's charitable organization established in 1900 dedicated to improving the quality of life for children, youth and those in need through educational, social service and citizenship programs.
Requirements: To be granted to a student or students enrolled in Level 3 of any program who demonstrate financial need. Preference will be given to students who have graduated from a Hamilton secondary school.

THE IVEY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to students who demonstrate financial need.

THE IVISON FAMILY BURSARY FUND
Established in 1998 by Don and Betty Ivison in support of McMaster students under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering, the Faculty of Business or the Schools of Medicine and Rehabilitation Science in the Faculty of Health Sciences who demonstrate financial need.

THE STUART AND MARJORIE IVISON BURSARIES
Established in 1997 by Donald Ivison (Class of '53) and Betty Ivison (Class of '52) in honour of his parents Stuart and Marjorie Ivison (Class of '28 (Arts)).
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to recipients of The Stuart and Marjorie Ivison Award.

THE CLIFFORD JACKSON MEMORIAL BURSARIES
Established in 1997 by family and friends in memory of Clifford Jackson. A variable number of bursaries to be granted annually to students in any program who demonstrate financial need.
Requirements: Preference will be given to children and grandchildren of employees and retirees of The Hamilton-Wentworth Regional Police.

THE JADDCO ANDERSON BURSARY
Established in 1997 by Jaddco Anderson Limited in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE DHANNA SINGH JAGPAL MEMORIAL BURSARY
Established in 2014 in loving memory of Dhanna Singh Jagpal.
Requirements: To be awarded to a student who is the first in their family to attend university, enrolled in Level 2 and above, and demonstrates financial need.

THE JONES-TURNER BURSARY
Established in 1997 by Sheila Lang (Class of '53) in honour of her family's long-standing association with the University.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE DR. RONALD V. JOYCE BURSARIES

Established in 2003 by Dr. Ronald V. Joyce (Class of '98) to support students at McMaster.

Requirements: A variable number of bursaries to be granted to undergraduate students in any program who demonstrate financial need.

THE JUNIOR LEAGUE OF HAMILTON/BURLINGTON, INC. BURSARY

Established in 1997 by the Junior League of Hamilton-Burlington, Inc. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Junior League of Hamilton/Burlington, Inc. Award.

THE KHALED HASSANEIN AND HODA KAMEL BURSARY

Established in 2023 by Khaled Hassanein and Hoda Kamel.

Requirements: To be granted to undergraduate students who identify as racialized, Black, and/or Indigenous and demonstrate financial need. Preference will be given to students in the Faculty of Business or Engineering.

THE MURIEL MCBRIEN KAUFFMAN BURSARIES

Established in 1997 by the Muriel McBrien Kauffman Foundation in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries to be granted annually to students enrolled in any program who demonstrate financial need.

THE VIENO MARIA KAUHANEN MEMORIAL BURSARIES

Established in 2010 by Irene Eleonor (Kauhanen) Townsend, B.A. (Class of '57) in memory of her mother, Vieno Maria Kauhanen.

Requirements: To be granted to female students in their first year in the Faculties of Humanities or Social Sciences who demonstrate financial need. Preference to be given to students who have demonstrated active involvement in their community.

THE ROBERT ALAN KENNEDY BURSARIES

Established in 1997 by Robert Alan Kennedy under the McMaster Student Opportunity Fund initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE KEW BURSARIES

Established in memory of Lloyd Daniel Kew and Delores Shirley Kew.

Requirements: A variable number of bursaries to be granted to students who demonstrate financial need.

THE MARY KEYES MEMORIAL BURSARY

Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyes, long-time teacher, coach, administrator and mentor at McMaster University.

Requirements: To be granted to a student who demonstrates financial need with a minimum 8.0 Grade Point Average in any program. Preference to be given to students who show leadership and participation in McMaster student life.

THE KHAKI UNIVERSITY AND YOUNG MEN'S CHRISTIAN ASSOCIATION MEMORIAL BURSARIES

Established in 1921 by the Khaki University of Canada and the Young Men's Christian Association.

Requirements: To assist students in any program who demonstrate financial need.

THE DAVID KINSLEY MEMORIAL BURSARY

Established in 2000 by family, friends, colleagues and former students of David Kinsley, Professor of Religious Studies at McMaster University from 1969 to 2000.

Requirements: To be granted to part-time students who have completed at least Level 1 of an undergraduate program in either the Faculty of Social Sciences or the Faculty of Humanities. Preference to be given to students who have attained a minimum Grade Point Average of 7.0.

THE KIWANIS CLUB OF HAMILTON EAST BURSARY

Established in 1997 by the Kiwanis Club of Hamilton East under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to members and former members of the Hamilton East Kiwanis Boys' and Girls' Club.

THE KNIGHT FAMILY BURSARY

Established in 2017 as a tribute to the generous spirit of Dorothy M.L. and Peter S. Knight who, despite never having the opportunity to benefit from higher education, did everything they could to support others in their educational pursuits.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE RICHARD KONRAD BURSARIES

Established in 1997 by Richard Konrad under the McMaster Student Opportunity Fund initiative in the belief that all students should have the opportunity to achieve their academic goals.

Requirements: To be granted to undergraduate students enrolled in any program who are registered with Student Accessibility Services and demonstrate financial need.

THE MIRIAM & JAMES KRAMER BURSARY

Established in 2017 by Miriam and James Kramer to assist students in continuing their studies.

Requirements: To be awarded to undergraduate students enrolled in any program who demonstrate financial need.

THE RAYMOND C. LABARGE MEMORIAL BURSARIES

Established in 1973 by friends and associates in memory of Raymond C. Labarge (Class of '36) of Ottawa.

Requirements: A variable number of bursaries to be granted to students enrolled in Level 3 or 4 of any program who demonstrate financial need. A minimum Grade Point Average of 8.0 is required.

THE LANCASTER GROUP INC. BURSARY

Established in 1997 under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE LANDMARK CONSULTING GROUP BURSARIES

Established in 1996 by The LANDMARK Consulting Group Inc. in support of its belief that all students should have the opportunity to pursue their educational aspirations.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE LANG FAMILY BURSARIES

Established in 1996 by H. Murray Lang (Class of '44) of Etobicoke, Ontario in honour of his family's connection to McMaster.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE JAMES R.A. LANGS STUDENT EXCHANGE PROGRAM BURSARIES

Established in 1996 by family in memory of James R.A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community.

Requirements: A variable number of bursaries to be granted to students enrolled in a program in Humanities who demonstrate financial need and who are participating in a formal McMaster Exchange Program.

THE GARY LAUTENS MEMORIAL BURSARIES

Established in 1996 by Mrs. Jackie Lautens, the Toronto Star, family and friends, in memory of Gary Lautens (Class of '50), columnist and editor of the Toronto Star (1962-92), the Hamilton Spectator (1950-62) and the McMaster Silhouette (1948-50), remembered as a journalist with wit and insight.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Gary Lautens Memorial Scholarship.

THE LEFLAR FOUNDATION BURSARY
Established in 1997 by The Leflar Foundation in support of its belief that all students should be able to pursue their educational goals.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students who are from the Owen Sound area.

THE BERTRAM LEGGAT MEMORIAL BURSARIES
Established in 1996 by his family and friends in memory of Bertram Leggat, Q.C., as a tribute to his dedication to the community, his esteem in the legal profession and his devotion to his family.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need.

THE LINCLUDEN MANAGEMENT BURSARIES
Established in 1997 by Lincluden Management Ltd. under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE RUSSELL AND ELIZABETH LINDLEY BURSARIES
Established in 2006 in memory of Russell and Elizabeth Lindley.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE LIONS CLUB OF ANCASTER RAY JOHNSON MEMORIAL BURSARY
Established in 1997 by the Ancaster Lions Club under the McMaster Student Opportunity Fund initiative and to exemplify the Lions international objective to take an active interest in the civic, cultural, social and moral welfare of the community.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to students who currently reside in the town of Ancaster.

THE SADIE LUDLOW BURSARIES
Established in 1996 by family and friends of Sadie Ludlow, former McMaster employee from 1957 to 1977, and an outstanding athlete who loved sports.
Requirements: A variable number of bursaries to be granted to students who have demonstrated financial need and involvement in either McMaster intervarsity football or intervarsity women's tennis.

THE LYNDEN LIONS CLUB BURSARY
Established in 1997 by the Lynden Lions Club under the McMaster Student Opportunity Fund initiative to exemplify the Lions international objective to take an active interest in the civic, cultural, social and moral welfare of the community.
Requirements: To be granted to a student enrolled in any program who has displayed commendable service to the community-at large. Preference to be given to students who currently reside in the Lynden or Troy area.

THE MAC10 YOUNG ALUMNI BURSARY
Established in 2014 through donations by McMaster's young alumni to honour their time at McMaster and support future generations of students.
Requirements: A variable number of bursaries to be granted to students enrolled in any program, Level 2 or above who demonstrate financial need.

THE ALEC JOHN ROYSTON MACMILLAN MEMORIAL BURSARY
Established in 1996 by his family in memory of Alec John Royston MacMillan under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students in any program who demonstrate financial need. Preference will be given to the recipients of The Alec John Royston MacMillan Memorial Awards.

THE PAUL R. MACPHERSON BURSARY
Established in 1998 by Paul R. MacPherson (Class of '57) and augmented in 2003 under the McMaster Student Opportunity Fund II initiative in support of his belief that all students should be able to pursue their educational goals.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to (i) students from Bracebridge and Muskoka Lakes Secondary School and (ii) Indigenous students from a First Nations community in Ontario.

THE MAKSTEEL BURSARY
Established in 1997 by Maksteel Inc. in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE MALLOCH FOUNDATION BURSARIES
Established in 1996 by the Malloch Foundation, Hamilton, in the belief that all students should be able to achieve their educational goals.
Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference to be given to students from the Hamilton area.

THE MANULIFE FINANCIAL BURSARIES
Established in 1997 by Manulife Financial under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Health Sciences.

THE PAUL MARANGER BURSARY
Established in 2016 by Paul Maranger, B.Com. (Class of '89), MBA, to inspire students to passionately pursue their goals and create a future that is uniquely theirs.
Requirements: To be awarded to students enrolled in any program who demonstrate financial need.

THE KAREN M. MASON AND ROSS H. MASON BURSARY
Established in 2009 by Karen and Ross Mason, B.A. (Class of '59).
Requirements: To be granted to students in any program who demonstrate outstanding athletic participation and financial need.

THE RONALD E. MATERICK/TISHMAN BURSARY
Established in 1996 by Ronald E. Materick (Class of '70).
Requirements: To be granted to an undergraduate student who demonstrates financial need.

THE DOROTHY DEAN MATHESON MEMORIAL BURSARY
Established in 2004 by bequest of Kenneth Matheson, in memory of Dorothy Dean Matheson (Class of '84).
Requirements: To be granted to female part-time students who demonstrate financial need.

THE MATTHEWS HALL BURSARY
Established in 1999 by past residents of Halcyon House under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to a student in residence at Matthews Hall.

THE LINDA MATTHEWS BURSARIES
Established in 1996 by Linda Matthews (Class of '69).
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to female students.

THE NEIL D. MCARTHUR BURSARIES
Established in 1997 by the Anne and Neil McArthur Foundation in memory of Mrs. McArthur's parents, Joseph and Josephine Hryniszak.
Requirements: To be granted to students in any program who demonstrate financial need. Preference to be given to students enrolled in either the Faculty of Science or the Faculty of Engineering.

THE KATHLEEN AND DENNIS MCCALLA BURSARIES
Established in 2003 by Kathleen and Dennis McCalla, former Dean, Faculty of Science and later Vice-President, Faculty of Health Sciences at McMaster University.
Requirements: To be granted to students who demonstrate financial need and are enrolled in a program in Science, Humanities, or Arts and Science. Preference will be given to students with a minimum admission average of

80% and who are from Grey or Bruce Counties.
Value: Minimum $1,000

THE DR. BRIAN MCCANN MEMORIAL BURSARY
Established in 2004 by friends, colleagues and former students in memory of Dr. Brian McCann.
Requirements: To be granted to a student in the School of Earth, Environment & Society who demonstrates financial need and is enrolled in a course offered by the School with an additional cost for a field component.

THE ANDREW MCFARLANE BURSARIES
Established in 1988 by bequest of Andrew McFarlane of Hamilton.
Requirements: To be granted to a student or students who are in good standing and have demonstrated financial need.

THE MCLAY BURSARY
Established in 1997 by David and Jean McLay under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student in any program who demonstrates financial need and who is participating in one of McMaster's formal exchange programs. Preference to be given to students who have been active in international clubs and associations.

THE MCLEAN FAMILY EXCHANGE BURSARIES
Established in 1997 by the McLean Family under the McMaster Student Opportunity Fund initiative, in gratitude for the learning and relationship enrichment which they obtained first at McMaster University, and subsequently through international travel.
Requirements: To be granted to students who wish to participate in exchange programs, who demonstrate financial need and who are enrolled in Level 2 or 3 of a program. Preference to be given to international exchanges, for students from the Faculty of Engineering or the Faculty of Humanities with a GPA above 7.0 at the most recent review and who have shown leadership and involvement in university and/or community activities.

THE MCMASTER ALUMNAE CENTENNIAL BURSARY
Established in 1988 by the McMaster Women's Alumnae, Hamilton Branch.
Requirements: To be granted to a student in his or her graduating year who is a Canadian citizen or permanent resident and who exhibits financial need. Preference will be given to a single parent.

THE MCMASTER ALUMNI ASSOCIATION BURSARY
Established in 1997 by the McMaster Alumni Association in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need.

THE MCMASTER ALUMNI CLASS BURSARY FUND
Established in 2016 by McMaster Alumni.
Requirements: A variable number of bursaries to be granted to students enrolled in any program and who demonstrate financial need.

THE MCMASTER ASSOCIATION OF PART-TIME STUDENTS BURSARIES
Established in 1988 in celebration of McMaster's Centennial to assist students currently enrolled in a degree or certificate program who, without such assistance, would be unable to continue their studies.
Requirements: Consideration may also be given to students who would not otherwise enrol without such assistance.

THE MCMASTER ASSOCIATION OF PART-TIME STUDENTS 20TH ANNIVERSARY BURSARIES
Established in 1999 by the McMaster Association of Part-Time students to commemorate its 20th anniversary. The bursary was further augmented by friends and colleagues of Helen Barton, MAPS' first President and founding member, in recognition of her 27 years of service and retirement as Senior Associate Registrar at McMaster.
Requirements: To be granted to students currently enrolled, on a part-time basis, in a degree program, who demonstrate financial need.

THE MCMASTER ASSOCIATION OF PART-TIME STUDENTS 25TH ANNIVERSARY BURSARIES
Established in 2004 by the McMaster Association of Part-Time Students (MAPS) to commemorate its silver anniversary.
Requirements: To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need.

THE MCMASTER ASSOCIATION OF PART-TIME STUDENTS 30TH ANNIVERSARY BURSARY
Established in 2008 by the McMaster Association of Part-time Students (MAPS) to commemorate 30 years of MAPS Board leadership and growth along with the 30th Anniversary of MAPS.
Requirements: To be granted to students currently enrolled on a part-time basis who demonstrate financial need. Preference to be given to students in a diploma or certificate program.

THE MCMASTER ATHLETIC COUNCIL (MAC) BURSARY
Established in 1997 by the Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need and who is a member of any inter-university team at McMaster. Preference will be given to the recipient of the McMaster Athletic Council Award.

THE MCMASTER ISMAILI ALUMNI BURSARY
Established in 2020 by members and alumni of the McMaster Ismaili community.
Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need.

THE MCMASTER MEN'S ATHLETICS BURSARY
Established by past and present student-athletes and friends of McMaster Interuniversity Athletics.
Requirements: To assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in men's interuniversity athletics.

THE MCMASTER MEN'S BASKETBALL BURSARY
Established by past and present student-athletes and friends of McMaster Men's Basketball.
Requirements: To assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in the sport of men's basketball.

THE MCMASTER RCAF MEMORIAL BURSARY FUND
Established in 2021 through the estate of a generous donor in memory of those members of the Royal Canadian Air Force, both air crew and ground crew, who gave their lives in World War II (1939-1945).
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE MCMASTER UNDERGRADUATE BURSARIES
Established in 1996 by McMaster University.
Requirements: To be granted to students in any undergraduate degree program who demonstrate financial need.

THE MCMASTER UNIVERSITY'S 125TH ANNIVERSARY BURSARY
Established in 2012 in honour of McMaster University's 125th Anniversary.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need. Preference given to students graduating from high schools in the Hamilton-Wentworth region.

THE MCNAMARA FAMILY BURSARY
Established in 2022 by Mr. Daniel McNamara (Class of '76), Mrs. Shannon McNamara and their family in support of their belief that an education in Humanities and the Social Sciences has the potential to create the community leaders of tomorrow.
Requirements: To be granted to undergraduate students enrolled in an

Honours Social Science or Humanities program who demonstrate financial need. Preference will be given to students enrolled in an Honours Sociology program.

THE PACE CREDIT UNION BURSARY

Established in 1997 by McMaster Savings and Credit Union Limited (presently known as PACE Credit Union) in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted annually to McMaster students enrolled in any program who demonstrate financial need.

THE MCMASTER SQUASH AND GOLF BURSARY

Established by past and present student-athletes and friends of McMaster Golf and Squash.

Requirements: To assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of golf or squash.

THE MCMASTER STUDENT OPPORTUNITY FUND BURSARIES

Established in 1996 by McMaster University from general donations to the University bursary program and matching funding provided through the Ontario Student Opportunity Trust Fund initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE MCMASTER STUDENT OPPORTUNITY FUND II BURSARIES

Established in 2003 by McMaster University from general donations to the University bursary program and matching funding provided through the Ontario Student Opportunity Trust Fund II initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE MCMASTER STUDENTS' UNION BURSARIES

Established in 1982 by the McMaster Students' Union.

Requirements: To assist those undergraduate MSU members who demonstrate financial need.

THE MCMASTER UNIVERSITY FACULTY ASSOCIATION BURSARY

Established in 1997 by the McMaster Faculty Association under the McMaster Student Opportunity Fund initiative based on the assumption that all students should have access to educational opportunities.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE MCMASTER WOMEN'S BASKETBALL BURSARY

Established by past and present student-athletes and friends of McMaster Women's Basketball.

Requirements: To assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women's basketball.

THE MCMASTER WOMEN'S VOLLEYBALL BURSARY

Established by past and present student-athletes and friends of McMaster Women's Volleyball.

Requirements: To assist a student in any academic program who demonstrates financial need and who demonstrates outstanding athletic participation in the sport of women's volleyball.

THE MCQUIGGE FAMILY BURSARY

Established in 2016 by Karen McQuigge (Class of '90) and Nancy McQuigge (Class of '93) to support students to pursue their academic and professional goals.

Requirements: To be granted to a student enrolled in a History or Nursing program who demonstrates financial need.

THE A.J. MELLONI MEMORIAL FUND

Established in 1999.

Requirements: To be granted to a student in any program.

THE MELOCHE MONNEX INC. BURSARY

Established in 1997 by Meloche Monnex Inc. under the McMaster Student Opportunity Fund initiative in the belief that students should have the opportunity to pursue their educational goals.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE MÉTIS NATION OF ONTARIO BURSARY

Established in 2014 by the Métis Nation of Ontario to encourage and support undergraduate students in any program.

Requirements: To be awarded to Métis students who demonstrate financial need.

THE EDNA C. AND FRANK CHARLES MILLER BURSARY

Established in 1997 by Frank C. Miller in memory of his parents, Edna C. and Frank Charles Miller, in support of McMaster students.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE DR. F. A. MIRZA BURSARY

Established in 1997 under the McMaster Student Opportunity Fund initiative.

Requirements: Preference will be given, if financial need is demonstrated, to the recipient of The Dr. F.A. Mirza Scholarship.

THE SUSAN MOELLERS BURSARY

Established in 2011 by Susan Moellers, M.B.A. (Class of '82).

Requirements: To be granted to undergraduate students in any program who demonstrate financial need.

THE MOORE INDIGENOUS STUDENT BURSARY

Established in 2024 by Joy and Greg Moore (Class of 1974).

Requirements: To be granted to Indigenous students enrolled in any program who demonstrate financial need.

THE JAMES C. MOORE MEMORIAL BURSARY

Established in 1989 by family and friends in memory of James C. Moore.

Requirements: To be granted to a student in Humanities or Social Sciences who demonstrates financial need and involvement in student government.

THE WALLACE R. MORRIS BURSARY FUND

Established in 1997 by bequest of Wallace Ronald Morris.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE WILLIAM MORRIS FAMILY BURSARIES

Established in 2010 by family and friends in honour of William Morris, B.A. (Class of '56) to commemorate his 50th anniversary as a respected member of the Law Society of Upper Canada and to honour his years of service to the City of Hamilton.

Requirements: To be granted to students who demonstrate financial need. Preference will be given to students from the Hamilton area.

THE MARLIE MORRISON & PAUL CONNELLY BURSARY

Established in 2019 by Marlie Morrison, B.Com. (Class of '88) and Paul Connelly, B.P.E (Class of '85), to inspire students to follow their dreams and to know that others are cheering for them to succeed.

Requirements: To be granted to students enrolled in a Commerce or Kinesiology program who demonstrate financial need.

THE JOHN DOUGLAS MOYER BURSARY

Established in 1986 by bequest of John Douglas Moyer.

Requirements: To assist needy students.

THE MULDOON FAMILY BURSARY

Established in 2016 by Greg (Class of 2003) and Erin (Class of 2003) Muldoon.

Requirements: To be awarded to a student who has completed Level 1 and is enrolled in either the Faculty of Business or the Faculty of Science and who demonstrates financial need.

THE HELEN K. MUSSALLEM BURSARY

Established in 1996 by Dr. Helen K. Mussallem (C.C., B.N., Ed.D., LL.D (Queen's), D.Sc., D.St.J., F.R.C.N., M.R.S.H.) under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Helen K. Mussallem Award.

THE MARJORIE AND BILL NELSON BURSARY

Established in 1997 by Marjorie and Bill Nelson under the McMaster Student Opportunity Fund initiative in support of the Hamilton community, and in support of the efforts of McMaster University to ensure that all students have the opportunity to achieve their educational goals.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE NELSON STEEL BURSARY

Established in 1997 by Nelson Steel in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to students in any program who demonstrate financial need.

THE NHLA-NY RANGER ALUMNI ASSOCIATIONS (PAT HICKEY AND HARRY HOWELL) BURSARY

Established in 1999 by The NHL Players' Association Alumni.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in an intervarsity sport.

THE LILLIAN AND LEROY PAGE BURSARIES

Established in 1997 by the Lillian and Leroy Page Foundation to enable students to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students from the Hamilton-Wentworth Region who demonstrate financial need. Preference to be given to students in the Faculty of Science.

THE THOMAS ALEXANDER PAIN BURSARY

Established by past and present student-athletes and friends of McMaster Football.

Requirements: To assist students in any academic program who demonstrate financial need and who demonstrate outstanding participation in the sport of football.

THE PARNOJA FAMILY BURSARY

Established in 2009 by Erik Parnoja in support of his belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who have achieved a minimum Grade Point Average of 7.0 and demonstrate financial need.

THE PART-TIME STUDENTS BURSARIES

Established in 2019 by McMaster University.

Requirements: To be granted to part-time students enrolled in any undergraduate degree program who demonstrate financial need.

THE DR. JOHN H. PASSMORE BURSARY

Established in 2004 by Dr. John H. Passmore (Class of '33) under the McMaster Student Opportunity Trust Fund II initiative.

Requirements: To be granted to students enrolled in the Faculty of Science or the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students who are studying Environmental Studies.

THE JULIE PATEL INDIGENOUS & RACIALIZED BURSARY

Established in 2021 by The Julie Patel Foundation (est. 2018 by the family's children and grandchildren). In loving memory of Julie and Ahmed, born and raised in apartheid South Africa, who did not have the opportunity to go to university but valued education and believed education was the path to helping those less fortunate successfully navigate the journey to a better life for themselves and their families.

Requirements: To be granted to undergraduate students enrolled in any program who identify as racialized or Indigenous and demonstrate financial need.

THE PAYMYTUITION BURSARY

Established in 2024 by PayMyTuition.

Requirements: To be granted to undergraduate students enrolled in any program who self-identify as a member of an equity-deserving group and demonstrate financial need.

THE PETERS FAMILY BURSARY

Established in 2016 by James (Class of '89) and Christine Peters (Class of '02) to support students in achieving their educational goals.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE PETRO-CANADA BURSARIES

Established in 1996 by Petro-Canada, the largest Canadian-owned oil and gas company and one of the country's leading refiners and marketers of petroleum products, in support of its belief that all students should have the opportunity to pursue their educational aspirations.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE ROBERT AND RUTH PHILIP STUDENT BURSARIES

Established in 1996 by Robert and Ruth Philip of Hamilton, Ontario.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE PIONEER ENERGY LP BURSARY

Established in 1997 by the Pioneer Group of Companies Inc. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Pioneer Group Inc. Award.

THE GORDON AND JANE PRICE BURSARY

Established in 1997 by their sons in honour of Gordon and Jane Price under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Gordon and Jane Price Award.

THE LES PRINCE BURSARIES

Established in 1996 in memory of Leslie A. Prince, dedicated teacher, coach and administrator at McMaster University remembered for his outstanding leadership and service in Athletics and Recreation, Student Life as well as the community-at-large.

Requirements: To be granted to student athletes who demonstrate financial need. Preference to be given to students who demonstrate qualities of leadership and service to the community.

THE PROCOR BURSARIES

Established in 1997 by Procor Ltd. in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to students enrolled in Engineering or Commerce who demonstrate financial need and undertake service to McMaster University and the community-at-large.

THE OLENA PYNDYK BURSARY

Established in 2021 by Donna Bovolaneas, B.A. (Class of '68), in memory of her mother, Olena Pyndyk, and their shared belief in the transformative power of education.

Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need. Preference will be given to a student who is the first generation in their family to attend post-secondary studies.

THE QUEEN ELIZABETH II INTERNATIONAL TRAVEL BURSARY

Established in 2015 by Arnold Beale, B.Sc. (Class of '68), B.A. (Class of '83) in honour of Her Majesty Queen Elizabeth II, who became the longest-reigning British monarch on September 9, 2015.

Requirements: To be granted to an undergraduate student participating in an international exchange program who demonstrates financial need. Preference will be given to a student travelling to a Commonwealth country.

THE GORDON RAYMOND BURSARY
Established in 1996 by the McMaster Association of Part-time Students and other friends and colleagues under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to part-time students in any program who demonstrate financial need. Preference will be given to the recipient of The Gordon Raymond Award.

THE RBC FINANCIAL GROUP BURSARY
Established in 1997 by the Royal Bank of Canada in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to McMaster students who demonstrate financial need.

THE REDPATH SUGARS BURSARY
Established in 1997 by Redpath Sugars, Division of Redpath Industries Limited, in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE REGIONAL MUNICIPALITY OF HAMILTON-WENTWORTH BURSARIES
Established in 1997 by the Regional Municipality of Hamilton-Wentworth in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries will be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students who permanently reside in the Hamilton-Wentworth Region.

THE REISE FAMILY BURSARIES
Established in 2009 by Leo Reise, B. A. (Class of '72) and Geraldine Reise.
Requirements: To be granted to students in any program who demonstrate financial need.

THE RETIRED TEACHERS OF ONTARIO (RTO/ERO), DISTRICT 13 BURSARY IN HEALTH, AGING AND SOCIETY
Established in 2017 by the Retired Teachers of Ontario, District 13, Hamilton-Wentworth, Haldimand in honour of the Provincial RTO/ERO's 50th Anniversary.
Requirements To be awarded to a student studying in the Department of Health, Aging and Society who demonstrates financial need.

THE RICOH CANADA INC. BURSARIES
Established in 1996 by Ricoh Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Business or the Faculty of Engineering.

THE JAMES AND ELIZABETH ROBERTS BURSARIES
Established in 1957 by R.H. Roberts in memory of his parents.
Requirements: To assist any male student of good academic standing.

THE HUGH AND ALICE ROBERTSON MEMORIAL BURSARIES
Established in 1997 by R. G. Hamish Robertson in honour of his parents Hugh and Alice Robertson under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE ROBERTSON-YATES CORPORATION BURSARIES
Established in 1996 by the Robertson-Yates Corporation of Hamilton in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Business or Engineering who demonstrate financial need.

THE ROLLS' FAMILY BURSARY
Established in 2016 by the Rolls family.
Requirements: To be granted to students enrolled in Level 2 or above, in a program in the Department of English and/or the School of Nursing, who demonstrate financial need.

THE RANDOLPH E. ROSS MEMORIAL BURSARY
Established in 1998 by family and friends in memory of Dr. Randolph E. Ross, who was a dedicated and cherished faculty member for over 25 years at McMaster University.
Requirements: To be granted to a student enrolled in the School of Business or the Engineering and Management Program. Preference will be given to a McMaster student participating in an international exchange program.

THE HELEN LENORE ROSZELL MEMORIAL BURSARIES
Established in 2000 by bequest of Helen Lenore Roszell.
Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need.

THE ROTARY CLUB OF ANCASTER BURSARY
Established in 1997 by the Rotary Club of Ancaster under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Ancaster Award.

THE ROTARY CLUB OF BURLINGTON CENTRAL BURSARY
Established in 1997 by the Rotary Club of Burlington Central under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students who are enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Burlington Central Award.

THE ROTARY CLUBS OF BURLINGTON CENTRAL AND BURLINGTON LAKESHORE BURSARY FOR INDIGENOUS STUDENTS
Established in 2022 by the Rotary Club of Burlington Lakeshore.
Requirements: To be granted to undergraduate students enrolled in any program who identify as Indigenous students and demonstrate financial need. Preference will be given to a student from Burlington.

THE ROTARY CLUB OF HAMILTON BURSARY
Established in 1997 by the Rotary Club of Hamilton under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Hamilton Award.

THE ROTARY CLUB OF HAMILTON A.M. BURSARY
Established in 1997 by The Rotary Club of Hamilton A.M. under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Rotary Club of Hamilton A.M. Award.

THE ROYAL & SUNALLIANCE BURSARIES
Established in 1997 by Royal & SunAlliance Canada in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need.

THE ELEANOR AND WILFRED RYDER BURSARY
Established in 1999 by Marvin Ryder in honour of Eleanor and Wilfred Ryder.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students from Oxford County or Norfolk County.

THE HELEN SANSONE BURSARIES
Established in 1996 by bequest of Helen Sansone of Hamilton, Ontario.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE SATURN OF HAMILTON EAST BURSARY
Established in 1996 by SATURN of Hamilton East under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The

Saturn of Hamilton East Achievement Award.

THE GINO AND ROBERTA SCAPILLATI BURSARY

Established in 2004 by Gino Scapillati (Class of '81) and Roberta Scapillati (Class of '79) under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to a student enrolled in the Faculty of Business or Faculty of Social Sciences who demonstrates financial need.

THE ROBERT H. AND LILLIAN SCULLION BURSARY

Established in 2016 in memory of Robert Hugh (Class of '51) and Lillian Scullion by Roy and Anne Mason.

Requirements: To be granted to a student who demonstrates financial need. Preference to be given to a student active in community service.

THE MYKOLA SEMENIUK BURSARIES

Established in 1991 by bequest of Mykola Semeniuk.

Requirements: To assist students who demonstrate financial need and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.

THE LOUIS SR. AND ROSITA SERAFINI BURSARY

Established in 2004 by Louis Jr. and Lori Ann Serafini, graduates of McMaster University, in honour of Louis Sr. and Rosita Serafini under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE ROSA MAUDE SHEARDOWN BURSARY

Established in 1997 by Gordon R. Baker, Q. C. in honour of his foster mother, Rosa Maude Sheardown, and her belief in the importance of education and providing a helping hand to others.

Requirements: To be granted to students in any Faculty who demonstrate financial need. Preference to be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King Township.

THE GERALD AND VERNA SIMPSON BURSARY

Established in 1997 by Paul R. Simpson, B.Sc. (Class of 1956) and James R. Simpson, B.A (Class of 1954) in memory of their parents, Gerald & Verna Simpson,under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to undergraduate students enrolled in a Physics program who demonstrate financial need. Preference will be given to the recipient of The Gerald and Verna Simpson Scholarship.

THE MEENA AND NARESH SINHA BURSARY

Established in 1996 by Meena and Narish Sinha under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Meena and Narish Sinha Award.

THE ALBERT EDWARD SMITH AND JEAN MCTAVISH SMITH BURSARY

Established in 1998 by Mrs. Jean McTavish Smith (Class of '31), in memory of Albert Edward Smith (Class of '29) under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student in any program who demonstrates financial need.

THE SAM SMURLICK BURSARY

Established in 1978 by the Smurlick family in memory of Sam Smurlick (Class of '35).

Requirements: To be granted to a student in any program who demonstrates financial need.

THE LORNA AND DAVID SOMERS BURSARY

Established in 1997 by Lorna Somers (Class of '81) and David Somers (Class of '88) under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Lorna and David Somers Award.

THE SOMERVILLE BURSARY

Established in 1997 under the McMaster Student Opportunity Fund initiative.

Requirements: Preference will be given, if financial need is demonstrated, to a recipient of The Somerville Scholarships.

THE DENNIS SOUDER BURSARY

Established in 2009 by Dennis Souder, B.A. (Class of '70).

Requirements: To be granted to a student in any program who demonstrates financial need. Preference will be given to a student from Cambridge, ON.

THE SOUDER FAMILY BURSARY

Established in 2013 by the Souder Family.

Requirements: To be granted to a student in any program who demonstrates financial need. Preference will be given to a student from Cambridge, ON.

THE LILLIAN R. STEGNE MEMORIAL BURSARIES

Established in 1990 in memory of Lillian Rose Stegne (Class of '62) by family, friends and colleagues.

Requirements: To be granted to students enrolled in any program who are registered with SAS and who demonstrate financial need.

THE ADAM SUDAR PRINTMAKING BURSARY

Established in 1997 in memory of Adam Sudar by his friends under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Adam Sudar Printmaking Award.

THE SVADJIAN BURSARY

Established in 2020 by Victoria Joseph.

Requirements: To be granted to undergraduate students enrolled in any program who identify as racialized students and demonstrate financial need.

THE SWYTCH DELIVERY SOLUTIONS INC. BURSARY

Established in 2006 by Swytch Delivery Solutions Inc. in support of students attending McMaster University.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE TARBUTT CONSTRUCTION LTD. BURSARY

Established in 1997 by Tarbutt Construction Ltd. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in any program who demonstrates financial need.

THE TD BANK FINANCIAL GROUP BURSARIES

Established in 1999 by the TD Bank Financial Group in support of its commitment to helping students succeed in their post-secondary studies.

Requirements: A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference to be given to students enrolled in the Earth and Environmental Sciences, the Environment & Society and Environmental Studies or an Engineering and Society Program.

THE RUBY TEDDER BURSARY

Established in 2006 by the bequest of Ruby Tedder as a memorial to Victor Tedder, Lilian Ruby Tedder, Thomas Tedder and Robert Tedder.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE STEPHEN F.H. THRELKELD BURSARY

Established in 1997 by friends and colleagues of Stephen F.H. Threlkeld under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Stephen F.H. Threlkeld Award.

THE MARJORIE (COCHRANE) TICE BURSARY

Established in 2006 by Peggy, B.A. (Class of '75 and '95) and Bob, M.B.A. (Class of '81) Savage to honour the memory of Marjorie (Cochrane) Tice.

Requirements: To be granted to students in any program who demonstrate financial need.

THE GUY TIRIMACCO MEMORIAL BURSARY
Established in 2007 by Terri, Sarah and Jessica in memory of Guy, B.A. (Class of '81), a loving husband and father, a great role model, mentor, teacher, coach, musician and avid golfer.
Requirements: To be granted to students enrolled in any Faculty who demonstrate financial need. Preference will be given to students from Hamilton.

THE TKK INC. BURSARY
Established in 1997 by TKK Inc. under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The TKK Inc. Awards.

THE GRAHAM RONALD TOOP BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to students in any program who demonstrate financial need. Preference will be given, if financial need is demonstrated, to the recipient of The Graham Ronald Toop Scholarship.

THE TOWNSHIPS OF NORTH DUMFRIES AND WOOLWICH IN WATERLOO REGION AND TOWNSHIP OF CENTRE WELLINGTON AND CITY OF GUELPH IN WELLINGTON COUNTY BURSARY
Established in 2005 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals.
Requirements: To be granted to students in any Faculty who demonstrate financial need. Preference will be given to students residing in the Townships of North Dumfries and Woolwich in Waterloo Region and Township Centre Wellington and City of Guelph in Wellington County.

THE TRAVELLERS GUARANTEE COMPANY OF CANADA BURSARY
Established in 1997 by London Guarantee Insurance in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted annually to McMaster students who demonstrate financial need.

THE RAY AND JOYCE TRULL BURSARY
Established in 1998 by Roger and Janet Trull and their children in honour of Ray and Joyce Trull.
Requirements: To be granted to a student in any program who demonstrates financial need.

THE ROGER TRULL BURSARY
Established in 1997 by friends and colleagues under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Roger Trull Award.

THE GEORGE ELIAS TUCKETT BURSARIES
Established in 2005 in memory of George Elias Tuckett, a prominent Hamilton businessman and community leader who founded the oldest tobacco manufacturing company in Canada - a company that has been part of Imperial Tobacco since 1930.
Requirements: To be granted to students in any Faculty who demonstrate financial need.

THE EDITH H. TURNER FOUNDATION BURSARIES
Established in 1996 by The Edith H. Turner Foundation in support of students pursuing their post-secondary studies at McMaster.
Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need.

THE TYNOWSKI BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to students in any program who demonstrate financial need. Preference will be given, if financial need is demonstrated, to the recipient of The Tynowski Scholarship.

THE UBS GLOBAL ASSETS MANAGEMENT (CANADA) COMPANY BURSARY
Established in 1997 by the UBS Global Assets Management (Canada) Company under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The UBS Global Assets Management (Canada) Company Award.

THE STELCO BURSARY FUND
Established in 1996 by Stelco- a market-driven, technologically advanced group of businesses committed to maintaining leadership roles as steel producers and fabricators-in support of students who, without financial aid, would be unable to pursue their educational goals.
Requirements: To be granted to students who demonstrate financial need and are enrolled in the Faculties of Business, Engineering or Science. Preference will be given to students who are enrolled in the Department of Materials Science and Engineering.

THE VALLEY CITY BURSARY
Established in 1996 by Valley City in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student in any program who demonstrates financial need.

THE HOWARD ROWE VARDY MEMORIAL BURSARY
Established in 2019 by the Estate of Howard Rowe Vardy, B.A.Hon. (Class of '47).
Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE FILOMENA AND FERDINANDO VISOCCHI BURSARY
Established in 2003 by their children and family in honour of Filomena and Ferdinando Visocchi under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in any program who demonstrates financial need.

THE SYLVIA AND BRIAN WALKER BURSARIES
Established in 1996 by Sylvia (Hunt) and Brian Walker.
Requirements: To be granted to a student enrolled in Humanities I or Nursing I who demonstrates financial need. Preference to be given to students who have demonstrated leadership and involvement in university and community activities.

THE WALLINGFORD HALL BURSARIES
Established through anonymous donations.
Requirements: To assist students in any program who demonstrate financial need.

THE KENNETH J. WARD MEMORIAL BURSARY FOR NEW CANADIANS
Established in 2020 in memory of Kenneth J. Ward (Class of `71) in honour of his commitment to equality and opportunity for all in pursuing education and in memory of the support he and his family provided to refugees.
Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need. Preference will be given to new Canadians.

THE G.S. WARK LTD. BURSARY
Established in 1996 by G.S. Wark Ltd. General Contractors, in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be awarded to a student in any program who demonstrates financial need.

THE WASMUND FAMILY INDIGENOUS BURSARY
Established in 2020 by Dr. Bert Wasmund, a world-renowned leader in metallurgical plant engineering and design as well as a driving force in the growth and success of Hatch Ltd., in recognition of his two sons, Dr. Eric Wasmund (M.Eng.'92 & Ph.D. '05) and Jeffrey Wasmund (B.Eng. '94).
Requirements: To be granted to undergraduate students who identify as Indigenous and demonstrate financial need. Preference will be given to

students in the Faculty of Engineering.

THE SAM WATSON MEMORIAL BURSARY

Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Sam Watson Memorial Award.

THE SAM AND IRENE WATSON BURSARY FUND

Established in 1998 by the estate of Irene Mary Watson.

Requirements: To be granted to students who demonstrate financial need and who have completed their second year with a Grade Point Average of at least 8.0 in the Arts and Science Program or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences.

Value: $2,000

THE ROSS FAWCETT WEBB BURSARY FUND

Established in 1983 by the Hamilton Community Foundation in memory of Ross Fawcett Webb.

Requirements: To be granted in the second term of study (any level) to a student who demonstrates financial need and is enrolled in any program at McMaster. Applicants must be Canadian Citizens or hold permanent resident status in Canada.

THE ARTHUR AND MARGARET WEISZ BURSARY

Established in 2004 by Arthur Weisz (LL.D. 2004) and Margaret Weisz under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE LLOYD WERDEN MEMORIAL BURSARIES

Established in 1996 by bequest of Lloyd Werden of Bonavista in the Township of Louth in the County of Lincoln, former Physician.

Requirements: To be granted to students enrolled in any program who demonstrate financial need.

THE WESCAST INDUSTRIES BURSARY

Established in 1997 by Wescast Industries Inc. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Wescast Industries Continuous Learning Award.

THE CONVERA BURSARY

Established in 2020 through the generosity of Convera.

Requirements: To be granted to undergraduate international students enrolled in Level 2 or above of any program who demonstrate financial need.

THE WESTINGHOUSE CANADA INC. BURSARIES

Established in 1996 by Westinghouse Canada Inc. in support of students who, without financial support, would be unable to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students in a program in the Faculty of Business and the Faculty of Engineering who demonstrate financial need.

THE ALLAN AND JOY WILLIAMS BURSARY

Established in 1996 by Mary Williams (Class of '87), Anne Williams (Class of '89) and Ellen and Dan Walker under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Allan and Joy Williams Award.

THE WILLIAMS-FORBES FAMILY BURSARY

Established in 2022 by McMaster University in honour of Mary Williams (Class of '87) and her family, Rob Forbes (Class of '95) and Liam Forbes. In establishing this award, McMaster recognizes the more than 30 years of service that Mary had with the University, most recently as Vice-President, University Advancement (2011-2022), and her work in enhancing McMaster's relationships, reputation, and resources.

Requirements: To be granted to undergraduate students enrolled in any program who demonstrate financial need.

THE TOM WILSON BURSARY

Established in 2020 under the leadership of Tom Wilson and through the generous support of friends and supporters as well as funds from the Estate of Eva May. This bursary was established to honour the charitable nature of Bunny Wilson, who raised Tom and brought honour, love, respect, and light back on the culture he was introduced to later in life.

Requirements: To be granted to students entering Level 1 in any program, who identify as Indigenous and demonstrate financial need. Preference will be given to students who graduated from an Ontario Secondary School.

THE CAROLINE WOO BURSARY

Established in 2021 in loving memory of Caroline Woo.

Requirements: To be granted to undergraduate students enrolled in Level 3 or above in The School of Earth, Environment and Society who demonstrate financial need.

THE WRIGHT FAMILY BURSARY

Established in 2003 by Thomas C. Wright, M.B.A. (Class of '72) under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to a student in the Faculty of Business or the Faculty of Science who demonstrates financial need.

THE YATES BURSARIES

Established in 1963 by bequest of William Henry Yates of Hamilton.

Requirements: To assist students in any program.

THE YESMIN OPPORTUNITY BURSARY

Established in 2024 by Susan Yee-Wickler.

Requirements: To be granted to undergraduate students enrolled full-time in a STEM program who self-identify as women and demonstrate financial need. Preference will go to students who self-identify as Racialized and/or who are the first generation in their family to attend post-secondary education.

THE GLADYS A. YOUNG BURSARY

Established in 1997 under the McMaster Student Opportunity Fund initiative.

Requirements: To be awarded to students in any program who demonstrate financial need. Preference will be given, if financial need is demonstrated, to the recipient of The Gladys A. Young Scholarship.

THE ZENON ENVIRONMENTAL BURSARY

Established in 1997 by Zenon Environmental Inc. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Zenon Environmental Award.

THE ZONTA CLUB OF HAMILTON I BURSARIES

Established in 1997 by the Zonta Club of Hamilton I in support of the McMaster Student Opportunity Fund initiative and in the belief that all students, particularly women in non-traditional fields, should have the opportunity to pursue their educational goals.

Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering, or in Business or is enrolled in a course in Indigenous Studies. Preference to be given to female students.

THE ZOOM MEDIA INC. BURSARY

Established in 1997 by Zoom Media Inc. in support of McMaster students under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Zoom Media Award.

Open to the Arts & Science Program

THE ARTS AND SCIENCE BURSARIES

Established in 2019 by McMaster University.

Requirements: To be granted to students enrolled in the Arts and Science Program who demonstrate financial need.

THE ARTS AND SCIENCE CLASS OF '97 BURSARY
Established in 1997 by The Arts and Science Class of '97 under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student in the Arts and Science program who demonstrates financial need.

THE BAIN-PEART BURSARIES
Established in 2018 by the Estate of Helen Jean Bain.
Requirements: To be granted to students enrolled in Level 2 or above in an Arts & Science Program who demonstrate financial need.

THE LOUILA BRAYFORD MEMORIAL BURSARY
Established in 1998 by Mrs. Janet Leenaars in memory of her late mother, Mrs. Louila Brayford (nee Bingham, Class of '34).
Requirements: To be granted to a student enrolled in the Arts and Science Program who demonstrates financial need. Preference will be given to a student enrolled in a course in Mathematics.

THE GEORGE P. GILMOUR MEMORIAL BURSARY
Established in 1997 by the Class of '62 in support of McMaster students.
Requirements: To be granted to a student enrolled in the Arts and Science Program who has demonstrated financial need. Preference will be given to the student who wins the George P. Gilmour Memorial Scholarship.

THE JOHNS FAMILY BURSARIES
Established by Martin W. Johns and family.
Requirements: A variable number of bursaries to be granted to students enrolled in the Arts and Science Program who demonstrate financial need.

THE QUIRT FAMILY BURSARY
Established in 2023 through a gift by Dr. Alan Quirt (Class of '65).
Requirements: To be granted to undergraduate students enrolled in the Arts & Science program who demonstrate financial need.

THE JENNIFER YOUNG MEMORIAL BURSARY
Established in 2015 by family, peers and community in honour of Jennifer Young, (Class of '07 & '09). Jennifer was passionate about fitness and wellness, she excelled in math and science and her professional interests were in population modelling and policy planning for the Department of Fisheries and Oceans.
Requirements: To be awarded to a student who is enrolled in an Arts and Science program and demonstrates financial need. Preference will be given to female students who demonstrate keen interest in math.

Open to the DeGroote School of Business

THE GARY ALLEN MEMORIAL BURSARY
Established in 1987 by friends and family of the late Gary Allen (Class of '84) and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative, to assist a Commerce student in Year III or IV whose major area of study is accounting and who demonstrates financial need.
Requirements: Preference will be given to a mature student.

THE CATHERINE BENTZEN-BILKVIST MEMORIAL BURSARY
Established in 2017 by family and friends of Catherine Bentzen-Bilkvist, B.A. (Class of '75), B.A. Hon. (Class of '81), M.A. (Class of '86), to honour her memory.
Requirements: To be granted to a student in a Bachelor of Commerce program who demonstrates financial need.

THE CHAN YIN CHAK BURSARY
Established in 1997 by Tak Chan in honour of his great grandfather, Mr. Chan Yin Chak.
Requirements: This bursary will be used to help defray expenses of Level 3 Commerce students or M.B.A. students, who demonstrate financial need, and are participating in one of the international exchange programs at the DeGroote School of Business.

THE DAVID CLARK BURSARIES
Established in 1996 by David I. Clark and Marilyn D. Eustace.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Commerce who demonstrate financial need. Preference to be given to students demonstrating interest in Asian Studies.

THE DAUGHTERS OF THE EMPIRE CLUB, HAMILTON LTD. BURSARIES
Established in 1996 in honour of The Daughters of the Empire Club, Hamilton, Limited (1911-1996) in support of its belief that all students should have the opportunity to pursue their educational aspirations.
Requirements: A variable number of bursaries to be granted to students in financial need. Preference to be given to women enrolled in the Faculty of Business.

THE DEGROOTE COMMERCE CLASS OF '82 BURSARY
Established in honour of the 30th anniversary of the Commerce Class of '82.
Requirements: A variable number of bursaries to be awarded to students enrolled in a Commerce program in the DeGroote School of Business who demonstrate financial need.

THE DEGROOTE SCHOOL OF BUSINESS BUSINESS ADVISORY COUNCIL BURSARY
Established in 1997 by the DeGroote School of Business Business Advisory Council under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in Business I or in the first year of the M.B.A. program at the DeGroote School of Business.

THE STEPHEN DULMAGE BURSARY
Established in 2005 by Stephen Dulmage, B.A. (Class of '64).
Requirements: To be granted to students enrolled in the Bachelor of Commerce program in the DeGroote School of Business who demonstrate financial need.

THE SANDRA STEPHENS "BRIGHTER WORLD" MEMORIAL BURSARY
Established in 2020 in loving memory of Sandra Stephens.
Requirements: To be granted to students enrolled in Level 3 or above in the Faculty of Business who demonstrate financial need. Preference will be given to students who demonstrate leadership and community engagement within McMaster.

THE FACULTY OF BUSINESS BURSARIES
Established in 1997 under the McMaster Student Opportunity Fund initiative with proceeds from the Fundraising Auction held at Vineland Estates Winery Ltd.
Requirements: To be granted to students enrolled in the Faculty of Business who demonstrate financial need.

THE DARREN FARWELL BURSARY
Established in 2021 by Darren Farwell, B.Com. (Class of '81), to encourage students to pursue their goals and aspirations.
Requirements: To be granted to undergraduate students enrolled in a Commerce program in the DeGroote School of Business who demonstrate financial need.

THE FINANCIAL EXECUTIVES INSTITUTE BURSARY
Established in 1997 by the Hamilton Chapter of the Financial Executives Institute in support of its belief that all students should have the opportunity to achieve their educational goals.
Requirements: To be granted to a student enrolled in Level 2 of the Commerce program who demonstrates financial need, has attained a minimum GPA of 6.0 and who plans to major in Accounting and/or Finance. The bursary is renewable for up to two additional years on condition that the student continues to demonstrate financial need and maintains a minimum GPA of 6.0 in the Commerce program.

THE GARY GRAHAM BURSARY
Established in 1997 by Gary Graham under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in Business I, or in the first year of the M.B.A. program at the DeGroote School of Business.

THE HAMILTON CHAPTER OF THE HUMAN RESOURCES PROFESSIONALS ASSOCIATION BURSARY

Established in 1999 by the Hamilton Chapter of the Human Resources Professionals Association under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a Level 3 or Level 4 Commerce student taking two or more of the Human Resource and Management Area courses who demonstrates financial need.

THE M.A. (JACK) HASSAL BURSARY

Established by the Hamilton and District Chartered Accountants Discussion Group in 1982 in memory of M.A. (Jack) Hassal.

Requirements: To assist a student in Commerce who is a Canadian citizen or permanent resident of Canada. It is hoped that recipients, after graduation, will reimburse the fund to the extent of their award so that the fund may assist increasing numbers of students.

THE HAZELVIEW BUSINESS BURSARY

Established in 2023 by the Hazelview.

Requirements: To be granted to undergraduate students enrolled in the DeGroote School of Business who demonstrate financial need. Preference will be given to students who demonstrate commitment to sustainability through academic studies or extra-curricular involvement.

THE JOHANNES MICHAEL HOLMBOE MEMORIAL BURSARY

Established in 2004 by bequest of Ruth Anna Holmboe in memory of her husband Johannes Michael Holmboe.

Requirements: To be granted to students enrolled in the Faculty of Business who demonstrate financial need.

THE MARK JANTZI MEMORIAL BURSARY

Established in 2004 by Paul and Hanne Jantzi under the McMaster Student Opportunity Fund II initiative, in memory of their son Mark Jantzi, an Honours Commerce 2002 graduate who passed away tragically in a car accident at the age of 25.

Requirements: This bursary is in support of the belief that all students should have the opportunity to pursue their educational goals. To be granted to students who demonstrate financial need and are enrolled in the DeGroote School of Business.

THE COLIN JARVIS MEMORIAL BURSARY

Established in 2021 by Mr. Colin Jarvis, B.COM (Class of '90).

Requirements: To be granted to undergraduate students enrolled in Level 2 or above of the Bachelor of Commerce program in the DeGroote School of Business who demonstrate financial need.

THE JAN KELLEY MARKETING BURSARY

Established in 1997 by Kelley Advertising Inc., founded in Hamilton in 1913.

Requirements: This bursary to be granted to a student enrolled in Business I, or in the first year of the M.B.A. program at the DeGroote School of Business who demonstrates financial need.

THE KNAP MARSHALL BURSARY

Established in 2005 under the Ontario Trust for Student Support initiative.

Requirements: To be granted to students enrolled in the DeGroote School of Business who demonstrate financial need and who have demonstrated outstanding athletic achievement in an intervarsity sport.

THE BERNIE MORELLI MEMORIAL BURSARY

Established in 2016 in memory of respected Hamilton councillor Bernie Morelli (Class of '67).

Requirements: To be awarded to a student enrolled in the DeGroote School of Business who demonstrates financial need and resides in the City of Hamilton. Preference will be given to those who attended an inner city high school.

THE KPMG BURSARIES

Established in 1996 by KPMG in support of its belief that students should have the opportunity to pursue their educational aspirations.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need.

THE KEVIN LENGYELL BURSARY

Established in 2006 by Kevin Lengyell, B.Com. (Class of '82).

Requirements: To be granted to students who have completed Level 2 or Level 3 of the Bachelor of Commerce program who demonstrate financial need. Preference to be given to students from the Region of Waterloo.

THE MILLER FAMILY BURSARY

Established in 2021 by Rachel Miller (Class of '96), FCPA, FCA.

Requirements: To be granted to undergraduate students enrolled in any program who identify as Indigenous and demonstrate financial need. Preference will be given to students enrolled in the DeGroote School of Business.

THE MINICH FAMILY BURSARIES

Established in 1996 by E. A. Minich and family. A variable number of bursaries to be granted to students enrolled in Business I who demonstrate financial need.

Requirements: Preference to be given to students who demonstrate a lively interest in the University and community through their involvement in extracurricular activities.

THE CAROL R. MITCHELL BURSARY

Established in 2005 by Carol R. Mitchell, M.B.A. (Class of '82).

Requirements: To be granted to students enrolled in the Bachelor of Commerce program in the DeGroote School of Business who demonstrate financial need.

THE CLAIRE AND JOHN NOVAK BURSARY

Established in 1997 by Bruce Cumming (Class of '73) and Marie Cumming in honour of Claire and John Novak.

Requirements: To be granted to a student enrolled in the Faculty of Business who demonstrates financial need.

THE DR. ALFRED AND LAURA OAKIE BURSARIES

Established in 1996 by Dr. Alfred U. Oakie.

Requirements: A variable number of bursaries to be granted to students enrolled in Business I who demonstrate financial need.

THE LYNDA QUINN BURSARY

Established in 2008 by Lynda Quinn, B.Com. (Class of '86).

Requirements: To be granted to students enrolled in the DeGroote School of Business who demonstrate financial need.

THE CARMEN AND DOROTHY RYDER BURSARY

Established in 1997 by Marvin Ryder under the McMaster Student Opportunity Fund initiative in honour of Carmen and Dorothy Ryder.

Requirements: To be granted to a student enrolled in the Faculty of Business who demonstrates financial need. Preference to be given to a student entering Level 3 or 4.

THE SCOTIAMCLEOD BURSARIES

Established in 1997 by ScotiaMcLeod in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in the Faculty of Business.

THE TERRY SEAWRIGHT BURSARY

Established in 1996 by Terry Seawright, Lecturer in the Faculty of Business.

Requirements: To be granted to a student in the Commerce Program who demonstrates financial need. Preference to be given to the student who has completed COMMERCE 2MA3 and attained a grade of at least B.

THE ETTIE AND ISRAEL SHRAGIE BURSARY

Established in 2009 by Mark Lighter and Maureen Shragie, in honour of Ettie and Israel Shragie.

Requirements: To be granted to students in The DeGroote School of Business who have achieved a minimum Grade Point Average of 7.0 and demonstrate financial need.

THE MOSSADIQ AND YASMIN UMEDALY BURSARIES

Established in 1999 by Mossadiq, M.B.A. (Class of '74) and Yasmin Umedaly under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in Business I or first year of the M.B.A. program who demonstrate financial need.

THE LILLIAN WELSH BURSARY

Established in 2020 by the Estate of Lillian Welsh.

Requirements: To be granted to students enrolled in Level 1 of a Business program who demonstrate financial need.

THE WHITLEY FAMILY BURSARY

Established in 2016 by the Whitley Family.

Requirements: To be granted to a student in the Bachelor of Commerce program who demonstrates financial need.

THE HELEN AND JACK WIDNER BURSARY

Established in 2016 by Marvin Ryder (Class of '84), in honour of Helen and Jack Widner.

Requirements: To be granted to a student enrolled in Level 3 in the Faculty of Business who demonstrates financial need.

THE JAMES MASON YOUNG BURSARY

Established in 1996 by James Mason Young in honour of his family's long-standing association with McMaster University.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need. Preference to be given to students participating in a formal McMaster Exchange Program.

Open to the Faculty of Engineering

THE ROSE (NÉE D'ALESSIO) AND PAUL ALLISON BURSARY

Established in 2004 by Rose (née D'Alessio) Allison, B. Eng. (Class of '81) and Paul Allison, B. Eng. Mgt. (Class of '80) and M.B.A. (Class of '81) in support of their belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to students enrolled in the Faculty of Engineering who demonstrate financial need.

THE ANDREW FOUNDATION BURSARIES

Established in 1997 by the Andrew Foundation under the McMaster Student Opportunity Fund initiative.

Requirements: A variable number of bursaries to be granted to students enrolled in a program in Engineering who demonstrate financial need. Preference to be given to students who are studying Electrical Engineering or Mechanical Engineering.

THE A.H. ATKINSON BURSARIES

Established in 1989 by the A.H. Atkinson Education Fund Inc. of Hamilton and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.

Requirements: A variable number of bursaries to be awarded to undergraduate students in a full-time program in Engineering who demonstrate financial need.

THE BACHELOR OF TECHNOLOGY BURSARY

Established in 2009.

Requirements: A variable number of bursaries to be granted to students enrolled in the Bachelor of Technology Program who demonstrate financial need.

THE BARTEK BURSARIES

Established in 1996 by Bartek Ingredients Inc. of Stoney Creek in support of McMaster students.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. Preference to be given to students currently on the Deans' Honour List.

THE BOOTH SCHOOL TRAILBLAZER BURSARY

Established in 2023 by the family of retired Booth professor Dr. Thomas Wonjoon Lee, in memory of his late brother Dr. John Yoonsun Lee, to encourage all students to pursue a rewarding professional career in Engineering Technology.

Requirements: To be granted to undergraduate students enrolled in any Bachelor of Technology program, who self-identify as a member of an equity-deserving group and demonstrate financial need.

THE CAMP XIII ENGINEERING BURSARY

Established in 2011 by Camp XIII, McMaster University in celebration of its 50th Anniversary through contributions from alumni, friends and Camp XIII funds in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to students enrolled in the Faculty of Engineering who demonstrate financial need.

THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING BURSARY

Established in 1997 by The Canadian Society for Mechanical Engineering in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to a student enrolled in Mechanical Engineering.

THE HARRY & EILEEN COATES BURSARY

Established in 2021 by Gary Coates, B.Eng. (Class of '73) and his wife Faye, in loving memory of Gary's parents, Harry and Eileen Coates.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering who demonstrate financial need.

THE C.F. CROZIER & ASSOCIATES INC. BURSARY

Established in 2020 by C.F. Crozier & Associates Inc., a multidisciplinary consulting engineering firm contributing to the growth of communities across Canada, from progressive land development projects to facility expansions and upgrades.

Requirements: To be granted to students enrolled in Level 3 or above in any Civil Engineering, Mechanical Engineering, or Electrical & Computer Engineering program, who demonstrate financial need. Preference will be given to students who come from a rural location.

THE CRS ROBOTICS CORPORATION BURSARIES

Established in 1997 by CRS Robotics Corporation Inc. in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need.

THE VALERIE DAVIDSON BURSARY

Established in 2023 by Valerie Davidson, B.Eng. (Class of '75) to encourage students to embrace the opportunities that a McMaster education offers.

Requirements: To be granted to undergraduate students enrolled in the Department of Chemical Engineering who demonstrate financial need.

THE GARY DISHER FAMILY BURSARY

Established in 2020 by Gary Disher, B.Eng. (Class of '77) and his wife, Margery Fisher, in honour of his father, Jerrold Ward Disher, P.Eng, a champion of engineering awareness and recognition in the Hamilton region who believed that education should be accessible to everyone.

Requirements: To be granted to students in the Faculty of Engineering who demonstrate financial need. Preference to be given to students in the Department of Electrical and Computer Engineering.

THE ELKOTT FAMILY BURSARY

Established in 2021 by Diaa ElKott, Ph.D. (Class of '07), and Rehab Nada to encourage students to wholeheartedly embrace their educational opportunities and later lead the way for others.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering who demonstrate financial need.

THE ENGINEERING AND SOCIETY TRAVEL BURSARY

Established in 1994 by the Department of Engineering and Society. To assist students with travel costs associated with their summer placement in the Engineering and Society program.

Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Engineering. Applications will be reviewed by the Director, Engineering and Society and the Office of the Registrar, Aid & Awards.

THE ENGINEERING BURSARY FUND
Established in 2014.
Requirements: To be granted to students in the Faculty of Engineering who demonstrate financial need.

THE ENGINEERING CLASS OF '97 LEGACY BURSARY
Established in 1997 by the graduating class in Engineering under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need.

THE GENERAL CONTRACTORS ASSOCIATION OF HAMILTON BURSARIES
Established in 1997 by the General Contractors Association of Hamilton under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need.

THE GENNUM CORPORATION BURSARIES
Established in 1997 by the Gennum Corporation in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students who are enrolled in the Faculty of Engineering and who demonstrate financial need.

THE GRAY FAMILY BURSARY
Established in 1997 by Donald Gray (Class of '70) and Glenn Gray (Class of '73) and Kerry Gray (Class of '77 and '82 (M.B.A.)) under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a third year student enrolled in the Engineering and Management program who demonstrates financial need. Preference to be given to students who permanently reside in the Hamilton-Wentworth Region.

THE HATCH ASSOCIATES BURSARY
Established in 1997 by Hatch Associates in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need.

THE HAZELVIEW ENGINEERING BURSARY
Established in 2023 by the Hazelview.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering who demonstrate financial need. Preference will be given to students who demonstrate commitment to sustainability through academic studies or extra-curricular involvement.

THE IODE JIM THOMSON ENGINEERING BURSARY
Established in 2007 by the Imperial Order of the Daughters of the Empire (IODE)-Angela Bruce Chapter in memory of Jim Thomson.
Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to students from Oakville.

THE E. ANTHONY JAMES BURSARY
Established in 2017 by E. Anthony James, B.Eng. Civil Engineering (Class of '73), in recognition of the excellent education that McMaster University provided him.
Requirements: To be granted to students in the Faculty of Engineering who demonstrate financial need.

THE JNE CONSULTING AND ARCELORMITTAL DOFASCO BURSARY
Established in 2019 by JNE Consulting in honour of the 25 Year Anniversary of the Engineering Partnership between JNE Consulting and ArcelorMittal Dofasco.
Requirements: To be granted to students enrolled in a Bachelor of Engineering program who demonstrate financial need.

THE SZE-WAI LEE MEMORIAL BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative in honour of Sze-Wai Lee.
Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need and has shown involvement in support of the community, particularly multicultural events.

THE ANTONIO LEOPARDI MEMORIAL BURSARY
Established in 2023 by the Tattersall & Leopardi families in honour of Antonio Leopardi.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering who demonstrate financial need and require support with expenses relating to McMaster clubs and/or teams, specifically membership, competition, and travel/accommodation.

THE LIBURDI ENGINEERING LIMITED BURSARY
Established in 1997 by Liburdi Engineering Limited under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in an Engineering program who demonstrates financial need.

THE ALBERT LOVAS MEMORIAL BURSARY
Established in 2008 by Reta Lovas, Glenn Gray (McMaster Class of '73) and Susan Gray (Mohawk Class of '72).
Requirements: To be granted to students enrolled in a Bachelor of Technology program who demonstrate financial need. Preference to be given to students residing in the City of Hamilton.

THE MCMASTER ENGINEERING SOCIETY BURSARY
Established in 1999 by the McMaster Engineering Society.
Requirements: To be granted to a student in the Faculty of Engineering who demonstrates financial need.

THE MERITOR AUTOMOTIVE INC. BURSARY
Established in 1999 by Meritor Automotive Inc. under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in a Mechanical Engineering program who demonstrates financial need.

THE ANN MINER MEMORIAL BURSARY
Established in 2005 in memory of Ann Miner by her brother Jim Sweetman (Class of '77) and his wife Sheila.
Requirements: To be granted to students enrolled in a program in Chemical Engineering in the Faculty of Engineering who demonstrate financial need.

THE NORMA MOORES BURSARY FOR WOMEN IN TECHNOLOGY
Established in 2022 in memory of Norma Moores by her friends and colleagues at IBI Group to support the next generation of engineers who will take good care of our planet.
Requirements: To be granted to undergraduate students enrolled in the Department of Civil Engineering who demonstrate financial need. Preference will be given to students who identify as female.

THE ROBERT JOHN MORRIS BURSARIES
Established in 1996 by family, friends and colleagues of Robert John Morris.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in the Faculty of Engineering. Preference will be given to in-course recipients and/or entrance level recipients of The Robert John Morris Awards in the year they receive the award.

THE ARCHIE MOUGHALIAN BURSARIES
Established by bequest in 1998.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need.

THE NCR (WATERLOO) BURSARY
Established in 1998 by NCR (Waterloo) under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in an Engineering and Management program who demonstrates financial need.

THE ORLICK INDUSTRIES LIMITED BURSARIES
Established in 1997 by Orlick Industries in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: A variable number of bursaries to be granted to students enrolled in a Mechanical Engineering program who demonstrate financial need.

THE OTIS CANADA BURSARIES IN ENGINEERING AND MANAGEMENT
Established in 1996 by OTIS Canada Inc., the world's largest elevator company with over 50,000 employees and more than 1,700 worldwide locations.
Requirements: A variable number of bursaries to be granted to students enrolled in Level 2 of a program in Engineering and Management who demonstrate financial need. Preference to be given to students who demonstrate a lively interest in the university and community through their involvement in extracurricular activities.

THE PATRIOT FORGE INC. BURSARY
Established in 1997 by Patriot Forge Inc. in support of McMaster students.
Requirements: To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference will be given to a student enrolled in Mechanical, Chemical or Materials Engineering.

THE MARC ANDRE ADRIEN PINEAULT BURSARY
Established in 1995 by family and friends in memory of Marc Pineault and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in a program in Engineering who demonstrates financial need. Preference will be given to a student who is involved in one of the following University activities or issues: the McMaster Choir, varsity wrestling, karate club, the environment or social justice.

THE EVELYN QUIRT MEMORIAL BURSARY
Established in 2016 by Jennifer Chapin (Class of 2003).
Requirements: To be awarded to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference to be given to a female student.

THE LEO W. SETO BURSARY
Established in 2003 by Leo W. Seto, B.Eng.Mgt. (Class of '87) and M.Eng. (Class of '90) under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Faculty of Engineering who demonstrates financial need.

THE LESLIE W. AND ELIZABETH SHEMILT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in an Engineering program.

THE RONALD G. SMITH BURSARY
Established in 2022 by Ronald G. Smith, B.Eng. (Class of '79), because everyone has a contribution to make.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Engineering who demonstrate financial need.

THE FRANK STERN/STERN LABORATORIES BURSARY
Established in 2005 in memory of Frank Stern, Chairman and CEO of Stern Laboratories Inc.
Requirements: To be granted to students enrolled in a program in Mechanical Engineering who demonstrate financial need.

THE TURKSTRA LUMBER BURSARY
Established in 1996 by the Turkstra Lumber Company Limited.
Requirements: A variable number of bursaries to be granted to students enrolled in an Engineering and Society program who demonstrate financial need. Preference will be given to students who attain a Fall-Winter Average of at least 7.0 at the most recent review.

THE CAROLE J. WILSON BURSARY
Established in 2018 by Carole J. Wilson, B.Eng.Mgt. (Class of '84) and MBA (Class of '92) to inspire women to pursue an education in engineering and achieve their full potential.
Requirements: To be granted to students enrolled in the Faculty of Engineering who demonstrate financial need and are Canadian citizens. Preference given to female students who are enrolled in underrepresented programs.

Open to the Faculty of Health Sciences

THE ANGELA DALZIEL AXELSON BURSARY IN NURSING
Established in 2006 by Angela (Bonnie) Dalziel Axelson, B.Sc.N. (Class of '62) to mark the 45th anniversary of her graduation.
Requirements: To be awarded to a student enrolled in the Nursing program who demonstrates financial need.

THE BACHELOR OF HEALTH SCIENCES (HONOURS) BURSARY
Established in 2004 by the Bachelor of Health Sciences (Honours) Program in the Faculty of Health Sciences through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Bachelor of Health Sciences (Honours) program who demonstrates financial need.

THE MARY BRIDGMAN MEMORIAL NURSING BURSARY
Established in 2011 by Donald Honey in memory of his wife, Mary Bridgman, B.Sc.N. (Class of '60) to recognize her lifelong commitment to educating students in the Nursing profession.
Requirements: To be granted to a student in the School of Nursing who demonstrates financial need.

THE LOIS AILEEN MENZIES BROWN BURSARY
Established to honour Lois Aileen Menzies Brown, mother and wife, in recognition of the health care provided to her family in association with members of the McMaster Health Sciences team.
Requirements: To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need.

THE ED BUFFETT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in a program in Health Sciences who demonstrate financial need. Preference will be given to students who have demonstrated leadership in their school and community.

THE CIBC NURSING BURSARIES
Established in 2009 by CIBC in support of its commitment to breast cancer care.
Requirements: A variable number of bursaries to be granted to students enrolled in the School of Nursing who demonstrate financial need. Preference will be given to students with a specific interest in breast cancer through oncology placements and/or community involvement.

THE DOUGLAS AND BEVERLY COLEMAN BURSARY
Established in 2005 by Douglas and Beverly Coleman, both of Class of '54.
Requirements: To be granted to students enrolled in the Department of Biochemistry and Biomedical Sciences who demonstrate financial need.

THE COMMUNITY NURSING REGISTRY - HAMILTON BURSARIES
Established in 2000 by the Community Nursing Registry - Hamilton in support of students pursuing a professional career in nursing.
Requirements: A variable number of bursaries to be granted to students enrolled in Level 2 in the School of Nursing in the Faculty of Health Sciences who demonstrate financial need. Preference will be given to students who demonstrate volunteer service in the area of health care.

THE STRUMMER CYPHER POND MEMORIAL BURSARY IN MIDWIFERY
Established in 2005 in memory of Strummer Cypher Pond by her parents, family, and friends, in recognition of the tremendous support and care provided to them by their midwives.
Requirements: To be granted to a student enrolled in the final clinical year of the Midwifery Education Program who demonstrates financial need to help defray the cost of tuition.

THE JEAN, MARTHA AND LAURIE DOUCET MEMORIAL BURSARIES
Established in 1998 by the family in memory of Jean, Martha and Laurie Doucet for their years of service and commitment to the nursing profession.
Requirements: A variable number of bursaries to be granted to students enrolled in the School of Nursing at both the undergraduate and graduate level and who demonstrate financial need. Preference will be given to students from the Regional Municipality of Niagara.

THE ELEANOR ENKIN MIDWIFERY BURSARY
Established in 2004 by Dr. Murray Enkin in support of Midwifery students.
Requirements: To be granted to Midwifery students who have completed at least Level 1 with notable academic standing and demonstrate financial need.

THE ALLAN FANG AND ALANNA JIN BURSARY FOR NEW CANADIANS
Established in 2014 by Allan Fang, MBA (Class of '03) and Alanna Jin, B.Sc. (Class of '04) to express gratitude for their time at McMaster as new Canadians.
Requirements: To be awarded to a student in Level 2 or above in the Faculty of Health Sciences who demonstrates financial need and has attained a minimum Cumulative Average of 10.0. Preference will be given to students who have obtained Canadian citizenship within the past 15 years.

THE MARGO AND FRASER FELL BURSARIES
Established in 1999 by Margot (Class of '52) and Fraser Fell (Class of '49).
Requirements: A variable number of bursaries to be granted to students enrolled in the School of Nursing in the Faculty of Health Sciences who demonstrate financial need.

THE FUTURE UNDERGRADUATE NURSING STUDENTS BURSARY
Established in 2021, in celebration of the School of Nursing's 75th anniversary and faculty members' years of service to the school.
Requirements: To be granted to undergraduate students enrolled in the School of Nursing who demonstrate financial need.

THE JACK AND THELMA HEATH MEMORIAL BURSARIES
Established in 1985 by Norton Canada Inc. in memory of Jack and Thelma Heath, former employees of the Company, who were tragically killed in a boating accident.
Requirements: The fund provides up to four awards to assist students, with demonstrated financial need, in Level 3 or 4 of the B.Sc.N. program (basic and/ or post-diploma stream).

THE FACULTY OF HEALTH SCIENCES BURSARIES
Established in 2019 by McMaster University.
Requirements: To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need.

THE HAZEL MAY HINKS BURSARIES
Established in 1996 by bequest of Hazel May Hinks of Burlington, Ontario.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Nursing who demonstrate financial need. Preference will be given to students who have graduated from a high school located in the City of Burlington.

THE IDA MARIETTA HOUSTON BURSARY
Established in 2007 by Ida Marietta Houston.
Requirements: To be granted to a student who has completed Level 2 in the School of Nursing and demonstrates financial need.Preference will be given to a student with a particular interest in palliative or end- of- life care.

THE IODE JEAN HENDERSON NURSING BURSARY
Established in 2007 by the Imperial Order of the Daughters of the Empire (IODE)-Angela Bruce Chapter in memory of Jean Henderson.
Requirements: To be granted to a student enrolled in the B.Sc.N. program who demonstrates financial need. Preference will be given to a student from Oakville.

THE HENRY AND FRANCES JEKEL BURSARY
Established in 2012 by Henry and Frances Jekel to provide financial assistance to students wishing to pursue a career in nursing.
Requirements: To be granted to students enrolled in the School of Nursing who demonstrate financial need.

THE KENTS FAMILY BURSARY
Established in 1997 by the Kents Family under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in the School of Medicine, the School of Nursing or the School of Rehabilitation Science.

THE PHILLIP GORDON KETTLE BURSARY
Established in 1996 in memory of Phillip Gordon Kettle.
Requirements: To be granted to a student enrolled in a Nursing program who demonstrates financial need. Preference to be given to a student studying herbal medicine as alternative therapies.

THE LOUCKS FAMILY BACHELOR OF HEALTH SCIENCES BURSARY
Established in 2000 by Mr. Ron Loucks and family in recognition of their support of Bachelor of Health Sciences students.
Requirements: To be granted to Bachelor of Health Sciences students who have completed at least Level 1 with notable academic standing and demonstrated financial need

THE HARRISON MAYNARD MEMORIAL BURSARY IN MIDWIFERY
Established in 2005 in memory of Harrison Maynard by his family and friends.
Requirements: To be granted to students enrolled in Level 2 or above of the Midwifery Education Program who demonstrate financial need.

THE JANET MCKNIGHT MEMORIAL BURSARIES
Established in 1996 in memory of Janet McKnight by the Pember Family.
Requirements: A variable number of bursaries to be granted to students enrolled in the final level of the Nursing program who demonstrate financial need.

THE MCMASTER NURSING ALUMNI CLASS BURSARY FUND
- variable number of bursaries to be granted.

Requirements: To be granted to students enrolled in a Nursing program and who demonstrate financial need.

THE MCMASTER WOMEN'S CLUB BURSARY
Established in 1983 by the McMaster Women's Club and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.
Requirements: To assist a student beyond Level 1 in the University's Bachelor of Science in Nursing program.

THE KATHERINE M. COLLYER MCNALLY BURSARY
Established in 1997 by her children in honour of Katherine M. Collyer McNally under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in Level 2 or above in the Midwifery or Nursing program.

THE MDS INC. BURSARY
Established in 1997 by MDS Inc., under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in the Faculty of Health Sciences who demonstrates financial need.

THE AELIN ROSE MELFI BURSARY
Established in 2023 by friends and family of Rob and Rhiannon Melfi, in memory of their beautiful daughter, and in recognition of the team of nurses of the NICU at McMaster Children's Hospital who exhibited extraordinary compassion and devotion to their duty while Aelin was in their care.
Requirements: To be granted to undergraduate students enrolled in the School of Nursing who demonstrate financial need. Preference will be given to students with a specific interest in neonatal or pediatric care.

THE MIDWIFERY BURSARY
Established in 1999 by the Midwifery Education Program to support Midwifery students.
Requirements: To be granted to Midwifery students with notable academic standing and demonstrates financial need.

THE RUTH MURRAY MEMORIAL BACHELOR OF HEALTH SCIENCES BURSARY
Established in 1999 by Mr. Alex Murray and family in memory of Ruth Murray and in recognition of their support to Bachelor of Health Sciences students.
Requirements: To be granted to Bachelor of Health Sciences students who have completed at least Level 1 with notable academic standing and demonstrated financial need.

THE PERC AND JOAN NORMAN NURSING BURSARY
Established in 2005 by Perc and Joan Norman in support of students pursuing a career in healthcare.
Requirements: To be granted to students who demonstrate financial need and are enrolled in the Nursing program.

THE NURSING CLASS OF '69 BURSARY
Established in 2009 by the Nursing Class of 1969 in honour of their 40th anniversary.
Requirements: To be granted to students enrolled in Level 3 or 4 in the School of Nursing who demonstrate financial need.

THE NURSING CLASS OF 1973 BURSARY

Established in 2023 for their 50th anniversary by the graduates of the Class of Nursing 1973. As members of the McMaster School of Nursing's (SON) first large class, this fund was created by 1973 Nurses as a unique legacy to support future Nursing students on their journey.
Requirements: To be granted to undergraduate students enrolled in Level 2 or above in a McMaster Nursing program who self-identify as a member of an equity-deserving group and demonstrate financial need.

THE NURSING CLASS OF '86 BURSARY FUND
Established in 2006 by the Nursing Class of 1986 in honour of their 20th reunion.
Requirements: To be granted to students enrolled in the School of Nursing who demonstrate financial need.

THE NURSING PROGRAM BURSARY
Established in 1997 in recognition of the contribution of McMaster students under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to students enrolled in the Nursing program who demonstrate financial need. Preference will be given to the recipient of the Nursing Program Award.

THE OAKRUN FARM BAKERY BURSARY
Established in 2004 by Oakrun Farm Bakery, under the McMaster Student Opportunity Trust Fund II initiative.
Requirements: To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need. Preference to be given to a student in the Hamilton area.

THE LORI OSTRANDER MEMORIAL BURSARY
Established in 2017 by the bequest of Dr. Albert Ostrander in memory of his late wife, Mrs. Lori Ostrander (nee Maude Lorene Hewitt), who completed her nursing training at Hamilton General Hospital in the 1940s.
Requirements: To be granted to students enrolled in the School of Nursing who demonstrate financial need.

THE O'SHAUGHNESSY BURSARY
Established in 1986 by the family and friends of the late Margaret O'Shaughnessy, RN.
Requirements: This bursary is to be used to alleviate financial need for students pursuing an education in Nursing (basic or post-diploma stream) in Level 2, 3, or 4.

THE JULIE PATEL FACULTY OF HEALTH SCIENCE BURSARY
Established in 2023 by The Julie Patel Foundation (est. 2018 by the family's children and grandchildren). In loving memory of Julie and Ahmed Patel, born and raised in apartheid South Africa, who did not have the opportunity to go to university, but valued education and believed education was the path to helping those less fortunate successfully navigate the journey to a better life for themselves and their families.
Requirements: To be granted to undergraduate students enrolled in any program in the Faculty of Health Sciences who demonstrate financial need.

THE E.J. RANKIN BURSARY
Established in 2016 from the Estate of Eleanor Jean Rankin (Class of '83).
Requirements: To be granted to full time undergraduate and graduate students enrolled in the School of Nursing who demonstrate financial need. Funding allocation to undergraduate and graduate students to be recommended by the Associate Dean, Nursing.

THE WALLACE M. RANKIN BURSARY IN THE SCHOOL OF NURSING
Established in 2006 by an anonymous donor.
Requirements: To be granted to students in the School of Nursing who demonstrate financial need.

THE ANITA ROBERTSON BURSARY
Established in 2019 from the Estates of Anita Robertson, B.Sc.N. (Class of '89) and Joseph Robertson.
Requirements: To be granted to students enrolled in the School of Nursing who demonstrate financial need.

THE JOAN ROYLE NURSING BURSARY
Established in 2019 by Joan Royle (Class of '58), former School of Nursing faculty member, in honour of her time at McMaster.
Requirements: To be granted to an undergraduate student who has completed Level 2 or above of a Nursing program and who demonstrates financial need.

THE SCHOOL OF NURSING BURSARY
Established in 2004 by the School of Nursing through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the School of Nursing who demonstrates financial need.

THE MOLLY SMITH NURSING BURSARY
Established in 2021 by Trevor Smith and Dr. Aaron Smith, inspired by their mother's belief that every student has the potential to succeed and to honour her outstanding career as a charge nurse at West Haldimand General Hospital for almost four decades.
Requirements: To be granted to undergraduate students enrolled in the School of Nursing who demonstrate financial need.

THE STRYKER AFRICAN ANCESTRY NETWORK BURSARY
Established in 2024 by Stryker Canada ULC.
Requirements: To be granted to undergraduate students enrolled in Level 2 or above in the Faculty of Health Sciences who self-identify as Black and demonstrate financial need.

THE AUDREY AND BOB WAUGH BURSARY
Established in 1997 by Audrey and Bob Waugh under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in the Faculty of Health Sciences who demonstrates financial need. Preference to be given to a student involved in Gerontological research.

THE DR. JANET WEISZ BURSARY
Established in 2004 by Dr. Janet Weisz, under the McMaster Student Opportunity Trust Fund II initiative.
Requirements: To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need.

Open to the Faculty of Humanities

THE JENNIFER AND THEODORE ARCAND ENGLISH BURSARY
Established in 1997 by Theodore Arcand (Class of '57), in memory of his wife, Jennifer (Class of '57), whose interest was Baroque English poetry.
Requirements: To be granted to undergraduate or graduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in an English and Cultural Studies program.

THE ESTELLE AND CHUB BAXTER BURSARY
Established in 2003 by Estelle and Chub Baxter under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in an Art History program in the School of the Arts.

THE MARJORIE E. (WATSON) BEATTIE BURSARY
Established in 1997 by William W. Beattie (Class of '68) in honour of his mother, Marjorie E. (Watson) Beattie (Class of '33), under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in any program who demonstrates financial need. Preference to be given to students enrolled in the Faculty of Humanities.

THE FRED AND NORMA BIDWELL BURSARY
Established in 2007 by Norma Bidwell, B.A. (Class of '38).
Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students in the Department of Communication Studies and Multimedia.

THE SYLVIA BOWERBANK MEMORIAL BURSARY
Established in 2005 by family and friends in memory of Dr. Sylvia Bowerbank.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who identify as Indigenous and demonstrate financial need. Preference will be given to students enrolled in the Department of English & Cultural Studies.

THE WILLIAM DAVID BROADHEAD MEMORIAL BURSARY
Established in 2003 by family in memory of William David Broadhead (Class of '39) under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in the Department of English and Cultural Studies.

THE BARBARA BROWN BURSARY
Established in 2019 by Barbara Brown, B.A. (Class of '66) in gratitude for the bursary she received as a student and in the spirit of extending that gift to others.
Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE MARIE IRELAND BUSH MEMORIAL BURSARIES
Established in 1996 by Helen Ireland Caldwell in memory of Marie Ireland Bush, (Class of '48) a dedicated teacher, who instilled in her students a love of learning.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in an English & Cultural Studies program.

THE HELEN CALDWELL BURSARY
Established in 2000 by Helen Caldwell (Class of '42, Faculty of Humanities.)
Requirements: To be granted to a student enrolled in a Women's Studies course who demonstrates financial need.

THE NORMAN NATHANIEL CASKEY BURSARIES
Established in 1996 by June Caskey of Hamilton in memory of her father.
Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a Music program.

THE DAVID COOK CANADIAN LITERATURE BURSARY
Established in 2016 in honour of David Cook who was a devotee of Canadian Literature and long-time librarian at McMaster University.
Requirements: To be awarded to students enrolled in the Department of English and Cultural Studies who demonstrate financial need. Preference will be given to students with an interest in English Literature.

THE GERALDINE LORETTA COSFORD BURSARIES
Established in 1997 by Geraldine Loretta Cosford under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students who have completed Level 1.

THE SUZANNE E. CRAVEN BURSARY
Established in 1997 by Mrs. Suzanne Craven in support of McMaster students.
Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE EARL FRANKLIN DAMUDE BURSARY
Established in 1993 by Dr. Christa Saas, in memory of Earl Franklin Damude (Class of '36.)
Requirements: To be granted to a student who demonstrates financial need and has completed Level 2 of a program in English or History.

THE DARVILLE BURSARY
Established in 2004 by Jack S. Darville (Class of '68) under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a music or art program in the School of the Arts.

THE MARGERY E. DIXON MEMORIAL BURSARY
Established in 2003 in loving memory of Margery E. Dixon (Class of '35) by Geraldine Phenix under the McMaster Student Opportunity Fund II initiative.
Requirements: A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a program in the Department of English and Cultural Studies.

THE ALAN AND CLAIRE EATOCK BURSARIES
Established in 1999 by Alan Eatock (Class of '47) and Claire Eatock under the McMaster Student Opportunity Fund initiative.
Requirements: A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need.

THE ENERSYSTEM INSULATION LTD. BURSARY
Established in 1997 by EnerSystem Insulation Ltd. in support of its belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in a program in French who demonstrates financial need.

THE FACULTY OF THE DEPARTMENT OF HISTORY BURSARY
Established in 2020 by the Faculty members of the Department of History.
Requirements: To be granted to undergraduate students enrolled in a History program who identify as Black or Indigenous students and demonstrate financial need.

THE FESTITALIA CORPORATION BURSARY
Established in 1997 by the Festitalia Corporation under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted, in alternating years, to a student who demonstrates financial need and is enrolled in the Department of Linguistics and Languages, specializing in Italian, or is enrolled in the School of the Arts.

THE JIM & MARGARET GIBSON ENGLISH & CULTURAL STUDIES BURSARY
Established in 2020 by the Estate of Margaret Janet Wilson Gibson B.A. (Class of '89), in memory of Jim and Margaret Gibson.
Requirements: To be granted to students enrolled in Level 3 or above of an English and Cultural Studies program in the Faculty of Humanities who demonstrate financial need.

THE JIM & MARGARET GIBSON MEMORIAL BURSARY
Established in 2020 by the Estate of Margaret Janet Wilson Gibson B.A. (Class of '89), in memory of Jim and Margaret Gibson.
Requirements: To be granted to students enrolled in Level 3 or above in the Faculty of Humanities who demonstrate financial need. Preference will be given to students with an interest in German Studies or those enrolled in German courses.

THE MICHAEL GILLESPIE BURSARY
Established in 2010 by Michael Gillespie.
Requirements: To be awarded to an undergraduate student enrolled in the Faculty of Humanities who demonstrates financial need.

THE GRIFFIN BURSARY
Established in 2021 by Danielle Griffin, Ph.D. (Class of 2001).
Requirements: To be granted to undergraduate students enrolled in the Faculty

of Humanities who demonstrate financial need. Preference will be given to students enrolled in a History Program.

THE GUENTHER FAMILY BURSARY

Established in 2012 by Jack and June Guenther (Class of 1949) in honour of their family.

Requirements: A variable number of bursaries to be awarded to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE BILL AND HELEN HAIGHT BURSARY

Established in 2004 by Helen (Class of '49) and Bill Haight under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students in Level 2 or 3 of a Music program.

THE HALL FAMILY BURSARY

Established in 2004 by Frederick A. Hall under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need.

THE HAMILTON COMMUNITY FOUNDATION MUSIC BURSARY

Established in 2013 by the Hamilton Community Foundation with bequests from Irene Norris and Merle Williams.

Requirements: To be granted to students enrolled in a Music program who demonstrate financial need.

THE HAMILTON PERFORMING ARTS BURSARY

Established in 1997 by the Hamilton Performing Arts Foundation Inc. under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to students enrolled in Level 2 or above of a program in the School of the Arts, who has shown service to the community-at-large and who demonstrates financial need. Preference to be given to students who are currently on the Deans' Honour list.

THE HARWOOD BURSARIES

Established in 1990 by bequest of Dr. William Harwood of Hamilton in memory of his beloved wife Grace and devoted daughter Willa Ruth Laurie (Class of '50).

Requirements: A variable number of bursaries to be granted to students studying Music who demonstrate financial need.

Value: Not to exceed $1,000

THE ORRA ROSE HENAN BURSARY

Established in 2014 through the bequest of Orra Rose Henan (Class of '53).

Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE HUMANITIES BLACK STUDENT BURSARY

Established in 2020.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who identify as Black students and demonstrate financial need. Preference will be given to students in a Communication Studies or Multimedia program.

THE GENERAL HUMANITIES BURSARY FUND

The General Humanities Bursary Fund, established in 1997 by Humanities alumni.

Requirements: Will be granted to undergraduate students at McMaster enrolled in any Humanities program who demonstrate financial need.

THE JULIA HURTIG BURSARY

Established by family and friends of the late Julia Hurtig in 1985.

Requirements: This bursary will be granted to a student entering Level 2 of the Faculty of Humanities, in good standing, who has made a special contribution to the McMaster community through involvement in University affairs. Preference will be given to a female student.

THE J. BEVERLY KRUGEL BURSARIES IN GERMAN STUDIES

Established in 2010 by Mrs. J. Beverly Krugel, B.A. (Class of '53).

Requirements: To be granted to students in the Faculty of Humanities who demonstrate financial need. Preference to be given to students who are enrolled in one or more German courses within the Department of Linguistics and Languages.

THE HAROLD J.L. KRUGEL BURSARY

Established in 2000 by Mrs. J. Beverly Krugel (Class of '53) in honour of her husband, Harold J.L. Krugel.

Requirements: To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student in the Department of Linguistics and Languages.

THE LAHREN LAMB MEMORIAL BURSARY

Established in 2007 by family and friends in loving memory of Lahren Lamb, B.A. (Class of '06), a gifted young artist and graduate of the Honours Art and Multimedia program who did not live to fulfill her potential. She was a truly loved and admired young woman.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the School of the Arts.

THE JAMES R. A. LANGS BURSARIES IN THE ARTS

Established by family in memory of James R. A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in Art, Theatre & Film Studies or Music Programs.

THE ELIZABETH LOWDEN BURSARY IN HISTORY

Established in 2022 in memory of Elizabeth Audet (nee Lowden) by her estate and family.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the Department of History.

THE DR. ALBERT MARTIN BURSARIES

Established in 1996 by Joyce Beverly Krugel, a former student of Dr. Albert Martin who was a Professor of German in the Faculty of Arts and Science from 1939 to 1961.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the Department of Linguistics and Languages.

THE J. B. MCARTHUR BURSARY

Established in 2005 by Joseph B. McArthur, son of J. B. McArthur, a 1905 graduate of McMaster University, who conscientiously served his alma mater for forty two years as President of the McMaster Alumni Association (1911), member of McMaster's Senate (1911-1931) and member of McMaster's Board of Governors (1931-1953).

Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE MCMASTER HISPANIC SOCIETY BURSARY

Established in 1999 by the McMaster Hispanic Society under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in Spanish courses (formerly Hispanic Studies) or a Linguistics and Languages program who demonstrates financial need. Preference will be given to students who demonstrate a lively interest in the University and community through their involvement in extracurricular activities.

THE THERESE E. MOORE BURSARY

Established in 2003 by David M. Moore (Class of '00) in honour of his mother, Therese E. Moore.

Requirements: To be granted to a student enrolled in a program in History who demonstrates financial need.

THE JUSTICE RUSSELL J. OTTER BURSARY

Established in 2021 by Justice Russell J. Otter, B.A. (Class of '66).

Requirements: To be granted to undergraduate students enrolled in the Faculty

of Humanities who demonstrate financial need.

THE PATTERSON-WILSON BURSARIES

Established in 2003 by the bequest of Laurence Cholwill Patterson under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to students in the Faculty of Humanities who demonstrate financial need.

THE DR. HOLLAND AND MRS. ELVIRA PETERSON BURSARY

Established in 1997 by Dr. Holland and Mrs. Elvira Peterson under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to those enrolled in a program in the Department of Linguistics and Languages.

THE ELVIRA AND HOLLAND PETERSON BURSARY

Established in 2000 by Mrs. Elvira Peterson (Class of '69) and Dr. Holland Peterson.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities, who demonstrates financial need. Preference will be given to students enrolled in Honours Art History or Combined Art History program.

THE LILLIAN PLUMB BURSARY

Established in 1998 by David Plumb in honour of his mother, Lillian Plumb.

Requirements: To be granted to a student enrolled in a program in the Department of English and Cultural Studies and who demonstrates financial need.

THE MARY ROMEO BURSARY IN ART HISTORY

Established in 1997 by Mary Romeo, a lifelong patron of the arts.

Requirements: To be granted to undergraduate and graduate students enrolled in the Faculty of Humanities and demonstrate financial need. Preference will be given to students enrolled in an Art History Program.

THE SAMMON MUNROE BURSARY

Established in 2003 by Robert Munroe (Class of '72) and Sheila Sammon under the Mc-Master Student Opportunity Fund II initiative.

Requirements: To be granted to a student in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in History.

THE SMYRNIW BURSARY

Established in 1996 by Dr. and Mrs. W. Smyrniw.

Requirements: To be granted to students who are Canadian citizens or permanent residents who demonstrate financial need and are in good academic standing in any undergraduate program of the Faculty of Humanities above Level 1.

THE SPALLACCI GROUP BURSARY

Established in 2009 by The Spallacci Group.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Humanites who demonstrate financial need. Preference will be given to students specializing in Italian studies.

THE SALVATORE SPITALE MEMORIAL BURSARY

Established in 1984 and augmented in 1997 by the Spitale family in conjunction with the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student in the Department of Linguistics and Languages, Level 2 or above, who demonstrates financial need and has completed a minimum of nine units of Italian courses. Preference to be given to a student who has demonstrated active involvement in community life.

THE LILLIAN AND HERMAN STEEVES BURSARY IN HUMANITIES

Established in 2007 by Glen Steeves, B.A. (Class of '80) and Lorne Steeves in honour of their mother and father.

Requirements: To be granted to students in the Faculty of Humanities who demonstrate financial need. Preference will be given to students who have demonstrated leadership in their school and community.

THE DONALD W. THOMAS BURSARIES

Established in 1996 by Donald W. Thomas of Dundas, Ontario.

Requirements: A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need.

THE DONALD WILLIAM THOMAS MEMORIAL BURSARY

Established in 2005 by Jack Craig in memory of Donald William Thomas, B.A. (Class of '70).

Requirements: To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a program in the School of the Arts.

THE ROBERTA GRAY TROXEL BURSARY

Established in 1997 by Roberta Gray Troxel under the McMaster Student Opportunity Fund initiative.

Requirements: To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference to be given to a female undergraduate student enrolled in a History program.

THE TRESSILA TRUBY MEMORIAL BURSARY

Established in 1992 from the bequest of Tressila Truby (M.C.S.P.) and Past-President of the Zonta Club of Hamilton II.

Requirements: To be granted to a female student who has completed Level 2 of a program in Music.

THE JOHN AND JOAN VAN DUZER BURSARY

Established in 2003 by John (Class of '50) and Joan Van Duzer under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to a student in the Faculty of Humanities who demonstrates financial need.

THE CATHERINE VASAS-BROWN BURSARIES

Established in 1996 by J. Allan Brown in honour of Catherine Vasas-Brown.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE CLIFFORD JOHNSTON WEBSTER MEMORIAL BURSARIES

Established in 1993 by Viola Webster, B.A. Hon. (Class of 1943) in memory of her brother Clifford Johnston Webster (Class of 1941).

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities, who graduated from an Ontario public secondary school, attain high averages and demonstrate financial need. First preference will be given to students who are enrolled in Honours English, then Honours French.

THE KATHRYN A. WILSON BURSARIES

Established in 2000 by bequest of Kathryn A. Wilson.

Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need.

THE SHELDON AND JANET WOLFSON NURSING BURSARY

Established in 2024 by Sheldon and Janet Wolfson to support the academic success of those pursuing the field of Nursing.

Requirements: To be granted to undergraduate students enrolled in any Nursing program who demonstrate financial need.

THE EDIE M. YEOMANS BURSARY IN FINE ARTS

Established in 2022 in memory of Edie M. Yeomans by her family and friends. The depth and breadth of her knowledge made Edie a sought-after lecturer on both sides of the border including at the Pratt Institute and a Fellow of the American Society of Appraisers where she served as governor and in other executive roles. Edie also chaired Toronto's Outdoor Art Exhibition for several years and served as board member at the Varley Art Gallery in Markham.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the School of the Arts.

THE SHEILA ZACK MEMORIAL BURSARY

Established by the 45th Annual B'nai Brith Sports Celebrity Dinner.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a Theatre & Film Studies program.

Open to the Faculty of Science

THE G. RODGER ALLAN BURSARY
Established in 2007 by M. Elizabeth Orr, B.A. (Class of '46) and her husband Robert Orr in memory of her brother G. Rodger Allan, B.A. (Class of '46).
Requirements: To be granted to a student enrolled in the Faculty of Science who demonstrates financial need.

THE HELEN AND MORRIS BAUGHMAN BURSARY
Established in 2005 by Marvin Ryder in honour of Helen and Morris Baughman.
Requirements: To be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference to be given to students in Level 3 or 4 of a Biology program.

THE MICHAEL AND LORA BEATTIE BURSARY
Established in 2021 by Michael and Lora Beattie.
Requirements: To be granted to undergraduate students enrolled in the School of Earth, Environment & Society who demonstrate financial need.

THE BEVERLY COLEMAN MEMORIAL BURSARY
Established in 2009 by Dr. Douglas Coleman in loving memory of Mrs. Beverly Jean Coleman.
Requirements: To be granted to students enrolled in the Department of Biochemistry and Biomedical Sciences who demonstrate financial need.

THE ANNIE AND HENRY COOPER MEMORIAL BURSARY
Established in 2022 by Kenneth Cooper (Class of '60), in honour of his parents Annie and Henry Cooper, to support students in pursuing their academic goals.
Requirements: To be granted to undergraduate students entering Level 4 in a Mathematics or Physics program who demonstrate financial need. Preference will be given to students who will pursue a career in teaching.

THE STEWART ANDERSON DINNING BURSARY
Established in 2008 by the Stewart Anderson Dinning Estate.
Requirements: To be granted to students enrolled in an Honours Chemistry program who demonstrate financial need.

THE DEPARTMENT OF MATHEMATICS & STATISTICS 80TH ANNIVERSARY BURSARY
Established in 2024 in honour of the 80th anniversary of the Department of Mathematics & Statistics.
Requirements: To be granted to undergraduate students enrolled in the Department of Mathematics & Statistics who demonstrate financial need.

THE FACULTY OF SCIENCE BURSARIES
Established in 2019 by McMaster University.
Requirements: To be granted to students enrolled in the Faculty of Science who demonstrate financial need.

THE LIZ FERRIER MEMORIAL BURSARY
Established in 2022 by Marla Dahlke, in memory of her friend, Liz Ferrier.
Requirements: To be granted to undergraduate students enrolled in the department of Kinesiology who demonstrate financial need. Preference will be given to students who are members of the McMaster Golf Team.

THE PATRICIA ANN FRENCH BURSARY
Established in 2020 by Chris French, B.Sc. Hons. (Class of '94) and his wife Jennifer Prihoda French, B.Com. (Class of '97), in recognition of Patricia and the passion for science that she instilled in her son.
Requirements: To be granted to female undergraduate students enrolled in a Biology program who demonstrate financial need.

THE DAVID FUNG SCIENCE BURSARY
Established in 2007 by David Fung, B.Sc. (Class of '75), M.B.A. (Class of '77) in support of his belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to a student enrolled in the Faculty of Science who demonstrates financial need.

THE JAMES EDWARD GRADER MEMORIAL BURSARY
Established in 1964 by his sister.
Requirements: To be granted to students enrolled in the Faculty of Science enrolled in The School of Earth, Environment & Society who demonstrates financial need.

THE ASMAHAN HAFEZ MEMORIAL BURSARY
Established in 1997 by her family in memory of Asmahan Hafez.
Requirements: To be granted to a student enrolled in Level 1 of the Faculty of Science who demonstrates financial need.

THE JAMES WILSON HOUSTON & JACKLYN HOUSTON BURSARY
Established in 2017, in honour of McMaster alumni James Wilson Houston & Jacklyn Houston.
Requirements: To be awarded to a student who demonstrates financial need and is registered in a Science Program.

THE DONALD W. HURD BURSARY
Established in 2006 by Alice Hurd in honour of her husband Donald W. Hurd, M.Sc. (Class of '50).
Requirements: To be granted to students enrolled in the Earth and Environmental Sciences program in the Faculty of Science who demonstrate financial need.

THE IRMA BURSARY
Established in 2019 by anonymous donors hoping to make a brighter world for student refugees forced to leave their country due to political or social upheaval or students with permanent resident status.
Requirements: To be granted to full-time undergraduate students enrolled in the Faculty of Science who have permanent resident status or a recognized claim of refugee protection from the Immigration Refugee Board of Canada and who demonstrate financial need. Preference will be given to refugee students. The bursary is tenable for up to four years, with special consideration for students undertaking a five-year undergraduate degree program. In order to remain eligible for funding, recipients must remain full-time, with the intention of completing their degree within the normal program duration, be allowed to continue at McMaster University, and continue to demonstrate financial need.

THE JENSEN BURSARY
Established in 1997 by Dr. Doris E.N. Jensen in conjunction with the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student in the Faculty of Science, Level 2 or higher, who demonstrates financial need. Preference to be given to a student enrolled in a co-op program in the Faculty of Science.

THE DR. HERMAN KLEEREKOPER AND BIOLOGY FACULTY OF 1954 BURSARY
Established in 2020 by Dr. Kaye Hayashida and Tullio Cedraschi to honour the inspiring teachings of Dr. Herman Kleerekoper, the Biology Faculty, and members of the Science and Arts Faculty of 1954.
Requirements: To be granted to undergraduate students enrolled in a Biology program who identify as racialized or Indigenous students and demonstrate financial need.

THE NORMAN D. LANE BURSARIES
Established in 1996 by family and friends in honour of Dr. Norman D. Lane, distinguished geometer and member of the Department of Mathematics and Statistics from 1952 to 1987 and now Professor Emeritus.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Mathematics who demonstrate financial need.

THE W. BRUCE MACLEAN BURSARY
Established in 2018 by the estate of W. Bruce MacLean, B.A. (Class of '33), M.A. (Class of '47) in honour of Professors Henry Franklin Dawes and Dr. A. Boyd McLay, B.A. (Class of '22).
Requirements: To be granted to students enrolled in a Physics program who demonstrate financial need.

THE JOHN AND HELEN MAXWELL BURSARIES
Established in 1996 by John and Helen Maxwell of Ottawa.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference to be given to students enrolled in a program in Earth Sciences or Chemistry.

THE DR. FREDA MAMKIROR OMASWA MEMORIAL BURSARY
Established in 2016 by family, peers and friends in loving memory of Freda Mamkiror Omaswa (Class of 2004). Freda was a talented physician who loved international health, was confident and passionate about helping others, and built lasting friendships all over the world.
Requirements: To be awarded to a student who demonstrates financial need, and has completed at least Level 1 of the Life Sciences program.

THE ROBERT MCNUTT MEMORIAL BURSARY
Established in 2018 by family, friends and colleagues, in memory of Robert (Bob) McNutt, one of McMaster's most versatile and accomplished academic leaders and scientists.
Requirements: To be granted to students enrolled in Level 2 or above in the Faculty of Science who demonstrate financial need.

THE MORT NELSON FAMILY BURSARY
Established in 2018 by Mort Nelson (Classes of '62 & '72) and family in memory of Professor Evelyn Nelson to support students pursuing their academic and professional goals.
Requirements: To be granted to students enrolled in Level 2 or above of a Mathematics program who demonstrate financial need.

THE BARBARA PARKE BURSARY
Established in 2007 by Barbara Parke, B.Sc. (Class of '72).
Requirements: To be granted to a student who has completed Mathematics and Statistics I, demonstrates financial need and has attained a minimum Grade Point Average of 8.0.

THE PHYSICAL EDUCATION CLASS OF '80 25TH ANNIVERSARY BURSARY
Established by the Bachelor of Physical Education Class of '80 in honour of their 25th Anniversary.
Requirements: To be granted to students in Level 2 or above of a program in Kinesiology who demonstrate financial need.

THE PITCHER-RATFORD BURSARIES
Established in 2004 by Bruce Ratford (Class of '71) and Elda Ratford (Pitcher) (Class of '71) under the McMaster Student Opportunity Fund II initiative.
Requirements: A variable number of bursaries to be granted to students enrolled in the School of Earth, Environment & Society who demonstrate financial need. Preference will be given to students who have completed Level 3 of an Environment & Society program with a Grade Point Average of 8.0 at the most recent review.

THE DR. JOHN POTTER BURSARY
Established in 2019 by the family of Dr. John Potter, B.Sc. Honours (Class of '58) to honour his memory and life achievements.
Requirements: To be granted to students enrolled in a Physics or Mathematics program who demonstrate financial need.

THE HARRY A. ROTHMANN BURSARY
Established in 2005 by Harry A. Rothmann, B.Sc. (Class of '58).
Requirements: To be granted to students in the Faculty of Science enrolled in a program in Mathematics who demonstrate financial need.

THE ERIC SCHLICHTING MEMORIAL BURSARY
Established in 1966 by his family, classmates and friends.
Requirements: To assist students in a program in the Faculty of Science who demonstrates financial need. Preference will be given to students enrolled in The School of Earth, Environment & Society.

THE SCIENCE ALUMNI BURSARY
Established in 2004 by the Faculty of Science through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative.
Requirements: To be granted to a student in the Faculty of Science who demonstrates financial need. Preference to be given to a student who has attained a minimum Grade Point Average of 7.0 at the most recent review.

THE JOHN S. AND BARBARA SCOTT BURSARY
Established in 2015 by Mrs. Barbara Scott (Class of '53) and family, in memory of Dr. John S. Scott (Class of '53) of Ottawa.
Requirements: To be awarded to students studying in the Faculty of Science, who demonstrate financial need.

THE GEORGE SORGER BURSARY IN BIOLOGY
Established by the friends of Dr. George Sorger.
Requirements: To be granted to a student in Level 4 of a Biology program who demonstrates financial need. Preference will be given to students who have attained a Grade Point Average of at least 9.0 at the most recent review and who are also involved in community service.

THE VIOLET GERTRUDE TERRYBERRY SCOTT BURSARY
Established in 2021 by Carl and Sandra Scott of CVS Industries Inc. in memory of Violet Gertrude Terryberry Scott (Class of 1936) to support students to pursue their academic and professional goals.
Requirements: To be granted to undergraduate students enrolled in a Mathematics or Physics program who demonstrate financial need.

THE BROOKE P. TOWNSEND BURSARY
Established in 1996 by Brooke P. Townsend.
Requirements: To be granted to a student in any program who has demonstrated financial need. Preference to be given to a female student enrolled in the Faculty of Science.

THE TURNER FAMILY BURSARY
Established in 2005 by Mary Turner, B.Sc. (Class of '74) and Graham Turner, Ph.D. (Class of '76) in memory of Dr. Colin J.L. Lock, Professor of Chemistry and Pathology.
Requirements: To be granted to students enrolled in the Faculty of Science who demonstrate financial need.

THE WALLER FAMILY BURSARY
Established in 2014 by the Waller Family in memory of Thomas Edward and Norma Waller.
Requirements: To be awarded to students in a Biology program who demonstrate financial need.

THE KENNETH J. WARD MEMORIAL BURSARY
Established in 2024 by Maria Ward, in loving memory of her husband, Kenneth J. Ward (Class of 1971), to honour her grandchildren's pursuits of health and nutrition.
Requirements: To be granted to undergraduate students enrolled in a Kinesiology program who demonstrate financial need. Preference will be given to students who demonstrate an interest in health and nutrition.

THE MARY AND HAROLD WATERMAN UNDERGRADUATE SCIENCE BURSARY
Established in 2019 by Mary (Class of '48) and Dr. Harold Waterman (Class of '48 & '49).
Requirements: To be granted to undergraduate students enrolled in the Faculty of Science who demonstrate financial need.

THE FRIDA AND JOACHIM WOLTER BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative by Claus Wolter (Class of '80) in honour of his parents, Frida and Joachim Wolter.
Requirements: To be granted to a student enrolled in the Kinesiology program who demonstrates financial need.

THE JOHN YARWOOD MEMORIAL BURSARY
Established in 1998 by family and friends in memory of Dr. A.J. Yarwood.
Requirements: To be granted to a Level 2 student enrolled in an Honours Chemistry program who demonstrates financial need.

Open to the Faculty of Social Sciences

THE ANTHROPOLOGY BURSARY
Established in 1996 by faculty, alumni and other friends of the Department of Anthropology.
Requirements: To be granted to students who have completed Level 2 of a program in Anthropology and who demonstrate financial need. Preference will be given to students entering Level 3.

THE FRED AND JEAN ARMER BURSARY
Established in 2006 by Jean Armer in memory of her husband Frederick B. Armer, B.A. (Class of '75) and in support of her belief that all students should be able to pursue their educational goals.
Requirements: To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to students enrolled in Level 2 or Level 3 of a program in Anthropology.

THE ATKINSON CHARITABLE FOUNDATION BURSARY
Established in 1996 by The Atkinson Charitable Foundation.
Requirements: To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to the recipient of The Atkinson Charitable Foundation Award.

THE NORMA BERTI BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative by Norma Berti, active Stelco employee for 34 years and recognized by the Hamilton Council of Women as *Woman of the Year* for her charitable community contributions.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in a program in Work and Labour Studies.

THE SIDNEY L. BLUM BURSARY
Established in 1989 by friends and associates in memory of Sidney L. Blum.
Requirements: To be granted to one undergraduate and one graduate student enrolled in a program in Social Work who demonstrate financial need. Preference will be given to the undergraduate students enrolled in the Spring-Summer term in SOCWORK 3D06 A/B S.

THE DR. RICHARD A. BRYMER MEMORIAL BURSARY
Established in 1998, under the McMaster Student Opportunity Fund initiative, by Mrs.Isabelle Brymer in memory of her husband, Dr. Richard Brymer, who served as a faculty member in the Department of Sociology at McMaster University from 1969 to 1996.
Requirements: To be granted to a student enrolled in a program in Sociology or Anthropology who demonstrates financial need.

THE JODIE ANNE BULL MEMORIAL BURSARIES
Established in 1996 by her family in memory of Jodie Anne Bull.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. At least one bursary to be granted to a student enrolled in Work and Labour Studies.

THE ELEANOR TURNER CARMENT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in a program in Women's Studies.

THE CHRIS CLARK BURSARY
Established in 2021 by Chris Clark, M.A. (Class of '73) in appreciation of the contribution the Economics Faculty made to his career and lifestyle.
Requirements: To be granted to undergraduate students enrolled in an Economics program who demonstrate financial need. Preference will be given to students enrolled in an Honours Economics and Mathematics or Honours Economics and History program.

THE CLASS OF '46 BURSARIES
Established by the Year '46 in honour of their 40th class reunion.
Requirements: To be granted to a student in a program in Aging and Society.

THE MRS. MARGARET CUDMORE BURSARY
Established in 2005 under the Ontario Trust for Student Support initiative.
Requirements: To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in an Economics or Political Science program.

THE BEN F. DESROCHES BURSARIES
Established in 1996 as a tribute to Ben F. DesRoches, Stelco employee from 1949 to 1966 and elected Municipal Councillor for Saltfleet and Stoney Creek from 1969 to 1978, in recognition of his outstanding contributions to labour and to men and women in the greater Hamilton area.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Work and Labour Studies who demonstrate financial need.
Value: The value of this award shall be not less than $300.

PATRICIA ANNE DICICCIO MEMORIAL BURSARY
Established in 1988.
Requirements: This bursary is to be granted to a student or students enrolled in a program which includes Aging and Society as a major, who is a Canadian citizen or permanent resident and who exhibits financial need.

THE MARGARET E. DUNCAN BURSARY
Established in 1998 by Mr. and Mrs. J. Bruce Duncan in honour of his late mother who was a long-term volunteer in McMaster's Gerontology Program as a Tutor and, subsequently, a Senior Class Assistant.
Requirements: A variable number of bursaries to be granted annually to students enrolled in a Gerontology course who demonstrate financial need.

THE ILA MARIA FRANKLIN MEMORIAL BURSARY
Established in 2024 in memory of Ila Maria Franklin by her family in recognition of the need to address the systemic circumstances that separated her from her Indigenous heritage.
Requirements: To be granted to undergraduate students enrolled in Indigenous Studies who demonstrate financial need.

THE KITSY FRASER BURSARY
Established in 2017 by Kitsy (Potter) Fraser (Class of '61) to support students independent of their academic achievements.
Requirements: To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need.

THE BILL FULLER BURSARY
Established in 1996 in commemoration of the 50th anniversary of the historic 1946 Stelco strike by William E. (Bill) Fuller, recognized by the City of Hamilton for his volunteer work which included serving as Vice-President of Labour Community Services of the United Way for six years, member of The Hamilton Community Foundation Board from 1990-96, Chairman of the Finance Committee of the Holy Family Church and Hamilton's Citizen of the Year in 1991.
Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in the Work and Labour Studies program.

THE HAMILTON AND DISTRICT LABOUR COUNCIL BURSARY
Established in 1997 by the Hamilton and District Labour Council under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student enrolled in the Work and Labour Studies Program who demonstrates financial need.

THE HAMILTON FOLLIES INC. (GERITOL FOLLIES) BURSARY
Established in 1997 by the Hamilton Follies Inc. (Geritol Follies) under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student in any program who demonstrates financial need. Preference to be given to a student enrolled in Level 3 or above in the Aging and Society program.

THE SUSAN AND BRIAN HASSALL BURSARY
Established in 2017 by Susan (Class of '98) and Brian (Class of '79 and '83) Hassall.
Requirements: To be awarded to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference given to students in the Work and Labour Studies program.

THE HUQUE FAMILY BURSARY
Established in 2016 by Dr. Ahmed Shafiqul Huque, his wife Yasmin, and their family in the belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be granted to students enrolled in a Political Science program who demonstrate financial need. Preference to be given to international students.

THE JOHN B. ISBISTER BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by John B. Isbister of Stoney Creek, valued member of the United Steelworkers of America for 39 years and honoured war veteran by Canada and the navy on four occasions.
Requirements: To be granted to a student enrolled in a program in the Work and Labour Studies Program who demonstrates financial need.

THE JAMES A. JOHNSON CLASS OF '97 BURSARIES
Established by the Economics graduating Class of '97, and friends, under the McMaster Student Opportunity Fund initiative, in honour of Dr. James A. Johnson, to recognize his nine years as Dean of the Faculty of Social Sciences and his thirty-five years of dedicated service to the Department of Economics and McMaster University.
Requirements: A variable number of bursaries to be granted to students in a degree program in Economics who demonstrate financial need. Preference will be given to the recipient of The James A. Johnson Community Contribution Award.

THE ANDREW JOHNSTONE MEMORIAL BURSARY
Established in 2002 by colleagues, family and friends in memory of Andrew Johnstone.
Requirements: To be granted to a Level 3 student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to a student in an Economics program.

THE GEORGE KOBLYK MEMORIAL BURSARY
Established in 2016 by friends and family in memory of long time McMaster alumni volunteer George Koblyk (Class of `60 and `67).
Requirements: To be awarded to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference to be given to a student from Hamilton.

THE TRUDY AND CECIL LAMOCA BURSARY
Established in 2012 by Roland Lamoca, B.A.Hon. (Class of '86) in honour of his parents, Trudy and Cecil, for believing in the importance of supporting students in achieving their academic goals.
Requirements: To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need.

THE KELLY DAWN LAPP MEMORIAL BURSARY
Established in 1997 by family and friends under the McMaster Student Opportunity Fund initiative in memory of Kelly Dawn Lapp who received her B.A./B.S.W. degree from McMaster University in 1996.
Requirements: To be granted to a student enrolled in the Social Work program who demonstrates financial need. Preference will be given to a student who has volunteered or worked in programs related to violence against women and children, employment and affordable housing for women, advocacy and treatment of mental health patients, addiction treatment or prevention of cruelty to animals.

THE JOHN A. 'JACK' MACDONALD BURSARIES
Established in 1996 as part of the Hamilton Sesquicentennial Celebrations in honour of John A. 'Jack' MacDonald for his 45 years of outstanding service and leadership to Hamilton and the region.
Requirements: A variable number of bursaries to be granted to students enrolled in a Political Science program who demonstrate financial need and interest in extracurricular or community activities.

THE EWAN MACINTYRE BURSARIES
Established in 1999 by the Social Work Alumni Branch, the Citizen Action Group, the Social Work Students Association, faculty (past and present), staff, friends, alumni, and various organizations associated with McMaster's School of Social Work as a tribute to Dr. Ewan Macintyre for his 29 years of service to the School, including 12 years of service as the School's Director.
Requirements: A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in a Bachelor of Social Work program.

THE DIANNE MACISAAC MEMORIAL BURSARY
Established in 1994 by friends and family of Dianne MacIsaac and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student or students enrolled in a program in Sociology who demonstrate financial need. Preference will be given to students with disabilities.

THE BOB MACKENZIE BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by Bob MacKenzie, political organizer for the United Steelworkers Union and valued MPP for Hamilton East for twenty years.
Requirements: To be granted to a student enrolled in Work and Labour Studies who demonstrates financial need.

THE ENRICO HENRY MANCINELLI BURSARIES
Established in 1996 by the Labourers' International Union of North America, Local 837 in honour of Enrico Henry Mancinelli, LIUNA Canadian Director and Vice President and Local 837 President.
Requirements: Two bursaries to be granted to students enrolled in the Work and Labour Studies program who demonstrate financial need. Preference to be given to students attaining a Fall-Winter Average of at least 7.0 at the most recent review.

THE LAWRENCE MCBREARTY BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative by Lawrence McBrearty, current National Director of the United Steelworkers of America and President of the Steelworkers' Humanity Fund, the Union's third world aid and development arm.
Requirements: To be granted to a student enrolled in the Work and Labour Studies program who demonstrates financial need. The value of this award shall be no less than $300.

THE JOHN AND MARY MCCARTHY BURSARY
Established in 2017 by John McCarthy, B.A. (Class of '75) and his wife, Mary McCarthy, B.A. (Class of '91) to honour their belief that education should be accessible to everyone.
Requirements: To be granted to students enrolled in the Faculty of Social Sciences, who demonstrate financial need.

THE R. CRAIG MCIVOR BURSARIES
Established in 1996 as a tribute to Professor R. Craig McIvor by his family, friends, colleagues and students.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in an Honours program in Economics.

THE HONOURABLE JOHN C. MUNRO BURSARIES
Established in 1998 by family, friends and colleagues of the Honourable John C. Munro for his outstanding years of service and commitment to the political life of Canada and to the Regional Municipality of Hamilton-Wentworth.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Political Science who demonstrate financial need.

THE CAROLE AND ALEXANDER NAKEFF BURSARIES
Established in 2000 by Carole Anne Nakeff (Class of '69) and Dr. Alexander Nakeff.
Requirements: A variable number of bursaries to be granted to students enrolled in a Political Science or Environmental Studies program who

demonstrate financial need.

THE MCQUADE FAMILY BURSARY

Established in 2010 by John McQuade (Class of '77).

Requirements: To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need.

THE NORTHWATER CAPITAL MANAGEMENT BURSARY

Established in 1997 by Northwater Capital Management in support of its belief that all students should have the opportunity to pursue their educational goals.

Requirements: A variable number of bursaries will be granted annually to McMaster students enrolled in the Aging and Society program who demonstrate financial need. Preference to be given to students who have participated in a conference or workshop on Gerontology.

THE MARION PEARCE BURSARIES

Established in 1990 by Dr. Sally Palmer in memory of her aunt Marion Pearce (Class of '20). Miss Pearce worked with New Canadians at the Beverly Street Baptist Church in Toronto.

Requirements: A variable number of bursaries to be granted to students enrolled in the Social Work program who have demonstrated financial need.

THE PEVENSING BURSARIES

Established in 1996 by David Hannaford (Class of '64).

Requirements: A variable number of bursaries to be granted to students enrolled in the penultimate year of an Honours program in Economics who demonstrate financial need.

THE BETH PHINNEY BURSARY

Established in 2005 by Beth Phinney, B.A. (Class of '78), and Member of Parliament for Hamilton Mountain for 18 years.

Requirements: To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need.

THE IRIS PICCINI BURSARY

Established in 2019 by Estate of Iris Piccini, B.A. (Class of '92).

Requirements: To be granted to an undergraduate student enrolled in a Sociology program who demonstrates financial need.

THE KATE PLAYLE BURSARY

Established in 2012 by Christopher Playle, B.Sc. (Hon.) (Class of '75) and his mother K. Yvonne Playle, B.A. (1944 McGill), in memory of Ms. Kathleen Playle, B.A. (Class of '80), B.S.W. (Class of '83).

Requirements: To be granted to students enrolled in the School of Social Work who demonstrate financial need. Preference will be given to students who demonstrate leadership and active involvement in the McMaster community.

THE GEORGE PLUMB MEMORIAL BURSARY

Established in 1996 by David Plumb in memory of his father George Plumb.

Requirements: To be granted to a student enrolled in a program in Aging and Society who demonstrates financial need. Preference to be given to a mature student.

THE POLITICAL SCIENCE CLASS OF 1999 BURSARY

Established in 2024 by Anna & Rob Esselment, Sarah Armstrong and Jeff Murray in celebration of the 25th anniversary of their graduation.

Requirements: To be granted to undergraduate students enrolled in a Political Science program who demonstrate financial need.

THE ROYAL CANADIAN LEGION BRANCH 163 BURSARY

Established in 1997 by the Royal Canadian Legion Branch 163 in support of the McMaster Student Opportunity Fund initiative and in keeping with the Legion's intention to support community service, education and leadership programs in the country.

Requirements: To be granted to a student enrolled in an Aging and Society program who demonstrates financial need.

THE WILLIAM F. SCANDLAN BURSARIES

Established in the 50th anniversary year of the historical Stelco steel strike of 1946 by William F. Scandlan, valued member of the United Steelworkers of America for 44 years including terms as International Representative (1953) and Area Supervisor (1976 to 1986), Alderman to the City of Hamilton (1964-1976) and Regional Councillor (1973-1976).

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in the Work and Labour studies program.

THE STACEY SKALKO SOCIAL WORK BURSARY

Established in 2023 by friends and family in memory of Stacey Skalko, in honour of her big heart and commitment to helping others.

Requirements: To be granted to undergraduate students enrolled in Social Work who demonstrate financial need.

THE SOCIAL SCIENCES BLACK STUDENT BURSARY

Established in 2021.

Requirements: To be granted to undergraduate students enrolled in the Faculty of Social Sciences who identify as Black students and demonstrate financial need.

THE SOCIAL SCIENCES BURSARY

Established in 2004 by the Dean of the Faculty of Social Sciences through the generosity of its alumni and friends under the McMaster Student Opportunity Fund II initiative.

Requirements: To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need.

THE SOCIAL SCIENCES SOCIETY BURSARIES

Established in 1990 by the Social Sciences Society Executive in recognition of the outstanding efforts of Dr. Peter George in establishing the Social Sciences Society.

Requirements: A variable number of bursaries to be granted to full-time students enrolled in a Social Sciences program involving Anthropology, Economics, Geography, Gerontology, Work and Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology and who demonstrate financial need.

THE EDWIN A. TAYLOR BURSARY

Established in 2005 by Edwin A. Taylor, B.A. (Class of '54) and M.B.A. (Class of '63).

Requirements: To be granted to a student in the Faculty of Social Sciences who demonstrates financial need.

THE HERMAN TEN CATE MEMORIAL BURSARY

Established in 2002 in memory of Herman Ten Cate by his family, in support of his belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need.

THE TRILLIUM NON PROFIT VENTURES FOR YOUTH BURSARY

Established in 2004 by Trillium Non Profit Ventures for Youth.

Requirements: To be granted to students who demonstrate financial need. Preference will be given to students enrolled in the School of Social Work.

THE UNITED STEELWORKERS OF AMERICA BURSARY

Established in 1997 by the United Steelworkers of America.

Requirements: To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students enrolled in the Work and Labour Studies program.

THE LYNN R. WILLIAMS BURSARY

Established in 1997 as a tribute to Lynn R. Williams (Class of '44), International President of the United Steelworkers of America from 1983-1994, in recognition of his outstanding contributions to labour and labour studies.

Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Work and Labour Studies program.

Value: The value of this bursary shall be no less than $300.

THE STUART AND PAULA WINN BURSARY

Established in 2016 by the McMaster University Retirees Association (MURA) following a bequest from the estate of Stuart and Paula Winn. Stuart (Class of '72) was the principal founding member of MURA and its first honorary president.

Requirements: To be granted to a student in the Department of Health, Aging, and Society who demonstrates financial need. Preference will be given to students enrolled in an Aging and Society program.
Value: The value of this bursary shall be no less than $1,600.

Emergency Bursaries

Emergency Bursary Regulations

1. An Emergency Bursary, grocery store gift cards and meal cards are non-repayable grants that may be available to enrolled students who find themselves in extreme circumstances or are experiencing unexpected financial hardship.
2. Students with emergency needs must meet with a representative from the Office of the Registrar, during drop-in counselling hours to discuss their financial circumstances. Indigenous students may choose to meet with representatives in Indigenous Student Services to discuss their financial circumstances. Other referral networks exist on campus to support students in crisis, such as Security Services, Indigenous Student Services and Student Support and Case Management.
3. Students are required to complete a bursary application.
4. Students may be required to submit supporting documentation to confirm financial need and/or extreme circumstances, as determined by the Office of the Registrar, Aid & Awards.
5. All Emergency Bursary payments are disbursed through the McMaster Student Account.
6. The University may remove specific Emergency Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Emergency Bursaries (e.g. donor funds).
7. Emergency Bursaries supported by donor funds may have additional eligibility requirements.

Emergency Bursaries

THE INTERIM ROOM PROGRAM EMERGENCY FUND
Established in 2019 by McMaster University.
Requirements: To be granted to students experiencing personal safety concerns related to their housing to help with the immediate costs of relocation so that they can continue to pursue their academic studies and reach their potential.

THE MCMASTER EMERGENCY BURSARY FUND
Funding provided by McMaster operating funding.
Requirements: To be granted to students who demonstrate urgent financial need due to exceptional circumstances as determined by the Office of the Registrar, Aid & Awards.

THE MCMASTER STUDENTS UNION EMERGENCY BURSARY FUND
Established in 2016 by the MSU Board of Directors and members of the McMaster Students Union.
Requirements: To be granted to full-time undergraduate students who are members of the MSU and who demonstrate urgent financial need due to exceptional circumstances as determined by the Office of Aid & Awards.

Exchange Bursaries

Exchange Bursary Regulations

1. Exchange Bursaries are non-repayable grants intended to assist students who otherwise would not be able to participate in exchange opportunities due to financial hardship.
2. Exchange Bursaries are allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic standing or other earned merit for students approved for exchange.
3. Exchange Bursaries are available to full-time and part-time students enrolled in Level 2 or above of their first undergraduate degree program, at the time of bursary application and selection, who are returning to McMaster to continue their studies.
4. Exchange Bursaries requiring full-time status are available to students enrolled in a full-time OSAP eligible course load or equivalent at the time of bursary application and selection.
5. Exchange Bursaries are only available to students who are Canadian Citizens, Permanent Residents, Convention Refugees and Protected Persons of Canada.
6. Exchange Bursaries are allocated on the basis of financial need, as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or completed standard University need profiles and an Exchange Bursary Application for the academic year in which the student is being considered.
7. Exchange Bursaries are allocated according to financial need, with higher bursary amounts assigned to students demonstrating higher levels of financial need. Bursary amounts are set by the Office of the Registrar, Aid & Awards.
8. Exchange Bursary funds are limited.
9. Students are limited to one Exchange Bursary in their first undergraduate degree program.
10. The greater demonstrated financial need is used to break any tie.
11. Exchange Bursaries may consider one or more McMaster University calculated averages (e.g. Cumulative Grade Point Average).
12. Exchange Bursaries may specify a minimum average requirement.
13. Exchange Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
14. To be considered for an Exchange Bursary by application, students must submit a completed application by the specified deadline date.
15. Exchange Bursary applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
16. Students must be enrolled in at least the course load used to determine their eligibility for the Exchange Bursary to have the Exchange Bursary payment processed.
17. All Exchange Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
18. Exchange Bursaries are typically disbursed no later than the end of May.
19. Exchange Bursaries are available to students participating in an approved formal exchange program during the academic year immediately following the application deadline.
20. It is the responsibility of Exchange Bursary recipients to make all exchange arrangements. Recipients are required to assess travel risks, have a plan of action in place for emergencies, and ensure they have proper medical and other insurance in place prior to departure.
21. Exchange Bursaries will not be issued for travel when University advisories and/or official global travel advisories have been issued to avoid non-essential travel outside Canada and to areas deemed as 'do not travel areas' per Global Affairs Canada.
22. Exchange Bursary recipients may be required to complete a risk assessment and/or safety component and/or waiver prior to departure as dictated by other University policies and must attend mandatory Exchange Pre-Departure Orientation sessions and complete Terms for Participation Forms, Liability Waivers, and Statement of Responsibilities Forms.
23. Students who do not participate in their formal exchange as identified on

their application will forfeit their bursary. Exchange bursaries are granted for a specific period of travel; deferrals are not normally granted. Students deferring exchange plans to another academic year should reapply in the next cycle.

24. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an Exchange Bursary. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
25. Students who forfeit their Exchange Bursary must return the full bursary amount to their McMaster Student Account.
26. The University may choose not to grant an Exchange Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application where complete applications have not been received.
27. The University may remove specific Exchange Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of Exchange Bursaries.
28. Exchange Bursaries supported by donor funds may have additional eligibility requirements.

Exchange Bursaries

THE BEALE-LINCOLN-HALL EXCHANGE PROGRAM BURSARIES
Established in 1996 by Arnold A. Beale in memory of his parents, F. Arnold Beale and Margaret S. Beale and, Mr. and Mrs. Walter Gould Lincoln and Commander Harley H. Hall., U.S.N.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in a program in Commerce, Biochemistry, Biology, English, Chemistry, Earth Sciences, History, Materials Science, Mathematics, Physics, Engineering Physics or Religious Studies. Preference will be given to students who are participating in one of McMaster's formal exchange programs, and who have demonstrated a lively interest in the humanities and the human and social implications of scientific developments.

THE CHAN YIN CHAK BURSARY
Established in 1997 by Tak Chan in honour of his great grandfather, Mr. Chan Yin Chak.
Requirements: This bursary will be used to help defray expenses of Level 3 Commerce students or M.B.A. students, who demonstrate financial need, and are participating in one of the international exchange programs at the DeGroote School of Business.

THE JAMES R.A. LANGS STUDENT EXCHANGE PROGRAM BURSARIES
Established in 1996 by family in memory of James R.A. Langs (Class of '37), a Hamilton business leader and great supporter of the Hamilton Community.
Requirements: A variable number of bursaries to be granted to students enrolled in a program in Humanities who demonstrate financial need and who are participating in a formal McMaster Exchange Program.

THE MCLAY BURSARY
Established in 1997 by David and Jean McLay under the McMaster Student Opportunity Fund initiative.
Requirements: To be granted to a student in any program who demonstrates financial need and who is participating in one of McMaster's formal exchange programs. Preference to be given to students who have been active in international clubs and associations.

THE MCLEAN FAMILY EXCHANGE BURSARIES
Established in 1997 by the McLean Family under the McMaster Student Opportunity Fund initiative, in gratitude for the learning and relationship enrichment which they obtained first at McMaster University, and subsequently through international travel.
Requirements: To be granted to students who wish to participate in exchange programs, who demonstrate financial need and who are enrolled in Level 2 or 3 of a program. Preference to be given to international exchanges, for students from the Faculty of Engineering or the Faculty of Humanities with a GPA above 7.0 at the most recent review and who have shown leadership and involvement in university and/or community activities.

THE MCMASTER GLOBAL EXPERIENCE EXCHANGE BURSARY
Established in 2018 by McMaster University to support global learning opportunities.
Requirements: To be granted to undergraduate students enrolled in any program who are participating in a formal McMaster Exchange and who demonstrate financial need.

THE QUEEN ELIZABETH II INTERNATIONAL TRAVEL BURSARY
Established in 2015 by Arnold Beale, B.Sc. (Class of '68), B.A. (Class of '83) in honour of Her Majesty Queen Elizabeth II, who became the longest-reigning British monarch on September 9, 2015.
Requirements: To be granted to an undergraduate student participating in an international exchange program who demonstrates financial need. Preference will be given to a student travelling to a Commonwealth country.

THE RANDOLPH E. ROSS MEMORIAL BURSARY
Established in 1998 by family and friends in memory of Dr. Randolph E. Ross, who was a dedicated and cherished faculty member for over 25 years at McMaster University.
Requirements: To be granted to a student enrolled in the School of Business or the Engineering and Management Program. Preference will be given to a McMaster student participating in an international exchange program.

THE JAMES MASON YOUNG BURSARY
Established in 1996 by James Mason Young in honour of his family's long-standing association with McMaster University.
Requirements: A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need. Preference to be given to students participating in a formal McMaster Exchange Program.

Bursaries for the Michael G. DeGroote School of Medicine

Michael G. DeGroote School of Medicine Aid Regulations

Emergency Bursary Regulations for School of Medicine (M.D) Students

1. An Emergency Bursary is a non-repayable grant sometimes available to students enrolled in the M.D. Program who find themselves in extreme circumstances or are experiencing unexpected financial hardship.
2. Students with emergency needs must meet with the designated representative from their M.D. Program Office to discuss their financial circumstances.
3. Students are required to complete a bursary application.
4. Students may be required to submit supporting documentation to confirm financial need and/or extreme circumstances, as determined by their M.D. Program Office.
5. The M.D. Program Office determines eligibility for emergency support.
6. All Emergency Bursary payments are disbursed through the McMaster Student Account.

Medicine (M.D) Bursary Regulations

1. M.D. Bursaries are non-repayable grants, allocated on the basis of demonstrated financial need, which may also include a minimum expectation of academic achievement or other miscellaneous criteria.

2. M.D. Bursaries are available to students in good standing enrolled in the M.D. Program.
3. M.D. Bursaries are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada.
4. Students who are not Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada are not eligible for M.D. Bursaries.
5. M.D. Bursaries are allocated on the basis of highest financial need, as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP), completed standard University need profiles and/or discussions with designated staff on campus (e.g. the M.D. Program Office) who confirm the need for bursary assistance through submission of additional supporting documentation, for the academic year in which the student is being considered.
6. M.D. Bursaries are allocated in adherence with the Ministry of Colleges and Universities (MCU) policies, procedures and guidelines in place for the given academic year. The MCU Student Access Guarantee (SAG) currently specifies bursary amounts and payment deadlines for M.D. Program students. M.D. Program students who are eligible for SAG will receive bursary support without need of an application.
7. M.D. Program students may receive more than one M.D. Bursary up to the amount for which they are eligible.
8. The greater demonstrated financial need is used to break any tie.
9. M.D. Bursaries may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements.
10. To be considered for an M.D. Bursary that is a named donor bursary, students must submit a completed application by the specified deadline date.
11. All M.D. Bursary applications are evaluated for eligibility, reviewed and ranked according to level of financial need. A selection committee may be struck depending on the bursary and donor requirements.
12. Students must be enrolled in the M.D. Program to have the M.D. Bursary payment processed.
13. If an M.D. Bursary is renewable, students must meet the renewal requirements specified in the bursary terms to receive a renewal payment.
14. All M.D. Bursary payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the M.D. Program Office.
15. All M.D. Bursaries are typically disbursed no later than the end of November.
16. Forfeiture of a renewable M.D. Bursary also cancels all future instalments of the bursary.
17. Change in course load may result in forfeiture or adjustment in the value of the M.D. Bursary. Students are advised to consult with their M.D. Program Office prior to making any changes to their course load.
18. Students who withdraw or take a leave of absence from the program may see an adjustment in the value of their M.D. Bursary or see the full amount returned to the University.
19. Any adjustment made to a student's account, in order to return all or a portion of an M.D. Bursary to the University, consider the balance available at the time of the adjustment and may put a student's account into deficit.
20. The University may choose not to grant an M.D. Bursary in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for bursaries by application, where complete applications have not been received.
21. The University may remove specific M.D. Bursaries from the University Calendar, may revise the terms and stated value and/or suspend the granting of M.D. Bursaries (e.g. donor funds).
22. M.D. Bursaries supported by donor funds may have additional eligibility requirements.

Bursaries for the Michael G. DeGroote School of Medicine

THE FREDERICK G. BLACK AND GWENDOLYN J. ATKINSON MD BURSARY

Requirements: Established in 2021 by Gwendolyn J. Atkinson, for the purpose of awarding annual grants to undergraduate students enrolled in the Michael G. DeGroote School of Medicine who demonstrate both financial need and academic merit. Academic Merit includes, but is not limited to, exceptional publishing, research potential, extra-curricular involvement, or community involvement. Preference will be given to students who identify as a first-generation immigrant, students with a parent who identifies as a first-generation immigrant, and/or students who identify as members of an equity-deserving group who intend to practice medicine in Canada upon completion of their studies. Students will be asked to submit a letter demonstrating their commitment to their choice of career and their community, and how the grant may further this commitment. The grant is renewable annually if the recipient continues to meet the criteria of this grant, however, previous recipients must reapply every year. The selection committee may also, in their sole discretion, choose to support one or more students throughout the duration of their undergraduate studies providing the criteria established by the committee continue to be met.

THE AVERBUCH FAMILY MD BURSARY FOR NEW CANADIANS

Established in 2016 by Max and Wendy Averbuch.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine, who is a permanent resident of Canada and demonstrates financial need.Preference will be given to students who are new to Canada. Applicants must declare their immigrant status.

THE IVANA BALDELLI BURSARY

Established in 2015 by Ivana Baldelli, B.A. (Class of '70).

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to a student participating in medical research, attending the Niagara Regional Campus. Students must submit a separate letter outlining their research.

THE DR. BARBER MUELLER BURSARY

Established in 2019 by Dr. Mark J. Magenheim, MD (Class of 74), to celebrate the 50th Anniversary of McMaster's medical school and in memory of Dr. C. Barber Mueller, an esteemed faculty member, who joined McMaster in 1967 as the medical school was being established and contributed to the development of a new problem-based teaching model that revolutionized medical education around the world.

Requirements: To be granted to students in the Michael G. Degroote School of Medicine who demonstrate financial need and an interest in a career in surgery.

THE JOANNE BOMBEN BURSARY

Established in 2008 by Frank Bomben and his children Kayley and Jeffrey, in recognition and memory of a loving wife and mother, Joanne (nee Butters).

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine in good academic standing who demonstrate financial need. Preference will be given to students with an interest in pediatrics. Applicants must submit a separate letter indicating the details of their interest in pediatrics; for example, by taking an approved elective or an educational or research project in the field of pediatrics.

THE DR. KEYNA BRACKEN BURSARY

Established in 2015 by Dr. Keyna Bracken to provide financial assistance to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

Requirements: Preference will be given to a student with an interest in primary care in women's and children's health.

THE WALTER BRANDSTAETER MEMORIAL BURSARY

Established in 2018 by the estate of Waltraud E. Jeremic in memory of his late brother Walter Brandstaeter.

Requirements: To be granted to students enrolled in the Michael G. Degroote School of Medicine who demonstrate financial need.

THE BRIJ AND AMAR BURSARY

Established in 2023 by Dr. Nikki Shah, M.D. (Class of 2020) to honour her single parent, Ms. Shah, and her grandparents, Mr. Brij Sharma and Mrs. Amar Sharma. Together, their resilience and strength empowered Nikki and her siblings to pursue careers in medicine.

Requirements: To be granted to undergraduate students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to a sole-support parent, or child of a single parent.

THE MOLSON C. CAIN MEDICAL BURSARY

Established in 2017 by the estate of Molson C. Cain.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine at McMaster University who demonstrate financial need.

THE CAMPBELL FAMILY BURSARY

Established in 2019 by Dr. Fiona Campbell M.D. (Class of '84) and Mrs. Diana Campbell in memory of Dr. Moran Campbell, the founding Chair of the Department of Medicine, to commemorate the 50th Anniversary of the McMaster Medical School.

Requirements: To be granted to students enrolled in the Michael G. Degroote School of Medicine who demonstrate financial need.

THE CANADIAN MEDICAL ASSOCIATION 150TH ANNIVERSARY BURSARY

Established in 2017 by the Canadian Medical Association Foundation in honour of the CMA's 150th anniversary.

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine, who demonstrates significant financial need, and is Canadian citizen, permanent resident, or person with protected/ refugee status. Preference may be given to members of the Canadian Medical Association.

THE CANADIAN MEDICAL FOUNDATION (CMF) BURSARY

Established in 2015 by the Canadian Medical Foundation.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to Indigenous students.

THE DR. LEO CELLINI CLASS OF '84 BURSARY

Established in 2004 in honour of the memory of Dr. Leo Cellini by his classmates, M.D. Class of 1984, at their Class Reunion.

Requirements: To be granted to a third year student in the Michael G. DeGroote School of Medicine who aspires to work with less fortunate patients in the inner-city. Awarded to a medical student in financial need. Must be a resident of Ontario for at least one year.

THE MARY LILLIAN CHAPMAN MEMORIAL FUND

Established in 2018 by the estate of Nancy Mary Chapman.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine at McMaster University who demonstrate financial need.

THE PATRICK SHING LUNG CHEUNG AND IVY HEONG NGAN CHAN AWARD

Established in 2011 by Dr. Francesca Ting Yan Cheung, M.D. (Class of '06) CCFP, to honour her parents, Mr. Patrick Shing Lung Cheung and Mrs. Ivy Heong Ngan Chan.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine with an interest in Family Medicine who are in good academic standing and demonstrate financial need. Preference will be given to students who are newcomers to Canada. Applicants must submit a separate letter indicating the details of their interest in Family Medicine and their immigrant status.

THE CHOLOWSKY FAMILY MULTIPLE SCLEROSIS BURSARY

Established in 2002 by Mrs. Tania Cholowsky.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who are in good academic standing and are completing an approved elective, educational or research project in the field of Multiple Sclerosis or the broader area of Neurology.

THE CIBC MEDICAL BURSARIES IN BREAST CANCER

Established in 2004 by CIBC in support of CIBC's belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted first to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need and are completing an approved elective, educational or research project in the field of breast cancer and, alternatively, to students who are completing an approved elective, educational or research project in the field of women's health, obstetrics, gynecology or medical oncology.

THE CLINICAL EDUCATION LEADERS BURSARY FUND

Established in 2017 by clinical educators in the Niagara region.

Requirements: To be awarded to a student from the Niagara Regional Campus of the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE DR. MARK COHEN PRIZE IN OPHTHALMOLOGY

Established in 2010 by Dr. Mark Cohen.

Requirements: To be awarded to an undergraduate medical student in the Michael G. DeGroote School of Medicine who has been accepted into an ophthalmology residency program in Canada and demonstrates academic excellence.

THE COMMUNITY LEADERS FOUNDATION BURSARY

Established in 2013 by the Community Leaders Foundation.

Requirements: To be awarded to students enrolled at the Niagara Regional Campus of the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE DR. IAN SCOTT CORNELL BURSARY

Established in 2019 by Dr. Ian Scott Cornell M.D (Class of '77) to commemorate the 50th Anniversary of the McMaster Medical School.

Requirements: To be granted to students enrolled in the Michael G. Degroote School of Medicine who demonstrate financial need.

THE RICHARD DAY BURSARY

Established in 2018 by Dr. Richard Day, MD (Class of '79) in recognition of the goodwill that was shown to him during his days at McMaster.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine, in the Faculty of Health Sciences, who demonstrate financial need.

THE MICHAEL G. DEGROOTE SCHOOL OF MEDICINE BURSARY

Established in 2005.

Requirements: To be granted to an undergraduate student in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE DEPARTMENT OF BIOCHEMISTRY & BIOMEDICAL SCIENCES BURSARY

Established in 2004.

Requirements: This bursary is available to Medical students with financial need who have resided in Ontario for one year prior to receiving the bursary. The award will recognize the student's capacity to contribute to the study of cancer through their learning.

THE DEPARTMENT OF MEDICINE BURSARY

Established in 2004.

Requirements: The bursary is available to Medical students with financial need who have resided in Ontario for one year prior to receiving the bursary. The award will recognize the student's excellence in academic endeavour and capacity to contribute to the field of medicine through their learning.

THE DEPARTMENT OF MEDICINE BURSARY FOR INDIGENOUS MEDICAL STUDENTS

McMaster University, Department of Medicine, remains committed to upholding Call to Action 23, from the Truth and Reconciliation Commission, to increase the number of Aboriginal professionals working in the healthcare field. Acknowledging financial barriers for Indigenous students accessing undergraduate medical education, the Department of Medicine in partnership with the Indigenous Health Curriculum Committee offers a three-year scholarship.

Requirements: To be granted to an Indigenous student entering the Michael G. DeGroote School of Medicine who demonstrates financial need. The scholarship is tenable for 2 years provided the recipient remains enrolled in the Michael G. DeGroote School of Medicine and continues to demonstrate financial need.

Interested individuals will complete an application which will include submitting a personal letter (maximum 1000 words) detailing demonstration of Indigenous community leadership, involvement, advocacy, and financial need for consideration.

THE SAVITRI DEVI BURSARY

Established in 2013 by Dr. Indra Rastogi in honour of her mother Savitri Devi.

Requirements: To be granted to female students in the Michael G. DeGroote School of Medicine who demonstrate financial need and maintain a good academic standing.

THE DODGE-BELLOWS CARDIO-RESPIRATORY AWARD

Established in 1995 by Betty Lou and Norman Bellows to provide financial assistance to a variable number of undergraduate medical students to further their education and training in the area of cardio-respiratory or internal medicine.

THE SEETA ETWAROO MEMORIAL BURSARY

Established in 2017 by Brendan Singh and Chad Singh to honour their aunt, Seeta Etwaroo, and her courageous fight against cancer.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

Value: $1,000

THE RON AND GINA FRASER HEALTH SCIENCES BURSARY

Established in 2005 by The Ronald K. Fraser Foundation and Gina E. Fraser with a mandate to provide university tuition funding for students in the highest financial need who enter full-time study in the Bachelor of Health Sciences Program in the Faculty of Health Sciences at McMaster University.

Requirements: The amount of the bursary is equivalent to one year of tuition and would be available for each of the four years in the Bachelor of Health Sciences Program on the condition of both continued good academic standing and financial need. If the bursary recipient decides to pursue a career in medicine and is accepted into the Michael G. DeGroote School of Medicine, the tuition bursary would be available for each of the three years in medical school or if the bursary recipient decides to pursue a career in biomedical engineering and is accepted into the Graduate Program in Biomedical Engineering, the tuition bursary would be available for each of the five years in biomedical engineering at McMaster University.

THE GENERAL MEDICAL BURSARY

Established in 1970 by the School of Medicine and its associated faculty members and physicians.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE FRIEDMAN-GROSSMAN BURSARY

Established in 2012 by Dr. Yael Friedman and Paul Grossman, in honour of Musia Friedman and in loving memory of Jasza Friedman, Pola and Zysia Zylber, Ann and Harold Linton, and Irvine and Hannah Grossman.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE DANIEL GIANNINI BURSARY

Established in 1998 by Mr. Daniel Giannini.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine to provide financial assistance with tuition fees in order to further education in the medical field. A student who receives the award in the first year would be eligible to continue to receive the award for their second and third years of study, providing they maintain a good academic standing. Student must be a graduate from a publicly-funded secondary school in the Hamilton or Burlington area and participate in community activities in the Hamilton or Burlington area.

THE DR. JOHN GRANTON MEDICAL BURSARY

Established in 2009 by Dr. John Granton, M.D. (Class of '87) to provide financial support for medical students who wish to pursue their educational goals.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE SAYRA AND ABDUL HAI BURSARY FOR INSPIRING CHANGE

Established in 2013 by Sayma Hai to honour her parents who instilled in her the importance of education and giving back to one's community.

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need and maintains good academic standing. To be granted to students who have demonstrated an interest in pursuing a career in Cardiology or Internal Medicine. Applicants must submit a separate letter indicating the details of their interest in Cardiology or Internal Medicine.

THE ALFRED THEODORE HAINES AND FORSTER HAINES BURSARY

Established in 2014 through the bequest of Alfreda Haines (Class of '35).

Requirements: To be granted to students in the Michael G. DeGroote School of Medicine at McMaster University who demonstrate financial need. Preference will be given to a student who demonstrates interest in homeopathic medicine.

THE DR. GAIL HENNING MEMORIAL BURSARY

Established in 2000 by William J. Henning in loving memory of his daughter, Dr. Gail Patricia Henning, who worked on the staff of McMaster Medical Centre and in private practice as a psychiatrist from 1978 until her death in 1990.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine in financial need who choose to complete electives in Psychiatry with the intention to pursue a career in psychoanalysis.

THE ALAN HITCHEN MEMORIAL MEDICINE BURSARY

Established in 2023 in memory of Alan Hitchen, B.Sc. Hons. (Class of 1951).

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE FERRARA KENNEDY BURSARY

Established in 2007 by Mario Ferrara, B.Com. (Class of '70), M.B.A. (Class of '74) and Annabel Kennedy.

Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to a student attending the Niagara campus.

THE KILPATRICK SCHOLARSHIP IN MEDICINE

Established in 2018 from the estate of Eleanor Jean McLeish.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who best exhibit academic excellence and demonstrate financial need.

THE DR. CHARLES KNAPP BURSARY

Established in 2019 by Dr. Charles Knapp (MD '87) to commemorate the 50th Anniversary of the McMaster Medical School.

Requirements: To be granted to students in the Michael G. Degroote School of Medicine who demonstrate financial need. Preference will be given to students with an interest in Anesthesiology.

THE DR. R. NEIL LAMONT MEDICAL BURSARY

Established in 2021 by Dr. R. Neil Lamont (MD '87).

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need and have an interest in

pursuing a career in surgery. Preference will be given to students who have an Arts background.

THE JOSEPH & JOANNE LEE BURSARY

Established by Joseph (Class of '72) and Joanne Lee.

Requirements: To provide financial assistance for Undergraduate Medical students in the Michael G. DeGroote School of Medicine who demonstrate financial need and would like to further their education and training in the area of Inflammatory Bowel Disease or Crohn's Disease by way of an elective or research.

THE SAU-MI LEE MEMORIAL BURSARY

Established in 2005 by Dr. Carl Lee (M.D. Class of '99) in memory of his mother Sau-Mi Lee.

Requirements: To be granted to a medical student in good standing who is enrolled in the second or third year of the Michael G. DeGroote School of Medicine, is planning to continue training in Family Medicine, and has demonstrated participation in extracurricular activities.

THE DR. VICTORIA LEE BURSARY

Established in 2005 by Victoria Lee (M.D. Class of 1982), FRCPC.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need and are completing an approved elective, educational or research project in the field of psychiatry or geriatric medicine. Preference will be given to students completing an approved elective, educational or research project in geriatric psychiatry.

THE DR. VICTORIA LEE BURSARY FOR INDIGENOUS MD STUDENTS

Established in 2016 by Victoria Lee (Class of '82) in support of her belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to indigenous students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Note: Students may be asked to provide proof of indigenous ancestry.

THE DR. JANICE LEGERE MD BURSARY

Established in 2020 by Dr. Janice Legere (MD '95) to commemorate the 25th Anniversary of her graduation from the McMaster Medical School.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to a sole-support parent, or child of a single parent.

THE DR. LEONARD E. LEVINE BURSARY

Established in 2006 by the Estate of Dr. Leonard E. Levine, retired McMaster University Professor.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to students showing interest in Lymphoma or Leukemia research or participating in a related elective.

THE LEW-KING LI AND YUN-FANG LI AWARD

Established in 2012 by Dr. Shao-Jin Gene Li to honour his parents, Lew-King Li, and Yun-Fang Li.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need and maintains good academic standing. Preference will be given to students who are new to Canada within the last five years. Applicants must declare their immigrant status.

THE MAGENHEIM FAMILY MEDICAL EDUCATION TRAVEL BURSARY

Established in 2006 by Dr. Mark J. Magenheim, M.D. (Class of 1974), in honour of his parents Milton David and Dolores Ella Magenheim.

Requirements: To be granted to an undergraduate medical student taking an international elective in Public Health and/or Preventative Medicine outside Canada who demonstrates financial need. Electives in the US are acceptable provided they focus primarily on addressing needs in an underserved rural urban area with documented disproportionately high public health problems and low resources. Students must submit an application, separate cover letter outlining how the elective meets these criteria and a letter of acceptance from the proposed supervisor. Upon completion of the elective, the successful candidate will work with the Program Administrator of the Undergraduate Medical Program to identify an appropriate venue to share his/her experience in a public forum with others. Recipients of the bursary are required to prepare a report of their elective experience which the Administrator of the Undergraduate Medical Program will forward to the founder of the award. The report can be brief (2-5 pages) and should indicate where the elective time was spent, with whom, knowledge acquired from the experience, overview of activities conducted, assessment of health issues observed and/or addressed, evaluative analysis and overview of goals attained or not, and recommendations plus lessons learned to assist other McMaster M.D. Students. Must be a resident of Ontario for at least one year.

THE DR. CHERYL AND KYLE MARSHALL BURSARY

Established in 2010 by Dr. C.P. Marshall, MBBS (UWI), FRCP (C).

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine at McMaster University who demonstrates financial need. Preference will be given to a sole support parent.

THE PETER MAURER NORTHERN HEALTH BURSARY

Established in 1991 in memory of Peter Maurer, Administrative Officer for the Faculty of Health Sciences at McMaster and later, Administrator of the Lakehead/McMaster Link Project in Thunder Bay.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need and are pursuing electives in northern Ontario via the Northern Ontario School of Medicine (NOSM).

THE DR. BARBARA MCAULEY MEMORIAL BURSARY

Established in 2012 by the family, friends and colleagues of Dr. Barbara McAuley, a respected physician from the Niagara region.

Requirements: To be granted to a student enrolled at the Niagara Regional Campus of the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to students who are mothers and/or students with a nursing background.

THE DRS. ANDREW AND ANNETTE MCCALLUM MEDICAL BURSARY

Established in 2016 by Dr. Andrew McCallum (Class of '80, MD), and Dr. Annette McCallum (Class of '91, MD) to provide financial support for medical students who wish to pursue their educational goals.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine at McMaster University who demonstrates financial need.

THE EVELYN MCGLOIN SCHOLARSHIP

Established in 2014 by the Heart and Stroke Foundation of Canada. To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who have completed at least their first year of medical school.

Requirements: The award will provide valuable research training and experience over the summer (June through August) under the supervision and tutelage of established scientific investigators.

THE MCMASTER UNIVERSITY M.D. PROGRAM BURSARY

Established in 2007.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1972 BURSARY

Established in 2012 by the M.D. Class of 1972 to commemorate their 40th anniversary.

Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1973 BURSARY

Established in 2013 by the McMaster University M.D. Class of 1973.

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1974 BURSARY

Established in 2013 by the McMaster University M.D. Class of 1974.

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE M.D. CLASS OF 1975 BURSARY
Established in 2005 by the M.D. Class of 1975 in honour of their 30th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Student must be a resident of Ontario for at least one year.

THE M.D. CLASS OF 1976 BURSARY
Established in 2006 by the M.D. Class of 1976 in honour of their 30th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Student must be a resident of Ontario for at least one year.

THE M.D. CLASS OF 1977 BURSARY
Established in 2007 by the M.D. Class of 1977 in honour of their 30th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Student must be a resident of Ontario for at least one year.

THE MCMASTER M.D. CLASS OF 1978 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1978.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1979 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1979.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE M.D. CLASS OF 1980 GYAN AHUJA BURSARY
Established in 2005 by the M.D. Class of 1980 in honour of their 25th reunion and in memory of their classmate Gyan Ahuja.
Requirements: To be granted to students enrolled in the M.D. Undergraduate Program who demonstrate financial need and who, in the judgment of the Michael G. DeGroote School of Medicine, demonstrate a lively interest in humanitarian contributions to society and issues affecting third world developing countries.

THE M.D. CLASS OF 1981 BURSARY
Established in 2006 by the M.D. Class of 1981 in honour of their 25th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Student must be a resident of Ontario for at least one year.

THE M.D. CLASS OF 1982 BURSARY
Established in 2007 by the M.D. Class of 1982 in honour of their 25th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Must be a resident of Ontario for at least one year.

THE MCMASTER M.D. CLASS OF 1983 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1983.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1986 BURSARY
Established by the M.D. Class of 1986 to commemorate their 25th anniversary.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1987 BURSARY
Established in 2012 by the M.D. Class of 1987 to commemorate their 25th anniversary.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1988 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1988.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1989 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1989.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1990 BURSARY
Established in 2013 by the McMaster University M.D. Class of 1990.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER UNIVERSITY M.D. CLASS OF 1991 BURSARY
Established by the M.D. Class of 1991 to commemorate their 20th anniversary.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 1992 BURSARY
Established in 2012 by the M.D. Class of 1992 to commemorate their 20th anniversary.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE M.D. CLASS OF 1995 BURSARY
Established in 2007 by the M.D. Class of 1995 in honour of their 10th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to a mature student.

THE M.D. CLASS OF 1996 BURSARY
Established in 2006 by the M.D. Class of 1996 in honour of their 10th reunion.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE MCMASTER MD CLASS OF 1997 EDI BURSARY
Established in 2022 by members of the McMaster MD Class of 1997.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who identify as a member of an equity-deserving group and demonstrate financial need.

THE MCMASTER M.D. CLASS OF 2002 BURSARY
Established in 2012 by the M.D. Class of 2002 to commemorate their 10th anniversary.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER UNIVERSITY M.D. CLASS OF 2011 BURSARY
Established by the M.D. Class of 2011 as a class gift to the M.D. Program.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER M.D. CLASS OF 2012 BURSARY
Established in 2012 by the McMaster University M.D. Class of 2012.
Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER UNIVERSITY M.D. CLASS OF 2013 SHANE DANIELL AND ISKREN KANTCHEV MEMORIAL BURSARY
Established in 2011 by the M.D. Class of 2013 to honour the memory of their classmates, Shane Daniell and Iskren Kantchev.
Requirements: To be granted to students enrolled in the M.D. undergraduate program who demonstrate financial need. Preference will be given to students who have demonstrated an interest in Global Health.

THE MCMASTER MD CLASS OF 2014 BURSARY
Established in 2014 by the McMaster University MD Class of 2014.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER MD CLASS OF 2015 BURSARY
Established in 2015 by the McMaster University MD Class of 2015.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER MD CLASS OF 2016 BURSARY
Established in 2016 by the McMaster University MD Class of 2016.
Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE MCMASTER OMA BURSARIES
The Medical Alumni from the province of Ontario have established this bursary in recognition of their support to medical students at McMaster Univeristy.
Requirements: These annual bursaries are intended to provide financial assistance for undergraduate medical students.

THE DR. JOHN THOMAS WILLIAM MCWHINNIE BURSARY
Established in 2014 by the estate of Betty Milne McWhinnie.
Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need and show an interest in human sexuality through study and/or research.

THE MEDICAL STUDENT OPPORTUNITY TRUST BURSARY
Established in 2001 from a variety of financial contributions which were donated to help medical students.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine in financial need.

THE FRANK C. MILLER JR. BURSARY
Established in 2011 by the Hamilton Community Foundation.
Requirements: To be granted annually to provide financial assistance to cover up to fifty percent of tuition and up to fifty percent of compulsory fees to up to four undergraduate medical students in the Michael G. DeGroote School of Medicine who demonstrate financial need, a desire to learn, and a willingness to participate in the Hamilton community. Preference will be given to entry level students.

THE ORVILLE J. MIREHOUSE MEMORIAL BURSARY
Established in 2007 by family and friends in memory of Dr. Orville J. Mirehouse, M.D., a pioneering plastic surgeon and mentor.
Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE ADRACHES (ARCHIE) YIAN MOUGHALIAN MEMORIAL BURSARY
Established in 1998 from the estate of Mr. Adraches (Archie) Yian Moughalian.
Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine to provide financial assistance to further their education in the medical field.

THE DRS. RICHARD AND TAMAR PACKER M.D. BURSARY
Established by Dr. Tamar Packer and Dr. Richard Packer to commemorate their 25th anniversaries as graduates of the McMaster M.D. Program in 2011/2012.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to a student who is a Hamilton resident.

THE DR. ADRIAN PARK MEDICAL BURSARY
Established in 2018 by Dr. Adrian Park, MD (Class of '87).
Requirements: To be granted to students in the Michael G. DeGroote School of Medicine who demonstrate financial need and an interest in a career in surgery. Preference will be given to students with an interest in mission-based surgery.

THE JULIE AND AHMED PATEL DEGROOTE SCHOOL OF MEDICINE BURSARY
Established in 2021 by The Julie Patel Foundation. Julie and Ahmed Patel's three children and six grandchildren created this bursary in their memory.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who identify as racialized or Indigenous students and demonstrate financial need.

THE JANET PATERSON MUIR BURSARY
Established in 2009 by the bequest of Janet Paterson Muir.
Requirements: One or more bursaries to be granted to full-time students in the undergraduate medical program of the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE JOSEPH AND EDITH NAGY BURSARY
Established in 2018 by Jo-Anne Ferns in memory of her parents who always held medical doctors in high regard and were grateful for their cardiology and oncology care.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to students who demonstrate professionalism and compassion.

THE DR. PAUL R. NICHOLAS / COSMETIC SURGERY CLINIC MD BURSARY
The Cosmetic Surgery Clinic of Waterloo in honour of Dr. Paul R. Nicholas who trained in anaesthesia at McMaster University and Memorial University. Dr. Nicholas' distinguished career has taken him to the Canadian Maritimes, rural Maine, and the Cambridge/Kitchener-Waterloo area where he has provided over 35 years of service in anaesthesia both in local hospitals and as Chief of Anaesthesia at the Cosmetic Surgery Clinic of Waterloo. The recipient will embody the qualities at the core of Dr. Nicholas' unique approach to caring for patients that extends to all aspects of their medical well-being: dedication to patient care, compassion, intelligence, teamwork, selflessness, and most of all, a willingness to go above and beyond to always put patients' interests first.
Requirements: To be granted to a medical student from the Waterloo Regional Campus of the Michael G. DeGroote School of Medicine who demonstrates financial need and will be pursuing a career in Anesthesiology or Surgery. Preference will be given to a graduating student.

THE DR. BRYAN PEARSE FAMILY BURSARY
Established in 2013 by Dr. Bryan Pearse, M.D. (Class of '75) in memory of his sister Nancy Katherine.
Requirements: To be granted to an undergraduate medical student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE DR. SUSAN BEVERLEY PLANK MEMORIAL BURSARY
Established in 1997 by Mr. William J. Plank, family and friends, in memory of Dr. Susan Beverley Plank (Class of '90).
Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine.

THE RONALD PYE BURSARY
Established in 2000 by Dr. Ronald Pye (Class of 1979).
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine based on good academic standing and financial need.

THE BENJAMIN, SAMANTHA, THOMAS AND KATE RAGONETTI MEDICAL BURSARY
Established in 1999 by Dr. Chris Ragonetti and family.
Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need and maintains good academic standing.

THE DR. ROBIN RICHARDS BURSARY
Established in 2019 by Dr. Robin Richards (MD '76) to commemorate the 50th Anniversary of the McMaster Medical School.
Requirements: To be granted to students enrolled in the Michael DeGroote School of Medicine who demonstrate financial need. Preference will be given to students from Guelph or Wellington County.

THE PAUL RIDDLES LAW BURSARY
Established in 2019 by Paul Riddles, B.A. (Class of '86) to support students to pursue their academic and professional goals.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE RIPLEY BURSARIES
Established in 1998.
Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE SALENA FAMILY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative by Dr. Bruno Salena (Class of '81), full-time faculty member in the Faculty of Health Sciences, and his family.
Requirements: To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine.

THE SCHENKEL MEDICAL ASSISTANCE BURSARY
Established in 1982.

Requirements: To provide books, equipment and bursaries for female students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE SHOALTS FAMILY BURSARY

Established in 2016 by Todd and Kerry Shoalts.

Requirements: To be granted to a student enrolled in the Niagara Regional Campus (NRC) of the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to individuals (a) from the Niagara region (or another small community, i.e. population < 100,000), and (b) with a demonstrated interest in elder care or family medicine.

THE JOEL SIEGEL MEMORIAL MD BURSARY

Established in 2021 by Dr. Mark Siegel (MD '73) and Mrs. Maureen Siegel.

Requirements: To be granted to a student in the Michael G. DeGroote School of Medicine with an interest in pursuing family medicine and who demonstrates financial need. Preference will be given to a student planning to pursue a career in family medicine in underserviced areas.

THE SCOTIABANK BREAST CANCER SCHOLARSHIP

Established in 1999 by the Bank of Nova Scotia.

Requirements: Two scholarships to be awarded annually to provide financial assistance to medical students who are in good academic standing and are completing an approved elective, educational or research project in the field of breast cancer at the Hamilton Regional Cancer Centre.

THE SCOTIABANK MEDICAL SCHOLARSHIPS/BURSARIES

Established in 1999 by the Bank of Nova Scotia.

Requirements: Ten scholarships to be awarded to undergraduate medical students based on good academic standing and financial need.

THE SCOTIABANK MEDICAL SCHOLARSHIPS

Established in 2004 by Scotiabank under the McMaster Student Opportunity Fund II initiative.

Requirements: Four scholarships to be awarded annually to undergraduate medical students who are in good academic standing and demonstrate financial need.

THE SCOTIABANK PEDIATRIC MEDICAL BURSARY

Established in 2004 by Scotiabank.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who are residents of Ontario, in good academic standing, demonstrate financial need and who are completing an approved elective, educational or research project in the field of Pediatrics.

THE ALBERT JOHN SMITH MEDICAL BURSARY

Established in 2015 by the bequest of Albert John Smith.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE STOBBE GLOBAL HEALTH BURSARY FUND

Established in 2017 by faculty, students, staff and friends of Dr. Karl Stobbe, the inaugural Regional Assistant Dean of the Niagara Regional Campus (NRC) of the Michael G. DeGroote School of Medicine.

Requirements: To be granted to students enrolled at the NRC who demonstrate financial need and will be pursuing further education in the area of global health.

THE GERRY AND SYLVIA SMITH BURSARY

Established in 2007 by Gerry Smith, B.Com. (Class of '71), M.B.A. (Class of '75) and Sylvia Smith because of their belief in the value of education.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need. Preference will be given to students from Simcoe County.

THE DR. GARY STEIN BURSARY IN MEDICINE

Established in 2011 by Gary Stein, M.D. (Class of '77).

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE STOBBE BURSARY

Established in 2016 by Karl and Julie Stobbe.

Requirements: To be granted to a student enrolled in the Niagara Regional Campus (NRC) of the Michael G. DeGroote School of Medicine who demonstrates financial need. If there are no eligible students from the NRC in a given year, no bursary will be granted and funds will be carried forward to support NRC students in future years.

THE DANIEL AND NATALIE STRUB BURSARY

Established in 1999 by the nieces and nephews of Daniel and Natalie Strub in their honour.

Requirements: To be granted to an undergraduate student enrolled in the Michael G. DeGroote School of Medicine to provide financial assistance to further their education in the medical field. Awarded to medical students in financial need who have completed an academic elective, or have special interest, in stroke recovery, leukemia or blood disorders.

THE ANDREW TALALLA MEMORIAL BURSARY FUND

Established in 2000 in the memory of Dr. Andrew Talalla, a Neurosurgeon at McMaster University.

Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine to provide financial assistance in the payment of their tuition fees in order to further education in the medical field. Preference will be given to students who are interested in a career in Neurosurgery.

THE MARY THOMAS BURSARY

Established in 2015 by bequest of Lilian Mary Eleanor Thomas.

Requirements: To be awarded to a female student in the Michael G. DeGroote School of Medicine who is a resident of Ontario, and who demonstrates financial need.

THE IAN AND AVERIL THOMPSON BURSARY IN MEDICINE

Established in 2010 by Mr. and Mrs. Ian and E. Averil Thompson.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE RUTH TOMLINSON MEMORIAL BURSARIES

Established in 1995 through a bequest of the late Ruth Nourse Tomlinson Wilson. Ruth Tomlinson was a professional artist born in Chicago, USA in 1908. She resided in Canada from 1917 to 1957 and moved to Chelsea, England until her death in 1994. Ruth Tomlinson was proud of her Canadian citizenship and, after attending the opening ceremony of the Medical School at McMaster University, she decided to bequeath a portion of her estate to create bursaries for medical students.

Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who are in good academic standing and who show evidence that they require financial support to complete their medical education training program.

THE UCHIDA FUND FOR MD ELECTIVES

Established in 2014 from the estate of Dr. Irene A. Uchida, Professor Emeritus at McMaster, in recognition of her years of service in the Faculty of Health Sciences, and as a contribution to the promotion of good health care by graduates of McMaster University.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who are pursuing electives in underserviced areas of Canada or in developing countries.

THE WILLIAM A. VANDERBURGH ESTATE BURSARY

Established in 1968 via the estate of Mr. William Andrew Vanderburgh Jr. in honour of his father.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE EDWARD VOGELMAN MD BURSARY

Established in 2019 from the Estate of Shirley Foran in memory of her father Edward Vogelman.

Requirements: To be awarded to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE WANG MD BURSARY FOR NEWCOMERS
Established in 2015 by the Wang family. To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.
Requirements: Preference will be given to students who are new to Canada within the last 5 years. Applicants must declare their immigrant status.

THE WENDY WANG BURSARY IN MEDICINE
Established in 2007 by Stanley Yip, B.Sc. (Class of '86) in honour of his wife, Wendy Wang.
Requirements: To be granted to a student enrolled in the Michael G. DeGroote School of Medicine who demonstrates financial need.

THE DR. IAN WILSON BURSARY
Established in 2019 by Dr. Ian Wilson (MD '83) to commemorate the 50th Anniversary of the McMaster Medical School.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need. Preference will be given to a student at the Waterloo Campus.

THE HENRY AND SYLVIA WONG BURSARY IN MEDICINE
Established in 2004 by Dr. Henry Wong and Mrs. Sylvia Wong.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE DR. HENRY AND SYLVIA WONG FAMILY BURSARY
Established in 2017 by Dr. Henry Wong and Mrs. Sylvia Wong.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who demonstrate financial need.

THE WALLY ZIMMERMAN CML HEALTHCARE BURSARY
Established in 2009 in honour of Wally Zimmerman by CML Healthcare Inc.
Requirements: To be granted to students enrolled in the Michael G. DeGroote School of Medicine who best exhibit a combination of academic excellence and community service. Applicants must submit a separate letter indicating the details of their community service and financial need.

Work Programs

McMaster Work Program Regulations

1. Work Programs provide meaningful employment opportunities, with approved University employers, to students who demonstrate financial need.
2. Students with completed full-time Canadian federal and/or provincial government student aid applications (e.g. full-time OSAP) with a calculated entitlement of at least $1 demonstrate financial need for the purpose of Work Program participation.
3. Students without government aid applications, including Indigenous students, International students, students with government aid restrictions, students with permanent disabilities studying at a lesser course load, Nursing students at the Mohawk site, and students on Social Assistance who complete a standard University need profile and show at least $1 in need demonstrate financial need for the purpose of Work Program participation.
4. Students who meet with designated staff on campus (e.g. a Student Loans Officer) who confirm the need for Work Program assistance through submission of additional supporting documentation demonstrate financial need for the purpose of Work Program participation.
5. International Students with a valid study permit who reside in Canada for the duration of their period of employment are able to participate in Work Programs.
6. Students wishing to participate in the fall and/or winter terms must be enrolled in the terms in which they wish to participate and must submit a complete Fall/Winter Work Program application through AwardSpring by the specified deadline date.
7. Students wishing to participate in the summer term must have been in a full-time OSAP eligible course load in the preceding fall or winter term and must submit a complete Summer Work Program application through AwardSpring by the specified deadline date.
8. Students are encouraged to apply for Work Program Approval as soon as the Work Program applications open, as there are more students interested in participating in Work Programs than jobs available.
9. Students approved for Work Program participation are provided a Work Program Approval notification.
10. Students approved for Work Program participation apply for approved positions posted under Career Opportunities in Mosaic. Job posting dates are advertised on the Office of the Registrar website https://registrar.mcmaster.ca/aid-awards/.
11. Students review approved positions and apply for those for which they feel they are qualified.
12. Students must provide a copy of their Work Program Approval when they apply to a position with a prospective employer.
13. Prospective employers review job applications and invite students to participate in their employee selection and hiring process. University employers use their own criteria for selecting eligible Work Program students for interview and/or hire.
14. Approval for Work Program participation does not guarantee the student will be hired for an approved Work Program position.
15. Approved Work Program students are restricted to accepting one Fall/Winter position and one Summer Work position in a given academic year.
16. Once hired, students may work no earlier than the published start date of the Work Program and no later than the published end date of the Work Program.
17. Employers and students must adhere to all applicable employment legislation and McMaster Human Resources' policies and guidelines.
18. Students must maintain satisfactory work performance and attendance.
19. University employers have the right to terminate student employment where work performance and/or attendance is unsatisfactory.
20. Students are advised that employers may or may not recognize University mid-term recesses as a scheduled break from work and may or may not be able to accommodate requests for time off. Students should discuss work requirements with their employers.
21. Students must report enrolment status and work program earnings, as required, by their government aid program.
22. Students earn at least minimum wage and are paid by the hiring employer through Payroll.
23. The Office of the Registrar, Aid & Awards, provides partial reimbursement of an approved Work Program student's salary to the employer from operating monies and donor trust funds.
24. The University may choose to no longer offer Work Programs and may choose to limit the number of approved participants due to funding limitations.
25. The University may remove specific Work Program funds from the University Calendar, may revise the terms and stated value and/or suspend the allocation of Work Program funds (e.g. donor funds).
26. Work Program participation supported by donor funds may have additional eligibility requirements.

McMaster Work Programs

Fall/Winter Specific Regulations

1. The Fall/Winter Work Program is available to students who are Canadian Citizens, Permanent Residents, Conventional Refugees and Protected Persons of Canada enrolled in OSAP eligible Graduate and Medicine degree programs.

2. The Fall/Winter Work Program is available to students who are Canadian Citizens, Permanent Residents, Conventional Refugees and Protected Persons of Canada in OSAP eligible Undergraduate degree programs (including Nursing students at the Mohawk Site). Students who are not Canadian Citizens, Permanent Residents, Conventional Refugees or Protected Persons of Canada, in OSAP eligible Undergraduate degree programs (excluding Nursing students at the Mohawk Site), may participate in Level 2 or above.
3. Students may work no more than 10 hours per week on average, during the fall and/or winter terms, through an approved Work Program.
4. To maintain Fall/Winter Work Program eligibility, students must be enrolled in a full-time OSAP eligible course load or equivalent in the term(s) in which they would like to participate in the Work Program, from the time of application through approval, hiring and start of employment.
5. Students must remain enrolled in the term(s) in which they participate in the Work Program, from start of employment to end of employment. Should a student drop all classes in a term or withdraw from the institution, their Fall/Winter Work Program participation ends on the date of withdrawal.

Fall/Winter Work Programs

Application details are available in AwardSpring. Further information about our Work Programs is available at https://registrar.mcmaster.ca/aid-awards/.

THE MCMASTER FALL/WINTER WORK PROGRAM

Established in 1996 by the University with the goal of creating meaningful employment opportunities for current students who demonstrate financial need.

Requirements: Students must be approved for the Fall/Winter Work Program through the Office of the Registrar, Aid & Awards.

Summer Specific Regulations

1. The Summer Work Program is open to students who are Canadian Citizens, Permanent Residents, Conventional Refugees and Protected Persons of Canada enrolled in OSAP eligible Medicine programs.
2. The Summer Work Program is available to students who are Canadian Citizens, Permanent Residents, Conventional Refugees, International students and Protected Persons of Canada in OSAP eligible Undergraduate degree programs (including Nursing students at the Mohawk Site) beginning in Level 1.
3. In order to be eligible to participate in the Summer Work Program, students must be returning to continue their studies the following academic year (i.e. their degree will not be conferred in the June of the Summer Work Program term nor in the November immediately following the Summer Work Program).
4. Summer work positions may be part-time or full-time. Students may work no more than 44 hours per week during the summer term.

Summer Work Programs

Application details are available in Mosaic. Further information about our Work Programs is available at https://registrar.mcmaster.ca/aid-awards/.

THE R. ROSS CRAIG MEMORIAL FUND WORK PROGRAM

Established in 1997 in memory of R. Ross Craig. A variable number of employment opportunities made available to students in any program who demonstrate financial need.

Requirements: Students must be approved for the Summer Work Program through the Office of the Registrar, Aid & Awards.

THE HAMLIN FAMILY FOUNDATION WORK PROGRAM

Established in 1996 by the Hamlin Family Foundation. A variable number of employment opportunities made to students in any program who demonstrate financial need.

Requirements: Preference will be given to students in disciplines related to the fields of Health Sciences and Engineering. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of the Registrar, Aid & Awards.

THE SALLY HORSFALL WORK PROGRAM

Established in 1996, the Offord Centre for Child Studies, McMaster University has a variable number of employment opportunities made available to students demonstrating financial need. These jobs will provide an opportunity for students to pursue research and/or assist with activities sponsored by the Centre.

Requirements: Students must be approved for the Summer Work Program through the Office of the Registrar, Aid & Awards.

THE HUMANITIES COMMUNICATIONS CENTRE WORK ENDOWMENT

Established in 1997 by Edward and Margaret Lyons, McMaster alumni of the Class of '49 and later augmented by friends of The Edward and Margaret Lyons Humanities Communications Centre.

Requirements: A variable number of employment opportunities will be made available to students in any program who demonstrate financial need. Preference will be given to students in Humanities and Social Sciences. Students must be approved for the Summer Work Program through the Office of the Registrar, Aid & Awards.

THE MCMASTER SUMMER WORK PROGRAM

Established in 1996 by the University with the goal of creating meaningful employment opportunities for current students who demonstrate financial need.

Requirements: Students must be approved for the Summer Work Program through the Office of the Registrar, Aid & Awards.

Awards for Undergraduate Students

Academic Grants

Entrance Academic Grants

Entrance Academic Grant Regulations

1. Entrance Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. Entrance Academic Grants are available to students admitted full-time on the basis of high school admission requirements.
3. Entrance Academic Grants are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
4. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Academic Grant, unless:

i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma), and/or

ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.

5. Entrance Academic Grants are available to students who are Canadian Citizens or Permanent Residents of Canada, Convention Refugees, or Protected Persons of Canada regardless of where they completed their high school education.
6. International students are not eligible for Academic Grants.
7. Entrance Academic Grants first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).

8. Students must achieve a minimum 80% in the average(s) used to determine Entrance Academic Grant eligibility. An admission audition, portfolio score, or equivalent may be included in the calculation of an average.
9. Averages for Entrance Academic Grants are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Academic Grants.
10. Entrance Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter.
11. Entrance Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition, or developing a portfolio.
12. To be considered for an Entrance Academic Grant by application, students must submit a complete application by the specified deadline date.
13. Entrance Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
14. Entrance Academic Grants are allocated on the basis of an eligible course load and financial need as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or a completed standard University need profile for the academic year in which the student is entering Level 1 of their program.
15. The greater calculated financial need is used to break any tie.
16. Students may receive a maximum of one Entrance Academic Grant.
17. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility to have an Entrance Academic Grant payment processed.
18. All Entrance Academic Grant payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
19. Entrance Academic Grants are typically disbursed September through the end of December.
20. Entrance Academic Grant recipients will have their awards noted on their University transcript.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Entrance Academic Grant. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. Students withdrawing from courses without failure by default in the Winter term will forfeit their Entrance Academic Grant.
23. Students who forfeit their Entrance Academic Grant will have their grant cancelled and their transcript notation removed. Students must return the Entrance Academic Grant funding to their McMaster Student Account.
24. Some Entrance Academic Grants are renewable (see In-Course and Renewal Academic Grant Regulations).
25. The University may choose not to grant an Entrance Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
26. The University may remove specific Entrance Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of Entrance Academic Grants (e.g. donor funds).
27. Entrance Academic Grants supported by donor funds may have additional eligibility requirements.

Academic Grants for Entering Students

Open to Two or More Faculties

THE FEENY/TOMKINS FAMILY FIRST-GENERATION ACADEMIC GRANT

Established in 2022 by Dr. David Feeny, and Dr. Darrell Joan Tomkins, Professors Emeritus, in memory of David's parents Mulley (Muriel) and Harold Feeny.

Requirements: To be granted to students entering Level 1 of any program with a high final admissions average, who demonstrate financial need, and who are the first generation in their family to attend post-secondary studies. The grant is tenable for up to 4 years provided the recipient maintains high averages and demonstrates financial need.

Typically Available: 1 x $ 3,000

Open to the DeGroote School of Business

THE COSTCO WHOLESALE CANADA LTD. ACADEMIC GRANT

Established in 2012 by Costco Wholesale Canada Ltd.

Requirements: To be awarded to a student entering the Commerce program in the DeGroote School of Business with a high final admission average who demonstrates financial need. The grant is tenable for up to four years provided the recipient is enrolled full-time in the DeGroote School of Business and maintains a minimum Fall-Winter Average of 9.5. To be awarded every four years.

Typically Available: 1 x $8,000 ($2,000/year)

THE BURDEE GIBSON ACADEMIC GRANT

Established in 2007 by Scott Kinnear, B.Eng. (Class of 1988) and Betty Ann Kinnear in memory of her mother, Burdee Gibson.

Requirements: To be awarded to a undergraduate students entering Business I in the DeGroote School of Business who have high final admission averages and demonstrate financial need. Award is tenable for up to four years provided the recipient remains in the DeGroote School of Business and maintains a minimum Fall-Winter Average of 9.5.

Typically Available: 1 x $4,000 ($1,000 /year)

THE CARL HALLER-ASSOCIATED MEDICAL SERVICES, INC. ACADEMIC GRANT

Established in 2006 by Associated Medical Services, Inc. in honour of Carl Haller, B.A., Economics and Business (Class of '55) for his dedication and years of service on its Board of Directors.

Requirements: To be awarded to a student entering Business I in the DeGroote School of Business who has a high final admission average and demonstrates financial need.

Typically Available: 2 x $2,000

THE THELMA LAZAROWICH ACADEMIC GRANT

Established in 2005 by Michael Lypka, B. Com. (Class of '80) in memory of his grandmother.

Requirements: To be awarded to a student enrolled in 24 units or more in Business I in the DeGroote School of Business who has a high final admission average and demonstrates financial need. Award is tenable for up to four years provided the recipient remains in the DeGroote School of Business and maintains a minimum Fall-Winter Average of 9.5.

Typically Available: 1 x $24,000 ($6,000 per year)

THE LINO LUISON & JOANNE LICURSI FAMILY ACADEMIC GRANT

Established in 2017 by Lino Luison B.A.Hon. (Class of '79) and Joanne Licursi B.A.Hon. (Class of '79) in support of their belief that all students should have the opportunity to pursue their educational goals.

Requirements: To be granted to an entering student in the Honours Bachelor of Integrated Business and Humanities program who has achieved a high final admission average and demonstrates financial need.

Typically Available: 1 x $4,000

Open to the Faculty of Health Sciences

THE FRITH ACADEMIC GRANT FOR NURSING EXCELLENCE

Established in 2009 by the Styles Family Foundation in recognition of the Hamilton General Hospital School of Nursing and, in particular, the graduating Class of 1954B of which Jacqueline Frith Styles was a member.

Requirements: To be awarded to the student entering B.Sc.N. program in the School of Nursing who has a high final admission average and demonstrates financial need. The award is tenable for up to four years provided the recipient remains enrolled in the School of Nursing and maintains a minimum Fall-Winter Average of 9.5.

Typically Available: 1 x $22,000 ($5,500 per year)

Open to the Faculty of Science

THE DUBECK ACADEMIC GRANT

Established in 2006 by Dr. Michael Dubeck, B.Sc. (Class of '51) and M.Sc. (Class of '52).

Requirements: To be awarded to a student enrolling in a program of study in the Faculty of Science who has a high final admission average and demonstrates financial need. The grant is tenable for up to 4 years provided the recipient remains in the Faculty of Science and maintains a minimum Fall-Winter Average of 9.5.

Typically Available: 1 x $8,000 ($2,000 per year)

THE DUBECK MEMORIAL ACADEMIC GRANT

Established in 2012 by Dr. Michael Dubeck B.Sc. (Class of '51), M.Sc. (Class of '52) in memory of his parents, Samuel and Elsie Dudyk who, through dedication and sacrifice, enabled their two sons to attend McMaster.

Requirements: To be awarded to students enrolled in Level 1 Environmental & Earth Sciences Gateway, Honours Integrated Sciences, Life Sciences Gateway, or Chemical and Physical Sciences Gateway in the Faculty of Science with a high admission average and who demonstrate financial need. The grant is tenable for up to four years provided the recipient remains enrolled full-time in the Faculty of Science and maintains a minimum Fall-Winter Average of 9.5.

Typically Available: 1 x $20,000 ($5,000 per year)

Open to the Faculty of Social Sciences

THE WALTER AND ADELINE BOYCHUK ACADEMIC GRANT

Established in 2011 by Lynda Boychuk in honour of her parents, Walter and Adeline Boychuk.

Requirements: To be awarded to a Level 1 student in the Faculty of Social Sciences who has a high final admission average and demonstrates financial need.

Typically Available: 1 x $2,000

Community Contribution Awards

Community Contribution Awards Regulations

1. Community Contribution Awards are non-monetary, non-academic awards allocated on the basis of demonstrated qualities of leadership or innovative skills, service to the University or community at large, or outstanding athletic or artistic participation.
2. Community Contribution Awards are available to full-time and part-time students enrolled in Level 2 or above of their first undergraduate degree program at the time of award application and selection.
3. Community Contribution Awards requiring full-time status are available to students enrolled full-time or equivalent in both fall and winter terms.
4. Community Contribution Awards intended for true part-time students are available to students who have completed at least 50% of all units attempted in their undergraduate degree program at McMaster on a part-time basis.
5. Community Contribution Awards are available to all domestic and international students.
6. Community Contribution Awards are not available to second degree students.
7. Students are limited to one Community Contribution Award per academic year.
8. Community Contribution Awards are available to students with a minimum Cumulative Grade Point Average of 4.0 on a minimum of 18 graded units.
9. Community Contribution Awards seek to recognize current contributions which had a significant community impact of at least 100 hours or more during the year leading up to the application deadline.
10. To be considered for a Community Contribution Award, students must submit a complete application by the specified deadline date.
11. Community Contribution Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
12. Community Contribution Award recipients receive a letter of recognition.
13. Letters of recognition are typically available no later than the end of September.
14. Community Contribution Award recipients will have their awards noted on their University transcripts.
15. A Community Contribution Award recipient may be eligible to receive a corresponding donor bursary of the same name if the student is able to demonstrate financial need (see In-Course Bursary Regulations).
16. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of a Community Contribution Award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
17. Students who forfeit their award will have their award cancelled and their transcript notation removed. Students must return their letter of recognition to the Office of the Registrar.
18. The University may choose not to grant a Community Contribution Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
19. The University may remove specific Community Contribution Awards from the University Calendar, may revise the terms and stated number available for allocation and/or suspend the granting of Community Contribution Awards.
20. The terms of individual Community Contribution Awards may specify additional eligibility requirements.

Community Contribution Awards by Application

Open to Two or More Faculties

THE AUBURN INDUSTRIAL SERVICES LTD. COMMUNITY CONTRIBUTION AWARDS

Established in 1997 by Auburn Industrial Services Ltd.

Requirements: To be awarded to students enrolled in any program who display superior leadership or innovative skills.

Typically Available: 2

THE BRANTFORD ALUMNI BRANCH COMMUNITY CONTRIBUTION AWARDS

Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association.

Requirements: A variable number of awards to be granted to students enrolled in any program who demonstrate leadership and innovative skills through

participation in either university or community activities. Preference will be given to students from the Brant County area high schools.
Typically Available: 1

THE ELVA CARROL COMMUNITY CONTRIBUTION AWARD
Established in 1996 by Elva Carrol. To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation.
Requirements: Preference to be given to an athlete who participates on an inter-university women's team and has demonstrated leadership and fair play.
Typically Available: 1

THE EDWARD FRANK DAVIS MEMORIAL COMMUNITY CONTRIBUTION AWARD
Established in 1996 by bequest in memory of Edward Frank Davis.
Requirements: A variable number of awards to be granted to students in Level 2 or above in any program who have shown commitment and contribution to their community through volunteer work.
Typically Available: 1

THE DAMIAN MIGUEL HEADLEY COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '89).
Requirements: To be awarded to students enrolled in any program who demonstrate one or more of the following: service to McMaster University or the community-at-large, outstanding athletic or artistic participation or display superior leadership or innovative skills.
Typically Available: 3

THE RUDY HEINZL COMMUNITY CONTRIBUTION AWARD
Established in 1996 by family, friends and colleagues upon the retirement of Rudy Heinzl as Dean of Student Affairs, in recognition of 32 years of dedicated service to students and to the McMaster University community.
Requirements: To be awarded to a student enrolled in any program who, in the judgment of a selection committee, has made a significant contribution to the university life of his/her fellow students.
Typically Available: 3

THE JUNIOR LEAGUE OF HAMILTON-BURLINGTON, INC. COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Junior League of Hamilton-Burlington, Inc. under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to a student in any program who has demonstrated service to the community-at-large.
Typically Available: 4

THE ALEC JOHN ROYSTON MACMILLAN MEMORIAL COMMUNITY CONTRIBUTION AWARDS
Established in 1996 by his family in memory of Alec John Royston MacMillan.
Requirements: Three awards to be granted upon completion of Level 1: a) one to a student in any program; b) one to a student enrolled in the Faculty of Business, Humanities or Social Sciences; and, c) one to a student enrolled in the Faculty of Engineering, Health Sciences or Science who, in the judgment of a selection committee, demonstrate qualities of innovation, leadership and service to the community through participation in campus and community programs including athletics.
Typically Available: 3

THE MCMASTER ATHLETIC COUNCIL COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation. Preference will be given to students in Level 2 or higher who exhibit leadership and dedication to sport and prove to be an overall asset to their team(s).
Typically Available: 1

THE PIONEER ENERGY LP LEADERSHIP COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by the Pioneer Group of Companies Inc. in recognition of the community contributions of McMaster students.
Requirements: A variable number of awards to be granted to students enrolled in any program who, in the judgment of a selection committee, have demonstrated leadership and community service.
Typically Available: 10

THE GORDON AND JANE PRICE COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by their sons in honour of Gordon and Jane Price.
Requirements: To be awarded to students in the Arts and Science Program or in the Faculty of Health Sciences who demonstrate service to the community-at-large, outstanding athletic participation or who display superior leadership and innovative skills.
Typically Available: 4

THE GORDON RAYMOND COMMUNITY CONTRIBUTION AWARD
Established in 1996 by the McMaster Association of Part-time Students and other friends and colleagues in honour of Gord Raymond in recognition of his 27 years of service to McMaster University including 15 years as Coordinator of Part-time Degree Studies.
Requirements: To be awarded to the part-time student who, in the judgment of a selection committee, demonstrates enthusiasm for life-long learning and/or had an influence on the lives of part-time students.
Typically Available: 1

THE ROTARY CLUB OF BURLINGTON CENTRAL COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Burlington Central in keeping with Rotary's mission to foster the ideal of service within the community.
Requirements: To be granted to a student enrolled in any program who demonstrates involvement in extra-curricular or community activities. Preference will be given to a student from the Burlington area.
Typically Available: 3

THE ROTARY CLUB OF HAMILTON A.M. COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Hamilton A.M. in keeping with Rotary's mission to foster the ideal of service within the community.
Requirements: To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large.
Typically Available: 3

THE ROTARY CLUB OF HAMILTON COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Hamilton in keeping with Rotary's mission to foster the ideal of service within the community.
Requirements: To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large.
Typically Available: 4

THE SATURN OF HAMILTON EAST COMMUNITY CONTRIBUTION AWARDS
Established in 1996 by SATURN of Hamilton East.
Requirements: To be awarded to McMaster students who promote the ideals of leadership and community service. One award to be granted in each Faculty.
Typically Available: 1 per Faculty

THE STEPHEN F. H. THRELKELD COMMUNITY CONTRIBUTION AWARD
Established in 1997 by friends and colleagues of Stephen F. H. Threlkeld.
Requirements: To be awarded to a student entering Level 4 of an Honours Biology Core program who has demonstrated leadership or innovative skills through participation in either university and/or community activities. Preference will be given to students who have taken at least nine units of Genetics courses.
Typically Available: 1

THE ROGER TRULL COMMUNITY CONTRIBUTION AWARD
Established in 1997 by friends and colleagues in recognition of Roger Trull's ten years of outstanding service and commitment to the Advancement area and the McMaster University community in general.
Requirements: The award will be granted annually to a student who demonstrates solid academic standing and superior leadership in extra-curricular activities in the McMaster community.
Typically Available: 4

THE UBS GLOBAL ASSETS MANAGEMENT (CANADA) COMPANY COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by Brinson Partners Inc. under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to a student enrolled in any program who demonstrates one or all of the following: service to McMaster University or the community-at-large; superior leadership or innovative skills; outstanding athletic or artistic participation.
Typically Available: 5

THE ZOOM MEDIA COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by Zoom Media Inc. in support of McMaster students.
Requirements: A variable number of awards to be granted to students enrolled in any program who, in the judgment of a selection committee, have demonstrated superior leadership and innovative skills through participation in either university and/or community activities.
Typically Available: 6

Open to the Arts and Science Program

THE SAM WATSON MEMORIAL COMMUNITY CONTRIBUTION AWARD
Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson.
Requirements: One or two awards to be granted to students enrolled in a program in Arts and Science who, in the judgment of the selection committee, have made a notable contribution in the community-at-large through participation in extra-curricular activities.
Typically Available: 1

Open to the Faculty of Engineering

THE ROBERT JOHN MORRIS COMMUNITY CONTRIBUTION AWARDS
Established in 1996 by family, friends, and colleagues of Robert John Morris.
Requirements: Six awards: three to be granted to students upon completion of Level 2 or higher of a program in Engineering, and three to be granted to students upon completion of Level 2 or higher of a program in Engineering Physics who, in the judgment of the appropriate selection committee in the Faculty of Engineering, have demonstrated leadership or innovative skills in the field of Engineering or, through their participation in campus and community activities, have had a significant influence on the lives of Engineering students at McMaster University.
Typically Available: 6

THE MEENA AND NARESH SINHA COMMUNITY CONTRIBUTION AWARD
Established in 1996 by Meena and Naresh Sinha.
Requirements: To be awarded to a student enrolled in the Faculty of Engineering who, in the judgment of selection committee, has demonstrated superior leadership or innovative skills through participation in either University and/or community activities.
Typically Available: 1

THE TKK INC. COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by TKK Inc. in recognition of the contributions of McMaster students.
Requirements: To be awarded to students enrolled in the Faculty of Engineering who demonstrate outstanding athletic participation and display superior leadership or innovative skills.
Typically Available: 2

THE WESCAST INDUSTRIES CONTINUOUS LEARNING COMMUNITY CONTRIBUTION AWARD
Established in 1997 by Wescast Industries Inc. in recognition of the contributions of McMaster students.
Requirements: To be awarded to a student enrolled in the Faculty of Engineering who is involved in activities displaying superior leadership or innovative skills. Preference will be given to a student enrolled in Materials Engineering.
Typically Available: 1

THE ZENON ENVIRONMENTAL COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by Zenon Environmental Inc. in recognition of the contributions of McMaster students.
Requirements: To be awarded to students enrolled in the Faculty of Engineering who display superior leadership or innovative skills.
Typically Available: 2

Open to the Faculty of Health Sciences

THE HELEN K. MUSSALLEM COMMUNITY CONTRIBUTION AWARD
Established in 1996 by Dr. Helen K. Mussallem (C.C., B.N., Ed.D., LL.D (Queen's), D.Sc., D.St.J., F.R.C.N., M.R.S.H.) to stimulate interest in professional nursing affairs through participation in meetings, conferences, professional associations and societies related to the field of nursing.
Requirements: A variable number of awards granted to students who have completed Nursing I and who, in the judgment of the School of Nursing, have demonstrated notable involvement in extracurricular activities.
Typically Available: 1

THE NURSING PROGRAM COMMUNITY CONTRIBUTION AWARDS
Established in 1997 in recognition of the contribution of McMaster students.
Requirements: To be awarded to students enrolled in the Nursing program who display superior leadership or innovative skills. Preference to be given to students who are working in under-resourced communities and who must travel long distances to participate in the program.
Typically Available: 1

Open to the Faculty of Humanities

THE STUART AND MARJORIE IVISON COMMUNITY CONTRIBUTION AWARDS
Established in 1997 by Donald Ivison (Class of '53) and Betty Ivison (Class of '52) in honour of his parents Stuart and Marjorie Ivison (Class of '28 (Arts)).
Requirements: A variable number of awards to be granted to students enrolled in a program in the Department of English and Cultural Studies who demonstrate a lively interest in English/Cultural Studies, involvement in extra-curricular activities and service to the University or community-at-large.
Typically Available: 1

THE LORNA AND DAVID SOMERS COMMUNITY CONTRIBUTION AWARD
Established in 1997 by Lorna Somers (Class of '81) and David Somers (Class of '88) under the McMaster Student Opportunity Fund initiative.
Requirements: To be awarded to a student enrolled in the Faculty of Humanities who, in the judgment of a selection committee, has demonstrated one or more of the following: service to McMaster or the community-at-large; superior leadership or innovative skills; outstanding athletic or artistic participation. Preference will be given to a student enrolled in Art and Art History.
Typically Available: 1

THE ADAM SUDAR PRINTMAKING COMMUNITY CONTRIBUTION AWARD
Established in 1997 in memory of Adam Sudar by his friends.
Requirements: To be awarded to students entering Level 3 or 4 of the Honours Art Program at McMaster who, in the judgment of the selection committee, have demonstrated outstanding achievement or promise in the area of printmaking, and who have contributed significantly to the School's cultural

presentations within the community.
Typically Available: 1

THE ALLAN AND JOY WILLIAMS COMMUNITY CONTRIBUTION AWARD
Established in 1996 by Mary Williams (Class of '87), Anne Williams (Class of '89) and Ellen and Dan Walker in honour of their parents.
Requirements: To be awarded to a student enrolled in a program in the Department of English and Cultural Studies who, in the judgment of the selection committee, has made a notable contribution to campus and community life and demonstrates a lively interest in English studies.
Typically Available: 1

Open to the Faculty of Science

THE ROTARY CLUB OF ANCASTER COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the Rotary Club of Ancaster in keeping with Rotary's mission to foster the ideal of service within the community.
Requirements: To be awarded to a student enrolled in any program who demonstrates commendable service to the community-at-large. Preference to be given to a student enrolled in an Environmental Science Program.
Typically Available: 1

Open to the Faculty of Social Sciences

THE ATKINSON CHARITABLE FOUNDATION COMMUNITY CONTRIBUTION AWARD
Established in 1996 by The Atkinson Charitable Foundation.
Requirements: To be awarded to a student enrolled in any program who participates in activities displaying superior leadership or innovative skills and demonstrates service to the community-at-large. Preference to be given to a student enrolled in the Faculty of Social Sciences.
Typically Available: 2

THE JAMES A. JOHNSON COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the McMaster Social Sciences Society Executive Committee to recognize Dr. James A. Johnson, Dean of Social Sciences (1989-97), for his outstanding service to the Faculty of Social Sciences and the broader campus community.
Requirements: One award to be granted annually to a Social Sciences student enrolled in a program involving Anthropology, Economics, Geography, Gerontology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology who, in the judgment of the selection committee, has provided outstanding service to McMaster University or the community-at-large. Preference will be given to students whose service has been undertaken within the Faculty of Social Sciences at McMaster University.
Typically Available: 1

Entrance Awards

Entrance Awards Regulations

Entrance Awards are monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.

1. Entrance Awards are available to students admitted full-time on the basis of high school admission requirements.
2. Entrance Awards are available to students entering Level 1 of their first baccalaureate degree program.
3. Students who have enrolled at any post-secondary institution after graduation from high school are not eligible for Entrance Awards unless:

i. They are completing a certificate or diploma at McMaster University as a requirement of admission (e.g. the McMaster English Language Diploma), and/or

ii. They have withdrawn from post-secondary studies before attending or before the deadline to drop and add courses in their first term of study.

4. Entrance Awards are available to all domestic and international students.
5. Entrance Awards are available to students who pay fees to McMaster University.
6. Students may receive a maximum of one Entrance Award granted solely on the basis of academic standing (e.g. a McMaster University Award of Excellence or Achievement Award) and one Entrance Award granted on the basis of an application or other earned merit.
7. Entrance Awards first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).
8. Students must achieve a minimum 80% in the average(s) used to determine Entrance Award eligibility. An admission audition or portfolio score, or equivalent, may be included in the calculation of an average.
9. Averages for Entrance Awards are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Awards.
10. Entrance Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
11. To be considered for an Entrance Award by application, students must submit a complete application by the specified deadline date.
12. Entrance Award applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
13. Students must enrol in the fall term to have an Entrance Award payment processed.
14. To be eligible for International Entrance awards, international students must be paying international tuition fees and enrolled in courses full-time during the fall and winter terms. If their tuition fees change to domestic status, they are no longer eligible for international student entrance awards.
15. All Entrance Award payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
16. Entrance Awards are typically disbursed no later than the end of September.
17. Entrance Award recipients will have their awards noted on their University transcript.
18. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
19. Students withdrawing from courses on or before *the last day for withdrawing from courses without failure by default* in the Fall term will forfeit their Entrance Award.
20. Students who forfeit their Entrance Award will have their award cancelled and their transcript notation removed. Students must return the Entrance Award funding to their McMaster Student Account.
21. Some Entrance Awards are renewable (see In-Course Award and Renewals Regulations).
22. Students wishing to defer the benefits of an Entrance Award to the following academic year should apply to the Office of the Registrar, Admissions, for deferral of both admission and stated scholarship value. Approval of applications for deferral is not automatic, and deferrals are not normally granted for more than one academic year.
23. The University may choose not to grant an Entrance Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
24. Deferred award eligibility and value will be determined by the regulations

from the academic year the award was originally offered.

25. The University may remove specific Entrance Awards from the University Calendar, may revise the terms and stated value, and/or suspend the granting of Entrance Awards (e.g. donor funds).
26. Entrance Awards supported by donor funds may have additional eligibility requirements.

The McMaster University Entrance Awards

McMaster University offers the following award programs to level 1 students:

- The McMaster Brighter World Entrance Awards
- The McMaster University Award of Excellence
- The McMaster University Achievement Awards

The McMaster Brighter World Entrance Awards celebrate the achievements of Black students entering a Level 1 program. Brighter World Entrance Awards require an application. Award values and application requirements are set annually and are published at https://registrar.mcmaster.ca/entrance-awards.

The McMaster University Award of Excellence is automatically assessed. No application required. Students in the top 10% of their Faculty based on final admission average to their program will receive a $3000 award. The estimated and final admission average cut-offs for each Faculty are set annually and are published at https://registrar.mcmaster.ca/entrance-awards.

The McMaster University Achievement Awards are automatically assessed. No application is required. Students who are not in the top 10% of their Faculty based on final admission average to their program will be considered for an Achievement Award. The Achievement Award value and the final admission average cut-off for each Faculty are set annually and are published at https://registrar.mcmaster.ca/entrance-awards.

Entrance Awards

Automatically Assessed

OPEN TO TWO OR MORE FACULTIES

THE CLASS OF 1956 50TH ANNIVERSARY ENTRANCE SCHOLARSHIPS

Established in 2006 by the Class of 1956 in honour of its 50th anniversary.
Requirements: A variable number of scholarships to be awarded to undergraduate students entering any Level 1 program.
Typically Available: 2 x $2,200

THE DE VILLIERS - MAHAFFY MERIT AWARDS

Established in 1991 in memory of Nina De Villiers and Leslie Mahaffy of Burlington, by contributions from the local community and the employees of several area companies including Searle Canada, Boehringer Ingelheim, Smithkline Beecham, Monsanto and the Royal Bank.
Requirements: A variable number of scholarships to be awarded to outstanding students graduating from a secondary school in the Halton Region; (a) to students entering Level 1 of any program; and (b) to students entering Level 1 of either the Faculty of Science or the Music program. Preference will be given to female students.
Typically Available: 2 x $1,200

THE CATHRYN E. KAAKE MERIT AWARD

Established in 1988 in memory of Cathryn E. Kaake (Class of '78) by family and friends.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 1 x $1,600

THE LEGACY LANGUAGE SCHOLARSHIP

Established between 1909 and 1941 by generous donors, in recognition of Helen M. Currey, Albert Matthews, Harold Matthews, D. E. Thomson, and John Northway, Esquire.
Requirements: To be awarded to students entering Level 1 of any program whose Grade 12 U or M courses include English plus at least one of French, German, Latin or Spanish, who attained the highest admission averages.
Typically Available: 1 x $1,400

THE MCMASTER UNIVERSITY AWARD OF EXCELLENCE

Established in 2020 by McMaster University to celebrate the academic achievement of students entering a Level 1 program in the top 10% of their Faculty.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $3,000

THE LESLIE A. PRINCE MERIT AWARDS

Established in 1979 in honour of Leslie A. Prince, Dean of Students, by his friends and colleagues upon the occasion of his retirement and in recognition of his outstanding contribution to the University community.
Requirements: To be awarded to students entering any program of study.
Typically Available: 1 x $1,500

THE TYNOWSKI SCHOLARSHIP

Established in 1989 by the University, friends and colleagues of Olga Tynowski, for her outstanding contributions to McMaster University during 46 years of service.
Requirements: To be awarded to an outstanding student entering any program of study.
Typically Available: 1 x $1,000

OPEN TO THE ARTS & SCIENCE PROGRAM

THE ARTS & SCIENCE PROGRAM ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 of the Arts & Science Program.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

OPEN TO THE FACULTY OF BUSINESS

THE DEGROOTE SCHOOL OF BUSINESS ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the DeGroote School of Business (Faculty of Business).
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

OPEN TO THE FACULTY OF ENGINEERING

THE FACULTY OF ENGINEERING AWARD OF EXCELLENCE

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Engineering.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $3,000

THE WAGUIH ISHAK INTERNATIONAL SCHOLARSHIP

Established in 2023 by Waguih Ishak.
Requirements: To be awarded to international undergraduate students entering Level 1 of any Faculty of Engineering program who attain high averages. This award is tenable for up to 4 years, upon confirmation of continued full-time enrollment as a Faculty of Engineering student.
Typically available: $30,000 ($7,500 annually for up to 4 years)

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE ERIC SEIDLITZ AWARD

Established in 2020 by Eric Seidlitz (MSc '90, PhD '09), a faculty member in the Bachelor of Health Sciences (Honours) Program.
Requirements: To be awarded to students entering the Bachelor of Health Sciences (Honours) Program who, in the judgement of the program, best represent the incoming class.
Typically Available: 1 x $1,000

THE FACULTY OF HEALTH SCIENCES ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Health Sciences.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

OPEN TO THE FACULTY OF HUMANITIES

THE FACULTY OF HUMANITIES ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Humanities.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

THE DANIEL F. PHELAN ENTRANCE SCHOLARSHIP

Established in 2023 by Laurie J. Scott, B.A. Hon. (Class of '80) in honour of her late husband, Daniel F. Phelan, an academic librarian who had a vast array of interests, a lifelong passion for the arts, and a firm belief in the intrinsic value of learning.
Requirements: To be awarded to undergraduate students entering the Faculty of Humanities with high averages. The scholarship is renewable for 3 additional years provided the recipient remains enrolled full-time in the Faculty of Humanities.
Typically available: 1 x $40,000 ($10,000 each annually for 4 years)

OPEN TO THE FACULTY OF SCIENCE

THE FACULTY OF SCIENCE ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Science.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

THE LEGACY SCIENCE SCHOLARSHIP

Established between 1915 and 1956 by generous donors, in recognition of Henry Hoyes, Lizzie Lloyd and Isabella Campbell Mcnee.
Requirements: To be awarded to undergraduate students entering Level 1 of the Faculty of Science who attained the highest admission average.
Typically Available: 1 x $1,000

THE LILLIAN AND LEROY PAGE SCHOLARSHIP

Established in 1982 by donation of the Lillian and Leroy Page Foundation.
Requirements: For a student from the Hamilton area entering the Faculty of Science.
Typically Available: **1** x $4,500

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE FACULTY OF SOCIAL SCIENCES ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Social Sciences.
Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

Entrance Awards by Application

OPEN TO TWO OR MORE FACULTIES

THE ASHBAUGH SCHOLARSHIPS

Established in 1989 by bequest of Frederick K. Ashbaugh of St. Petersburg, Florida, in memory of Mary Eliza Kingston.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 5 x $5,000

THE DUNDAS SCHOLARSHIPS

Established in 1984 from funds donated by The H.G Bertram Foundation.
Requirements: A variable number of scholarships to be awarded to students from Dundas and surrounding area entering any program of study. The recipient of this award is eligible to receive the corresponding donor bursary if financial need is demonstrated.
Typically Available: 4 x $5,000

THE GEORGE AND NORA ELWIN SCHOLARSHIPS

Established in 1979 by bequest of George and Nora Elwin of Hamilton.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 10 x $5,000

THE MCMASTER BRIGHTER WORLD ENTRANCE AWARD

Established in 2020 by McMaster University to celebrate the achievements of Black students entering an undergraduate program.
Requirements: A variable number of scholarships to be awarded to Black students entering a Level 1 program.
Typically Available: 50 x $5,000

THE A.G. REILLY SCHOLARSHIPS

Established in 1991 by bequest of Lois E. Reilly of Toronto.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 10 x $5,000

THE SCHULICH LEADER SCHOLARSHIPS

Established in 2012 by The United Jewish Welfare Fund of Toronto through funding from Seymour Schulich.
Requirements: To be awarded to students entering the Faculty of Engineering or the Faculty of Science in the areas of science, technology, engineering or mathematics (STEM) who, in the judgment of the Faculties, have demonstrated academic excellence and/or leadership in school life or community life, or have provided evidence of entrepreneurial talent. The scholarship is renewable for three years at the same value provided the recipient remains enrolled full-time and demonstrates notable academic achievement.
Typically Available:

- 1 x $120,000 ($30,000 per year) Faculty of Engineering
- 1 x $100,000 ($25,000 per year) Faculty of Science

Note: See www.schulichleaders.com for application information.

OPEN TO THE DEGROOTE SCHOOL OF BUSINESS

THE KEVIN A. LOCKHART FAMILY SCHOLARSHIP

Established in 2017 by Kevin A. Lockhart, BA '87 and Past Vice-President of the McMaster Students Union.
Requirements: To be awarded to a student entering the Honours Bachelor of Commerce in Integrated Business and Humanities program and, who in the judgment of the DeGroote School of Business, has demonstrated community engagement and high academic achievement.
Typically Available: 2 x $5,000 by admission application through the faculty

THE MCCREARY FAMILY ENTRANCE SCHOLARSHIP

Established in 2023 by Rick McCreary.
Requirements: To be awarded to undergraduate students entering Level 1 in the DeGroote School of Business who attain high averages and demonstrate qualities of leadership, service and/or participation in athletics and/or music.
Typically available: 1 x $10,000

THE PEPSICO CANADA ENTRANCE AWARD IN BUSINESS

Established in 2020 by PepsiCo Canada.
Requirements: To be awarded to undergraduate students entering Level 1 in the Faculty of Business who identify as racialized students, attain high averages, and who demonstrate leadership potential.
Typically Available: Variable x $2,500 by award application through the faculty

THE FORTINOS SCHOLARSHIP

Established in 1990 by John Fortino.

Requirements: To be awarded to an outstanding student entering the School of Business.
Typically Available: 1 x $1,500 by award application through the faculty

OPEN TO THE FACULTY OF ENGINEERING

THE A.H. ATKINSON EDUCATION FUND SCHOLARSHIP

Established in 2001 by the A.H. Atkinson Education Fund.
Requirements: To be awarded to undergraduate students entering the Faculty of Engineering.
Typically Available: 1 x $2,500

THE YVES & CYNTHIA BLED FUTURE ACHIEVERS AWARD FOR WOMEN IN ENGINEERING

Established in 2019 by Yves and Cynthia Bled.
Requirements: To be awarded to female students entering Level 1 in the Faculty of Engineering who demonstrate high academic achievement and leadership potential.
Typically Available: 2 x $2,500

THE YVES & CYNTHIA BLED SCHOLARSHIP FOR BLACK WOMEN IN ENGINEERING

Established in 2022 by Claudette Bled in memory of her parents Yves and Cynthia Bled, who believed in the importance of having access to a post-secondary education for equity-deserving groups.
Requirements: To be awarded to undergraduate domestic female students, entering Level 1 in the Faculty of Engineering, who identify as Black and who demonstrate high academic achievement and leadership potential. This award is tenable for up to two years provided the student remains enrolled in the Faculty of Engineering and attains high averages.
Typically Available: 2 x $20,000 ($10,000 per year)

THE COCA-COLA SCHOLARSHIPS

Established in 1998 by Coca-Cola Bottling Ltd.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 1 x $4,500 by award application through the Faculty of Engineering

THE ENBRIDGE BLACKNORTH DIVERSITY ENTRANCE SCHOLARSHIP

Established in 2022 by Enbridge.
Requirements: To be awarded to undergraduate students entering Level 1 in the Faculty of Engineering who identify as Black, and who demonstrate leadership experience or involvement in extracurricular activities.
Typically Available: 1 x $9,000

THE CLASS OF 1952 MEL HAWKRIGG HONOUR AWARDS

Established in 2001 by the Class of 1952 in honour of its 50th reunion.
Requirements: A maximum number of four entrance scholarships to be awarded each year to students entering any Level 1 program.
Typically Available: 1 x $5,000 by award application through the Faculty of Engineering

THE NELLIE P. HOGG SCHOLARSHIP

Established in 1965 by bequest of Nellie P. Hogg of Hamilton.
Requirements: One scholarship to be awarded to a female student entering any program of study.
Typically Available: 1 x $8,000 by award application through the Faculty of Engineering

THE GENERAL MOTORS ENTRANCE SCHOLARSHIPS

Established in 1999 by General Motors of Canada Limited.
Requirements: A variable number to be awarded to female students entering the Faculty of Engineering.
Typically Available: 1 x $9,000 by award application through the Faculty of Engineering

THE JOHN HODGINS MEMORIAL SCHOLARSHIP

Established in 1985 by his wife, Jean, in memory of Dr. John W. Hodgins in recognition of his extraordinary contributions in founding the Faculty of Engineering which he served with distinction as the first Dean.
Requirements: To be awarded to an outstanding student entering the Faculty of Engineering.
Typically Available: 1 x $1,500 by award application through the Faculty of Engineering

THE JOSEPH IP ENTRANCE SCHOLARSHIP

Established in 2014 by Joe Ip, B.Eng. (Class of '79), M.Eng (Class of '81).
Requirements: To be awarded to students entering the Faculty of Engineering who achieve a minimum final admission average of 95%, and who demonstrate leadership experience and involvement in extracurricular activities.
Typically Available: 2 x $10,000 by award application through the Faculty of Engineering

THE LIBURDI ENGINEERING ENTRANCE SCHOLARSHIP

Established in 2019 by Joseph Liburdi.
Requirements: To be awarded to students entering the Faculty of Engineering who demonstrate outstanding academic achievement and community engagement.
Typically Available:1 x $10,000 by award application through the Faculty of Engineering

THE MOULTON COLLEGE ENTRANCE SCHOLARSHIP

Established in 1980 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949.
Requirements: To be awarded to a female student entering any program of study.
Typically Available: 1x $5,000 by award application through the Faculty of Engineering

THE NSBE MCMASTER CHAPTER SCHOLARSHIP

Established in 2020 by The National Society of Black Engineers (NSBE) McMaster Chapter.
Requirements: To be awarded to undergraduate students entering Level 1 in the Faculty of Engineering who identify as Black students and who demonstrate involvement and leadership within the Afro-Canadian or the wider Canadian Community.
Typically Available: 1 x $3,500

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION ENTRANCE SCHOLARSHIP

Established in 1961 by the Ontario Professional Engineers Foundation for Education.
Requirements: To be awarded to undergraduate students entering a CEAB (Canadian Engineering Accreditation Board) accredited program in the Faculty of Engineering who have demonstrated leadership qualities through participation in extra-curricular activities.
Typically Available: 2 x $1,500 each

THE PEPSICO CANADA ENTRANCE AWARD IN ENGINEERING

Established in 2020 by PepsiCo Canada.
Requirements: To be awarded to undergraduate students entering Level 1 in the Faculty of Engineering who identify as racialized students, attain high averages, and who demonstrate leadership potential.
Typically Available: Variable x $2,500

THE SONIA SENNIK RESILIENCE SCHOLARSHIP

Established in 2020 by Sonia Sennik, MBA, B.Eng., Eng. Physics (Class of '08) who understands there are numerous obstacles and off-ramps that can deter students of any identity from making it through their Engineering studies and starting their careers.
Requirements: To be awarded to undergraduate students entering Level 1 in the Faculty of Engineering who demonstrate a commitment to extra-curricular or community activities.
Typically Available: 1 x $8,000

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE FACULTY OF HEALTH SCIENCES ACHIEVEMENT AWARD

Established in 2020 by McMaster University to celebrate the academic achievement of students entering Level 1 in the Faculty of Health Sciences.

Requirements: A variable number of scholarships to be awarded to students on the basis of final admission average.
Typically Available: Variable x $1,000

THE REESE FALLON MEMORIAL SCHOLARSHIP

Established in 2018 in honour of Reese Fallon.
Requirements: To be awarded to students entering Level 1 in the School of Nursing who graduated from a Toronto District High School.
Typically Available: Variable x $1,326

OPEN TO THE FACULTY OF HUMANITIES

THE JOAN FRANCES BOWLING ENTRANCE SCHOLARSHIPS

Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling.
Requirements: Two scholarships to be awarded to students entering Music I, who in the judgment of the School of the Arts, have demonstrated excellence in classical music.
Typically Available: 2 x $1,650 by admission audition

THE EILEEN GRAY FARLEY SCHOLARSHIP

Established in 1998 by Eileen Gray Farley (Class of '43 and winner of the D.E. Thomson Scholarship) in memory of Mr. D. E. Thomson who exemplified a generous spirit of giving throughout his life and established the D.E. Thomson Scholarship in 1909.
Requirements: A variable number of scholarships to be awarded to students entering the Faculty of Humanities.
Typically Available: 3 x $4,000

THE H.P. FRID SCHOLARSHIP

Established in 1982 by the family of H.P. Frid in her memory.
Requirements: To be awarded to a promising student entering any program of study.
Typically Available: 1 x $1,300

THE MERRILL FRANCIS GAGE ENTRANCE SCHOLARSHIP

Established in 1982 from the estate of Merrill Francis Gage of Hamilton.
Requirements: To be awarded to a keyboard student entering Music I who, in the judgment of the School of the Arts, has attained outstanding musical proficiency.
Typically Available: 1 x $1,000 by admission audition

THE RAYMOND C. LABARGE MERIT AWARDS

Established in 1990 in memory of Raymond C. Labarge (Class of '36) of Ottawa.
Requirements: A variable number of scholarships to be awarded to students entering any program of study.
Typically Available: 1 x $3,500

THE MARION LAING-KNOX ENTRANCE SCHOLARSHIP

Established in 2000 by bequest of Marion Laing-Knox.
Requirements: To be awarded to a student entering the Faculty of Humanities in a program of study who presents an outstanding final admission average.
Typically Available: 2 x $2,000

THE JOSEPHINE MAGEE SCHOLARSHIP

Established in 1959 by bequest of Josephine Magee of Hamilton.
Requirements: To be awarded on the basis of general proficiency in the subjects required for admission to students from any province or territory of Canada.
Typically Available: 1 x $2,600

THE ALVIN I. OGILVIE SCHOLARSHIPS

Established in 1984 by bequest of Alvin I. Ogilvie of Hamilton.
Requirements: Five scholarships to be awarded to students entering any program of study.
Typically Available: 5 x $1,500

THE FRANK THOROLFSON MEMORIAL SCHOLARSHIPS

Established in 1978 in memory of Professor Frank Thorolfson, first Chair of the Department of Music.
Requirements: Two scholarships to be awarded to students entering Music I who, in the judgment of the School of the Arts, have attained high scholastic achievement and musical proficiency.
Typically Available: 2 x $1,200 by admission audition

THE GRAHAM TODD MEMORIAL ENTRANCE SCHOLARSHIP

Established in 2015 to honour the legacy of Professor Graham Todd of the School of the Arts.
Requirements: To be awarded to students entering the iArts 1 program who, in the judgment of the School of the Arts, have demonstrated artistic excellence and high academic achievement.
Typically Available: 1 x $1,000 by admission portfolio

THE WALLINGFORD HALL ENTRANCE SCHOLARSHIP

Established in 1993.
Requirements: To be awarded to a student entering any program of study.
Typically Available: 1 x $2,000

THE VICTOR WILSON SCHOLARSHIP

Established in 2009 in memory of his father, Victor Wilson, by Steve Wilson (Class of '85) and his wife Tina (Class of '86) and their family.
Requirements: Two scholarships to be awarded to students entering Music I who, in the judgment of the School of the Arts, demonstrates excellence in Music and strength of character; one to a piano student and one to an orchestral student.
Typically Available: 1 x $2,000 by admission audition

International Student Entrance Awards

Automatically Assessed

OPEN TO TWO OR MORE FACULTIES

THE CARIBBEAN ALUMNI ENTRANCE SCHOLARSHIP

Established in 2012 through the generous support of the McMaster University's Caribbean alumni.
Requirements: To be awarded to a visa student from a Caribbean nation belonging to the CARICOM Community entering Level 1 of any program with the highest admission average.
Typically Available: variable

THE MCMASTER CHINESE ALUMNI - PETER GEORGE INTERNATIONAL ENTRANCE SCHOLARSHIPS

Established in 1999 by Chinese Alumni (Toronto Chapter) of McMaster University.
Requirements: A variable number to be awarded to visa students entering Level 1 of any program.
Typically Available: 1 x $3,000

THE TAYLOR'S EDUCATION GROUP ENTRANCE SCHOLARSHIP

Established in 2010 by Dato' Loy Teik Ngan (Class of 1984).
Requirements: To be awarded to international undergraduate students from Malaysia entering Level 1 of any program. This award is tenable for up to 4 years provided the student maintains full-time enrollment.
Typically Available: 1 x $20,000 ($5,000 per year)

THE WOO FAMILY INTERNATIONAL ENTRANCE SCHOLARSHIPS

Established in 1999 by Mr. Chung How Woo in honour of his late wife, Mrs. Ching Yung Chiu-Woo, mother and mother-in-law of four McMaster graduates.
Requirements: A variable number to be awarded to visa students entering Level 1 of any program.
Typically Available: 1 x $3,000

In-Course Awards

Graduating Student Awards

Graduating Student Awards Regulations

1. Graduating Student Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.
2. Graduating Student Awards are normally available to all full-time and part-time students graduating from their first undergraduate degree program. Graduating Student Awards are not available to second degree students unless the terms of a donor award specify eligibility and the student has not received the award previously.
3. Graduating Student Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. Graduating Student Awards intended for true part-time students are available to students who have completed at least 50% of all units attempted in their undergraduate degree program at McMaster on a part-time basis.
5. Graduating Student Awards are available to all domestic and international students.
6. Students are considered for all available Graduating Student Awards in the spring following their graduating term.
7. While students typically apply for Graduating Student Awards in AwardSpring, students with degrees conferred at Fall Convocation are only able to apply for Graduating Student Awards by application the following spring using pdf application forms available through the Office of the Registrar at https://registrar.mcmaster.ca/aid-awards/.
8. Graduating Student Awards are available to students with a minimum Cumulative Grade Point Average of 8.0 calculated on at least 60 graded units.
9. Available averages, units upon which averages are calculated, program level, and enrolled units may be used to break any ties in an award competition.
10. Graduating Student Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
11. To be considered for a Graduating Student Award by application or by nomination, students must submit a complete application by the specified deadline date.
12. Graduating Student Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
13. All Graduating Student Award payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
14. Graduating Student Awards are typically disbursed no later than the end of May.
15. Graduating Student Award recipients will have their awards noted on their University transcripts.
16. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of a Graduating Student Award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study.
17. Graduating Student Award recipients who do not have their degree conferred as expected will forfeit their award.
18. Students who forfeit their awards will have their award cancelled and their transcript notation removed. Students must return any non-monetary award to the Office of the Registrar and any award funding to their McMaster Student Account.
19. The University may choose not to grant a Graduating Student Award in the absence of a suitable candidate; may choose to limit the number of recipients where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
20. The University may remove specific Graduating Student Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of Graduating Student Awards (e.g. donor funds).
21. Graduating Student Awards supported by donor funds may have additional eligibility requirements.

Graduating Student Awards

Automatically Assessed

- completed common application submitted through AwardSpring is required for nominated awards.

OPEN TO TWO OR MORE FACULTIES

THE CAMERON D. ALLEN BOOK PRIZE

Established in 1978 in memory of Cameron D. Allen.
Requirements: To be awarded to a student in an Honours program in the School of Earth, Evironment & Society who, in the judgment of the School of Earth, Evironment & Society, shows outstanding achievement in climatology. Preference will be given to a graduating student.
Typically Available: 2 x $200 for books

THE LEONE BETTY BLACKWELL MEMORIAL BOOK PRIZE

Established in 1999 by Dr. Bonnie Blackwell in memory of her mother, Leone Betty Blackwell.
Requirements: To be awarded to a graduating student with the highest grade in EARTHSC 4P03.
Typically Available: 1 x $85 for books

THE GOVERNOR GENERAL'S ACADEMIC MEDAL

Given by His Excellency the Governor General of Canada.
Requirements: To be awarded to the student graduating from a first baccalaureate degree program who has attained the highest standing throughout the program.
Typically Available: 3 x Medals

THE CATHERINE MACNEILL PRIZE

Established in 1946 by bequest of Annie May MacNeill (Class of 1903).
Requirements: To be awarded to undergraduate students in their graduating year of any program who attain high averages.
Typically Available: 1 x $200

THE MAPS GOLD MEDAL

Established in 1996 by the McMaster Association of Part-time Students.
Requirements: To be awarded to the graduating student completing studies primarily on a part-time basis and who attains the highest Grade Point Average.
Typically Available: 1 x Medal

THE WILLIAM J. MCCALLION SCHOLARSHIPS

Established in 1984 in honour of Professor McCallion, B.A. (Class of '43), M.A. (Class of '46), first Dean of the School of Adult Education from 1970 to 1978, in recognition of his outstanding contribution to adult education and to the Department of Mathematical Sciences during 41 years of service.
Requirements: To be awarded to graduating students who have completed a program primarily on a part-time basis with high averages.
Typically Available: 2 x $800

THE P.L. NEWBIGGING PRIZE

Established in 1982 in recognition of Dr. Lynn Newbigging for his outstanding contributions to the Department of Psychology, Neuroscience & Behaviour (Faculty of Science).

Requirements: Four prizes to be awarded to students graduating from a program in the Department of Psychology, Neuroscience & Behaviour with high averages.

Typically Available: 4 x $100 each

THE LLOYD REEDS PRIZES

Established in 1983 in recognition of Dr. Lloyd G. Reeds for his outstanding contributions to the Department of Geography during 35 years of service.

Requirements: To be awarded to graduating students who, in the judgment of the School of Earth, Evironment & Society, have demonstrated outstanding achievement in ENVSOCTY 4MT6 A/B or EARTHSC 4MT6 A/B.

Typically Available: 4 x $100 each

THE UNIVERSITY SCHOLARSHIPS

Established in 1978.

Requirements: To be awarded to graduating students who have completed a program primarily on a part-time basis with high averages.

Typically Available: 6 x $800

OPEN TO THE ARTS AND SCIENCE PROGRAM

THE LAURA DODSON PRIZE

Established in 1985 by Laura Dodson (Class of 1956).

Requirements: To be awarded to undergraduate students graduating from the Honours Arts and Science Program who have displayed outstanding achievement in both arts and science.

Typically Available: 1 x $200

OPEN TO THE DEGROOTE SCHOOL OF BUSINESS

THE BASU MEDAL

Established in 1984 in memory of Professor Sanjoy Basu by friends, colleagues and accounting organizations.

Requirements: To be awarded to the graduating student who, in the judgment of the School of Business, has displayed outstanding achievement in accounting and has attained an average of at least 10.0 in any four of COMMERCE 4AA3, 4AC3, 4AD3, 4AE3, 4AF3.

Typically Available: 1 x $1,250 and Medal

THE JOHN DEERE LIMITED SCHOLARSHIP

Established in 1992 by John Deere Limited.

Requirements: To be awarded to a graduating student who, in the judgment of the DeGroote School of Business, has demonstrated outstanding academic achievement in courses offered by the Human Resource/Labour Relations Area.

Typically Available: 1 x $2,000

THE BURTON R. JAMES MEMORIAL PRIZE

Established in 1974 by his friends and colleagues in honour of Burton R. James (Class of '39), Controller, 1963-71, Assistant Vice-President - Administration, 1971-73, McMaster University.

Requirements: To be awarded to the student who, has attained the highest Grade Point Average in a program in Commerce.

Typically Available: 1 x $250

OPEN TO THE FACULTY OF ENGINEERING

THE BINKLEY MEDAL

Established in 2000 by the University, friends and colleagues of Margaret Belec (nee Binkley) on the occasion of her retirement and for her outstanding contributions to McMaster University during her 43 years of service.

Requirements: To be awarded to a student graduating from an Honours program in Computer Science who attains the highest Grade Point Average.

Typically Available: 1 x $350 and a Medal

THE GERALD L. KEECH MEDAL

Established in 1994 by his friends and colleagues as a tribute to Gerald L. Keech in recognition of his outstanding contributions to McMaster University during his 33 years of service in Computer Science and computer services.

Requirements: To be awarded to the graduating student from a program in Computer Science who attains the highest Grade Point Average.

Typically Available: 1 x Medal

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION GOLD MEDAL

Established in 1961 by the Ontario Professional Engineers Foundation for Education.

Requirements: To be awarded to the graduate of a CEAB (Canadian Engineering Accreditation Board) accredited program in the Faculty of Engineering who attains the highest Cumulative Grade Point Average.

Typically Available: 1 x Medal

THE SHELL CANADA PRIZES IN ENGINEERING AND MANAGEMENT

Established in 1983.

Requirements: Three prizes to be awarded to students graduating from an Engineering and Management program. Awards will be based on scholarship and on the quality of and creativity shown in written communication.

Typically Available: 3 x $500

OPEN TO THE FACULTY OF HUMANITIES

THE WILLIAM AND LIDA BARNS MEMORIAL PRIZE IN HISTORY

Established in 1969 by their son, William D. Barns, of Morgantown, West Virginia.

Requirements: To be awarded to the graduand who, in the judgment of the Department of History, has attained notable standing in an Honours History program.

Typically Available: 1 x $150

THE MARION BATES BOOK PRIZE

Established in 1967, Centennial Year, by the Alumnae members of the McMaster Alumni Association in honour of Marion Bates, Dean of Women from 1947 to 1965.

Requirements: To be awarded to a student graduating from an Honours program in History who, in the judgment of the Department of History, has displayed outstanding achievement in Canadian history courses consistently throughout the degree program.

Typically Available: 1 x $100 for books

THE DEAN'S MEDAL FOR EXCELLENCE IN THE HUMANITIES

Established in 2000 by Donald T. Betzner (Class of '52).

Requirements: Three prizes to be awarded to the graduating students who, in the judgment of the Faculty of Humanities, have demonstrated outstanding academic achievement.

Typically Available: 3 x $8,675

THE W. NORMAN JEEVES SCHOLARSHIP

Established in 1987 by the French Section, Department of Romance Languages, in honour of W. Norman Jeeves, Professor of French from 1965 to 1987.

Requirements: To be awarded to a graduand of an Honours program in French who, in the judgment of the Department of French, has demonstrated outstanding academic achievement in the French component of the program.

Typically Available: 1 x $500

THE AGNES AND JOHN MACNEILL MEMORIAL PRIZE

Established in 1946 by bequest of Annie May MacNeill (Class of '03).

Requirements: To be awarded to the student graduating from an Honours program in English who has attained the highest Grade Point Average in English throughout the degree program.

Typically Available: 1 x $200

THE WALTER SCOTT MCLAY PRIZE

Established in 1938 in honour of Dean McLay, by his daughter, Mrs. R.R. McLaughlin (Marjorie McLay Class of '25) and further enlarged in 1950 by A.H. Wilson of Woodstock.

Requirements: To be awarded to the student who attains the highest Grade Point Average in an Honours program in English.

Typically Available: 1 x $300

THE ABRAHAM ISAAC ROSENBERG MEMORIAL PRIZE

Established in 1986 by bequest of Abraham Isaac Rosenberg (Class of '34) of Hamilton and Kitchener.

Requirements: To be awarded to the graduating student who attains the highest Grade Point Average in the Honours Philosophy program.

Typically Available: 1 x $225

THE JOHN H. TRUEMAN PRIZE

Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University.

Requirements: To be awarded to the graduating student who demonstrates the most outstanding ability in a History program.

Typically Available: 1 x $600

OPEN TO THE FACULTY OF SCIENCE

THE CSEP/SCPE UNDERGRADUATE STUDENT AWARD

Established in 1993 by the Canadian Society for Exercise Physiology.

Requirements: To be awarded to undergraduate students enrolled in the Kinesiology program who demonstrate high standing in KINESIOL 2C03, KINESIOL 2CC3 (Exercise Physiology) and KINESIOL 4C03.

Typically Available: 1 x Medal and Certificate

THE DAWSON PRIZE IN CHEMISTRY

Established in 2010 by Dr. Wilfred Chung (Class of '75) and the Philomathia Foundation in honour of Dr. Peter T. Dawson, Professor Emeritus of Chemistry.

Requirements: To be awarded to a graduating student who, in the judgment of the Department of Chemistry and Chemical Biology, has attained outstanding academic achievement in a Chemistry program. Preference will be given to the student who exhibits a special aptitude and promise in the field of physical chemistry and/or has attained the highest standing in Chemistry.

Typically Available: 1 x $900

THE JENSEN MEDAL

Established in 1995 by friends and colleagues as a tribute to Dr. Doris E.N. Jensen in recognition of her contribution in developing Cooperative Education Programs in the Faculty of Science and her 31 years of service in the wider university community.

Requirements: To be awarded to a student graduating from the Honours Biology and Pharmacology (Co-op) Program who, in the judgment of the Committee of Instruction, demonstrates outstanding academic achievement and excellence in co-op placements.

Typically Available: 1 x Medal

THE KINESIOLOGY PRIZES

Established in 1982.

Requirements: Two prizes to be awarded to graduating students who, in the judgment of the Department of Kinesiology, have submitted an outstanding paper or project.

Typically Available: 2 x $100

THE ESTHER MCCANDLESS MEMORIAL PRIZE

Established in 1984 by friends and colleagues in memory of Professor E.L. McCandless, a humanitarian and distinguished member of the Department of Biology from 1964 to 1983.

Requirements: To be awarded to a student who achieves an outstanding Grade Point Average in an Honours Biology Core program.

Typically Available: 1 x $300

THE MIDDLETON / WALKER PRIZE IN SEDIMENTARY GEOLOGY

Established in 2010 in honour of Gerard Middleton and Roger Walker by a generation of grateful students who studied under them from the mid-1960s until 2000.

Requirements: To be awarded to the student graduating from an Honours B.Sc. program in the School of Earth, Evironment & Society who, in the judgment of the School, has achieved the highest standing in the field of sedimentary geology.

Typically Available: 1 x $1,350

THE E.S. MOORE PRIZE

Established in 1956 by Elwood S. Moore, LL.D. (Class of '55).

Requirements: To be awarded to the student graduating in an Honours program in Geography who, in the judgment of the School of Earth, Evironment & Society, has attained the most notable standing in Geology (or Earth Science, Environmental Science or Geography).

Typically Available: 1 x $225

THE FREDRICK MOYES SCHOLARSHIP IN ANATOMY

Established in 2024 by Fredrick Moyes.

Requirements: To be awarded to graduating students enrolled in the Kinesiology program who attain high averages and demonstrate an interest in anatomy.

Typically available: 1 x $1,000

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE CFUW - HAMILTON MEMORIAL PRIZE IN POLITICAL SCIENCE

Established in 1992 by CFUW-Hamilton to honour the memory of past members. Renewed in 2015 on the occasion of the Club's 90th anniversary.

Requirements: To be awarded to a female student graduating from a Political Science program who has demonstrated outstanding academic achievement.

Typically Available: 1 x $1,000

THE DENTON PRIZE IN ECONOMICS

Established in 2009 by J. Stephen Yeo (Class of 1972) in honour of Dr. Frank T. Denton, Professor Emeritus in Economics.

Requirements: To be awarded to a student graduating from an Honours program in Economics who, in the judgment of the Department of Economics, has demonstrated outstanding achievement in Econometrics as well as overall academic merit.

Typically Available: 1 x $1,000

THE J.E.L. GRAHAM MEDAL

Established by the Faculty of Social Sciences in 1982 in recognition of Professor J.E.L. Graham for his outstanding contributions to the Faculty and the University during 32 years of service.

Requirements: To be awarded on the recommendation of the Faculty of Social Sciences to a student in the graduating class who, on the basis of scholarship, is judged to be an outstanding member of the class of Social Sciences graduands, and who has completed the program primarily on a part-time basis.

Typically Available: 1 x Medal

THE BRUCE HAMILTON SCHOLARSHIP

Established in 2024 by the Hamilton Community Foundation in honour of Bruce M. Hamilton.

Requirements: To be awarded to undergraduate students graduating from the Faculty of Social Sciences who attained high averages.

Typically available: 1 x $1,000

THE HURD MEDAL

Established in 1955 by Donald W. Hurd (Class of '49) in memory of his father, Dean William Burton Hurd and augmented in 2003 in his memory by his wife Alice Hurd.

Requirements: To be awarded to a student at graduation for distinguished achievement in an Honours program in which economics is a major field of study.

Typically Available: 1 x Medal

THE FRANK E. JONES PRIZE

Established in 1982 in honour of Professor F.E. Jones for his outstanding contributions to the Department of Sociology.

Requirements: To be awarded to full-time graduating students who have completed a program in Sociology with high averages.

Typically Available: 1 x $100

THE DR. JEAN JONES MEMORIAL SCHOLARSHIP

Established in 2005 by family and friends in memory of Dr. Jean Jones.

Requirements: To be awarded to a graduating student who attains the highest Grade Point Average in either the Bachelor of Arts/Bachelor of Social

Work or Bachelor of Social Work post-degree program.
Typically Available: 1 x $800

THE RUTH LANDES PRIZE

Established in 1982 in honour of Professor Ruth Landes for her outstanding contributions to the Department of Anthropology.
Requirements: To be awarded to graduating students who have completed a program in Anthropology primarily on a part-time basis with high averages.
Typically Available: 1 x $100

THE FELIKS LITKOWSKI MEMORIAL PRIZE IN POLITICAL SCIENCE

Established in 1987 by Albert Litkowski (Class of '78) and Richard Litkowski (Class of '86) in honour of their father.
Requirements: To be awarded to a student graduating from an Honours program in Political Science who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.
Typically Available: 1 x $950

THE R.C. MCIVOR MEDAL

Established by the Faculty of Social Sciences in 1982 in recognition of Professor R.C. McIvor, former Dean of the Faculty, for his outstanding contributions to the Faculty and the University during 35 years of service.
Requirements: To be awarded to a student in the Faculty of Social Sciences graduating class who attained high averages.
Typically Available: 1 x Medal

THE MCMASTER UNIVERSITY RETIREES ASSOCIATION PRIZE

Established in 1992 by the McMaster University Retirees Association.
Requirements: To be awarded to students graduating from a program in Aging and Society who attain high averages.
Typically Available: 1 x $1,200

THE HARRY L. PENNY PRIZE

Established in 1984 in recognition of Professor Harry L. Penny, founding Director of the School of Social Work, for his outstanding contribution to the School.
Requirements:To be awarded to the student with the highest Cumulative Average in a Social Work program.
Typically Available: 1 x $100

THE POLITICAL SCIENCE HONOURS ESSAY PRIZE

Established in 1982.
Requirements: To be awarded to the student who in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement in POLSCI 4Z06 A/B.
Typically Available: 1 x $100

THE POLITICAL SCIENCE PRIZE

Established in 1982.
Requirements: To be awarded to graduating students who have completed a program in Political Science primarily on a part-time basis with high averages.
Typically Available: 1 x $100

THE RELIGIOUS STUDIES PRIZES

Established in 1982.
Requirements: To be awarded to graduating students who have completed a program in Religious Studies primarily on a part-time basis with high averages.
Typically Available: 2 x $100 each

THE RICHARD SLOBODIN PRIZE

Established in 1982 in honour of Professor Richard Slobodin for his outstanding contributions to the Department of Anthropology.
Requirements: To be awarded to full-time graduating students who have completed an Anthropology program with high averages.
Typically Available: 1 x $100

THE SOCIOLOGY PRIZES

Established in 1982.
Requirements: To be awarded to graduating students who have completed a program in Sociology primarily on a part-time basis with high averages.
Typically Available: 2 x $100 each

THE HARRY WAISGLASS BOOK PRIZE

Established in 1988 in honour of Harry Waisglass, the first Director of the Labour Studies Education Program at McMaster.
Requirements: To be awarded to a student graduating from a program in Labour Studies who, in the judgment of the Committee of Instruction for Labour Studies, has demonstrated outstanding achievement.
Typically Available: 1 x $50 for books

THE ALVINA MARIE WERNER SCHOLARSHIP

Established in 2008 through a bequest by the late Alvina Marie Werner.
Requirements: To be awarded to a graduating student enrolled in a Aging and Society or Social Work program who, in the judgment of the Faculty of Social Sciences, demonstrates outstanding academic achievement and interest in pursuing a career in social services in the specific area of gerontology.
Typically Available: 1 x $3,500

Awards by Application

OPEN TO TWO OR MORE FACULTIES

THE GRADUAND WELCOME WEEK REP AWARD

Established in 2024 in recognition of the dedication and contributions of McMaster University's Welcome Week Representatives in fostering an inclusive and seamless transition to university life of first year students.
Requirements: To be awarded to Welcome Week representatives who have volunteered their time during their graduating year and have demonstrated significant involvement and leadership as Welcome Week Reps.
Typically available: 3 x $3,000

THE BERT MACKINNON MEMORIAL SCHOLARSHIP

Established in 1996 in memory of Bert MacKinnon, B.A. (Class of '43), LL.D. (Class of '77), first Associate Chief Justice of Ontario (1978 to 1986).
Requirements: One scholarship to be awarded to a graduating student who enrols in a Bachelor of Laws or Juris Doctor or equivalent degree program in the academic year immediately following graduation. The student selected will have demonstrated high academic achievement and leadership in extracurricular activities.
Typically Available: 1 x $800

THE JOHN R. MCCARTHY SCHOLARSHIP

Established in 1987 by John R. McCarthy, LL.D. (Class of '65), former Deputy Minister of University Affairs and Deputy Minister of Education for the Province of Ontario.
Requirements: To be awarded to a student graduating from a program in Arts and Science, Humanities, Science, or Social Sciences who enrols in the Faculty of Education of an Ontario university in the academic year immediately following graduation. The student selected will have made a contribution to the life of the University by displaying leadership in student government or student affairs and leadership and sportsmanship in athletic endeavours.
Typically Available: 5 x $800

THE MCMASTER UNIVERSITY FUTURES FUND GRADUAND AWARD

Established in 2000.
Requirements: To be awarded to undergraduate students who are children of a member of McMaster University's salaried pension plan who have demonstrated outstanding academic achievement. Recipient must obtain a Grade Point Average of 8.0 or greater.
Typically Available: 4 x $1,000

THE DRS. JOLIE RINGASH AND GLEN BANDIERA RENAISSANCE AWARD

Established in 2012 by Drs. Jolie Ringash and Glen Bandiera. The award, with its emphasis on experiential learning, is intended to create transformative opportunities for students from all Faculties and programs, from undergraduate to graduate and professional.
Requirements: The recipient of the award shall be an individual who wishes to engage in a 4-12 month, self-directed, enrichment experience outside his/her chosen program of study, and who wishes to explore a project of personal significance that will amplify the recipient's University experience while

engaging in experiential learning at home or abroad.
Typically Available: 1 x $25,000

OPEN TO THE DEGROOTE SCHOOL OF BUSINESS

THE E.H. AMBROSE GOLD MEDAL

Established in 1971 by Clarkson Gordon in memory of their former Hamilton partner, E.H. Ambrose, member of the University's Board of Governors from 1957 to 1967 and its Chair, 1965 to 1967, and augmented by Mrs. E.H. Ambrose in 1987.
Requirements: To be awarded to the student in the graduating class of a program in Commerce who, on the basis of scholarship and leadership, is judged to be the outstanding member of the class.
Value: 1 x Medal

OPEN TO THE FACULTY OF ENGINEERING

THE DR. RUDOLF DE BUDA SCHOLARSHIP

Established in 1989 in memory of Professor de Buda by family, friends and colleagues.
Requirements: To be awarded to students who have achieved high academic standing in an Electrical or Computer Engineering program and who complete a thesis or project in their final year or intend to pursue graduate research in the field of Information Theory, Coding or Digital Communications.
Typically Available: 1 x $1,900

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE MCMASTER NURSING ALUMNI MEMORIAL PRIZE

Established in 1984 and augmented in 2001 by the McMaster Nursing Alumni Branch to recognize graduates from the McMaster University School of Nursing.
Requirements: To be awarded to a student who, in the judgment of the School of Nursing, has demonstrated leadership while participating in undergraduate activities.
Typically Available: 1 x $300

THE LINDA NASH BSCN MEMORIAL SCHOLARSHIP

Established in 2024 by Julie, Melanie, and Stephen Nash in memory of Linda Nash.
Requirements: To be awarded to undergraduate students in their graduating year of any Nursing program (BScN), who are Canadian Citizens, who attain high averages and demonstrate compassion toward patients in the healthcare environment. This award is eligible to second degree students.
Typically available: 2 x $2,000

THE PIONEER ENERGY LP PRIZES IN NURSING

Established in 1989 by the Pioneer Group Limited in conjunction with the R. Samuel McLaughlin Centre for Gerontological Health Research.
Requirements: Two prizes to be awarded to students graduating from the Nursing program who, in the judgment of the School of Nursing, have achieved notable standing and demonstrated practical aptitude for a career in the health care of the elderly.
Typically Available: 1 x $375

THE HELEN FUNG MEMORIAL SCHOLARSHIP FOR NURSING EXCELLENCE

Established in 2024 by Adrian Fung in memory of his loving mother, Helen Fung.
Requirements: To be awarded to undergraduate students graduating from the School of Nursing, who attain high averages and demonstrate both excellence in patient and family-centered care and an interest in pursuing a career in cardiac care (Cardiology).
Typically available: 1 x $3,000

THE GRACE SENRA-FONTES MEMORIAL PRIZE

Established in 1989 by the graduating class (Class of '88) in association with the McMaster University Nursing Society and the McMaster Nursing Alumni Executive in memory of Grace Senra-Fontes (Class of '88) of Toronto.
Requirements: To be awarded to a student in Level 4 of the Nursing program and who, in the judgment of the School of Nursing, best demonstrates excellence in scholarship and leadership, and has served as a valuable role model for those qualities deemed important to success in a nursing career.
Typically Available: 1 x $300

THE MANUEL AND LILLIAN ZACK SCHOLARSHIP

Established in 1984 by Manuel and Lillilan Zack (Class of '40) of Hamilton.
Requirements: To be awarded to graduating students enrolled in Level 4 of a program in Nursing and who have demonstrated achievement, initiative, and commitment to gerontological nursing through clinical practice, term papers, research interest, or community activities.
Typically Available: 1 x $1,800

OPEN TO THE FACULTY OF HUMANITIES

THE AMELIA HALL GOLD MEDAL

Established in 1985 by members of the Class of '38 in recognition of Amelia Hall (Class of '38), D. Litt. (Class of '75), one of the great pioneers of Canadian theatre and a consummate actress, who performed on Canadian stage, screen, radio and television for 35 years.
Requirements: To be awarded to a graduating student who, in the judgment of the School of the Arts, has made a significant contribution to drama during the student's University career.
Typically Available: 1 x Medal

THE HUMANITIES MEDALS FOR SPECIAL ACHIEVEMENT

Established by the University in 1982.
Requirements: Up to five medals to be awarded to graduating students in the Faculty of Humanities in recognition of outstanding achievement in scholarship and contributions to the cultural and intellectual life of the University including such areas as the creative and performing arts and faculty government.
Typically Available: 5 x Medal

THE A.G. MCKAY PRIZE IN GREEK AND ROMAN STUDIES

Established in 1990 by Professor Emeritus A.G. McKay.
Requirements: To be awarded to graduating students from an Honours program in The Department of Greek and Roman Studies who have attained high averages and demonstrated leadership.
Typically Available: 1 x $250

OPEN TO THE FACULTY OF SCIENCE

THE BURKE MEMORIAL RING

Presented by science graduates of the University in memory of Dean C.E. Burke.
Requirements: To be awarded to a graduate of a B.Sc. program who is named to the Deans' Honour List and who has made the most outstanding contribution to undergraduate activities.
Typically Available: 1 x Ring

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE REV. ALLISON M. BARRETT SCHOLARSHIP

Established in 2010 by her family and friends in honour of Rev. Allison M. Barrett to celebrate her outstanding leadership and devoted service as Minister of the First Unitarian Church of Hamilton, 1996-2008.
Requirements: To be awarded to a graduating student in Honours Bachelor of Arts in Society, Culture & Religion with demonstrated excellence in Western Religious Thought who, in the judgment of the Department, has achieved notable academic standing and intends to pursue graduate studies.
Typically Available: 1 x $1,200

THE KARL KINANEN ALUMNI PRIZE IN GERONTOLOGY

Established in 1992 by the Gerontology Alumni of McMaster University in recognition of Karl Kinanen for his leadership in the development of Gerontological Studies at the University.
Requirements: To be awarded to a student graduating from a program in Aging and Society who, in the judgment of the Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in community activities.
Typically Available: 2 x $100

THE AUDREY EVELYN MEPHAM AWARD

Established in 2001 by Gordon W. Mepham in loving memory of his wife Audrey Evelyn Mepham.

Requirements: To be awarded to undergraduate students in their graduating year of an Honours program in the Department of Health, Aging and Society who, attain high averages and have completed a thesis or course paper on issues relating to Alzheimer's disease.
Typically Available: 3 x $5,000

THE PIONEER ENERGY LP GERONTOLOGY PRIZES

Established in 1988 by the Pioneer Group Limited.
Requirements: To be awarded to students graduating from a program in the Department of Health, Aging and Society, who in the judgment of the Department, demonstrate leadership in the field of Gerontology.
Typically Available: 1 x $150 each

In-Course Academic Grants

In-Course and Renewal Academic Grant Regulations

1. In-Course Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. In-Course Academic Grants are available to full-time and part-time students enrolled in their first baccalaureate degree program who are not in their graduating term.
3. In-Course Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Academic Grants will require either a minimum Cumulative Grade Point Average of 8.0 calculated on at least 18 graded units or a Fall-Winter Average of 9.5 calculated on the basis of graded units in at least a full-time OSAP eligible course load per term in the prior academic year.
5. In-Course Academic Grants first consider available averages, units upon which averages are calculated, program level and enrolled units in the ranking of academic standing.
6. In-Course Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
7. To be considered for an In-Course Academic Grant by application, students must submit a complete application by the specified deadline date.
8. In-Course Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
9. In-Course Academic Grants that are automatically assessed are allocated on the basis of an eligible course load and financial need as determined by a completed full-time OSAP application for the current academic year. In-Course Academic Grants by application may use a full-time OSAP application or a standard University need profile.
10. The greater calculated financial need is used to break any tie.
11. Some In-Course Academic Grants are renewable.
12. Entrance, Indigenous Student Entrance and In-Course Academic Grant renewals may be based on a minimum Cumulative Grade Point Average of 8.0, or a minimum Fall-Winter Average of 9.5 from the prior academic year based on their full-time OSAP eligible course load or equivalent. An OSAP application for the current year is not required to renew an Entrance or In-Course Academic Grant.
13. Students may receive a maximum of one In-Course Academic Grant or renewal of a prior year Entrance, Indigenous Student Entrance or In-Course Academic Grant.
14. Students must be enrolled in at least the full-time OSAP eligible course load or equivalent used to determine their eligibility to have an In-Course Academic Grant payment processed. Students must be enrolled in the fall term in a full-time OSAP eligible course load or equivalent to have the renewal of a prior year Entrance or In-Course Academic Grant payment processed.
15. All In-Course Academic Grants and Academic Grant renewal payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
16. In-Course Academic Grants are typically disbursed no later than the end of December. Academic Grant renewal payments are typically disbursed no later than the end of September.
17. In-Course Academic Grant recipients will have their awards noted on their University transcript. Academic Grant renewals are not noted on transcripts.
18. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the In-Course Academic Grant or Entrance or In-Course Academic Grant renewal. Students are advised to consult with the Office of the Registrar, prior to making any changes to their program of study or course load.
19. Students withdrawing from courses without failure by default in the Winter term will forfeit their Academic Grant renewal.
20. Students who forfeit their Academic Grant will have their grant cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the Academic Grant funding to their McMaster Student Account.
21. Forfeiture of a renewable Academic Grant also cancels all future instalments of the Academic Grant.
22. Students wishing to defer the benefits of an Academic Grant renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
23. Students holding renewable Academic Grants who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Academic Grant to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, Aid & Awards.
24. The University may choose not to grant an In-Course Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
25. The University may remove specific In-Course Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Academic Grants (e.g. donor funds).
26. In-Course Academic Grants supported by donor funds may have additional eligibility and renewal requirements.

Academic Grants for In-Course Students

Open to Two or More Faculties

THE ANANTH FAMILY ACADEMIC GRANT

Established in 2024 by Mrs. Girija and Dr. Vettai Ananthanarayanan, Professor Emeritus in Biochemistry & Biomedical Sciences at McMaster.
Requirements: To be awarded to undergraduate international students enrolled in any program who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE WILLIAM F. CAMPBELL ACADEMIC GRANT
Established in 2005 by Margaret Campbell, M.Sc. (Class of '72) and David F. Campbell in memory of their father William F. Campbell, B.A. (Class of '36) of Ottawa.
Requirements: To be awarded to students entering Level 2 in the Faculty of Engineering and the Faculty of Science who have completed Level 1 with high Fall-Winter Averages and demonstrate financial need. Tenable in Levels 3 and 4 provided that the recipients remain enrolled in their Faculty and maintain a minimum Fall-Winter Average of 9.5. These awards will be divided equally between the Faculty of Engineering and the Faculty of Science.
Typically Available: 1 x $6,000 ($2,000 each year)

THE RYAN AND LEANNE CLARKE ACADEMIC GRANT
Established in 2024 by Ryan and Leanne Clarke.
Requirements: To be awarded to undergraduate students enrolled in the Faculty of Social Sciences who attain high averages and demonstrate financial need.
Typically Available: 5 x $1,000

THE EMPIRE COMMUNITIES ACADEMIC GRANT IN ENGINEERING
Established in 2024 by Empire Communities, to promote a career in residential real estate and construction.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or higher in Civil Engineering who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE HANS GROH ACADEMIC GRANT
Established in 2011 by Dr. Catherine Groh, B.Sc. (Class of '93) and M.D. (Class of '96), in honour of her father Hans Groh to encourage students in their pursuit of education.
Requirements: To be awarded to a student who has completed at least Level 1 with a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 1 x $2,000

THE HENRY GLOBAL CONSULTING ACADEMIC GRANT
Established in 2011 by Henry Global Consulting at the request of Henry Zou, Ph.D. Engineering (Class of '91), in recognition of McMaster students who, through dedicated effort, excel in their education.
Requirements: To be awarded to a student who has completed at least Level 1 with a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 1 x $1,500

THE ALLAN FANG AND ALANNA JIN ACADEMIC GRANT
Established in 2014 by Allan Fang, MBA (Class of '03) and Alanna Jin, B.Sc. (Class of '04) to
express gratitude for their time at McMaster as new Canadians.
Requirements: To be granted to undergraduate students enrolled in Level 2 or above in the Faculty of Social Sciences or the Computer Science program who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE ELIZABETH JENKINS ACADEMIC GRANT
Established in 2010 by Tom Jenkins, B.Eng.Mgt. (Class of '82) and Toby Jenkins in honour of Tom's mother, Elizabeth Jenkins.
Requirements: To be awarded to students who have completed any Level 1 program, attained high Fall-Winter Averages, and who demonstrate financial need.
Typically Available: 10 x $6,500

THE JUDITH AND WARREN JOHNSON ACADEMIC GRANT
Established in 2017 by Judith Johnson (Class of '65) and Warren Johnson (Class of '62).
Requirements: To be awarded to a student in any Faculty who has attained a high average and demonstrates financial need.
Typically Available: 1 x $1,000

THE KNEALE BROTHERS '37 ACADEMIC GRANT
Established in 2006 by brothers Verne and Graham Kneale (Class of '37) in honour of their family's belief in higher education.
Requirements: To be awarded to a student enrolled in the Faculty of Social Sciences or the Faculty of Humanities enrolled in Level 3, who attains a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 4 x $2,000

THE MICKELSEN-GOULD FAMILY ACADEMIC GRANT
Established in 2016 by I. David Gould (Class of '62) and his wife Ruth Gould.
Requirements: To be awarded to a student enrolled in any program who attains a high average and demonstrates financial need.
Typically Available: 1 x $1,000

THE SZLEK MILLER ACADEMIC GRANT
Established in 2008 by Dr. Stefania Szlek Miller (Class of '67), on the occasion of her retirement after 35 years of service as a faculty member in the Department of Political Science.
Requirements: To be awarded to a student enrolled in an Honours History or Honours Political Science program who attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,500

THE UTTER MORRIS 90TH ANNIVERSARY ACADEMIC GRANT
Established in 2017 by Utter Morris Insurance Brokers of Burlington, Ontario, in celebration of 90 years of leadership and commitment to improving both itself and its community.
Requirements: To be awarded to a student enrolled in any program who attains a high average and demonstrates financial need.
Typically Available: 1 x $1,000

VAN DER SLUIS FAMILY ACADEMIC GRANT
Established in 2019 by Henry van der Sluis, B.Eng. (Class of '73) and his wife Jane van der Sluis, in memory of Henry's brother, John Albert van der Sluis and Jane's son, Paul John Allison. Two beloved family members who would have embraced all that a university education offers.
Requirements: To be awarded to students enrolled in either the Faculty of Engineering or the Faculty of Science who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

Open to the Arts and Science Program

THE JULIE PATEL FOUNDATION ACADEMIC GRANT
Established in 2017 by the Julie Patel Foundation.
Requirements: To be awarded to a student in an Arts & Science program who has attained a high Fall-Winter average and demonstrates financial need.
Typically Available: 1 x $1,000

Open to the DeGroote School of Business

THE AMICUS ACADEMIC GRANT
Established in 2024 by a Bachelor of Arts alumnus (Class of 1985).
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in the DeGroote School of Business who attain high averages and demonstrate financial need.
Typically available: 1 x $1,000

THE CHARITY OF HOPE/MORRIS MERCANTI ACADEMIC GRANT
Established in 2014 by The Charity of Hope, in memory of their family member, prominent entrepreneur and businessman Morris Mercanti, B.A., B.P.E. (Class of '76).
Requirements: To be awarded to a student in the Bachelor of Commerce program with a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 1 x $1,000

THE ALFRED HARRY CROWHURST ACADEMIC GRANT
Established in 2012 by Lawrence Crowhurst, B. Com. (Class of '76) in memory of his father, Alfred Harry Crowhurst.
Requirements: To be awarded to a student enrolled in the Bachelor of Commerce program who has completed at least Level 1 with a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 1 x $2,000

THE MARY DI BATTISTA ACADEMIC GRANT
Established in 2021 by Mary Di Battista B. Comm. (Class of '81) to support others in their educational pursuits.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in a Commerce program who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE IODE HAMILTON MARTHA SERRELS ACADEMIC GRANT
Established in 2010 by IODE Hamilton in memory of Martha Serrels.
Requirements: A variable number to be awarded to students enrolled in a Commerce program in the DeGroote School of Business who attain a high Fall-Winter Average and demonstrate financial need.
Typically Available: 3 x $1,000

THE BRENT LAYTON MEMORIAL ACADEMIC GRANT
Established in 2022 in memory of Brent Layton by his friends from the DeGroote School of Business.
Requirements: To be awarded to undergraduate students enrolled in a Commerce program who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE TAYLOR LEIBOW ACADEMIC GRANT
Established in 2006 by Taylor Leibow LLP, a Hamilton-based firm established in 1947.
Requirements: To be awarded to a student who has completed Level 2 or 3 of the Bachelor of Commerce program, attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,100

THE NOBLE FAMILY ACADEMIC GRANT
Established in 2024 by Melinda Noble, B.Com. (Class 2010).
Requirements: To be awarded to undergraduate students enrolled in the DeGroote School of Business who attain high averages and demonstrate financial need.
Typically available: 1 x $1,000

THE BARRIE REID ACADEMIC GRANT
Established in 2006 by friends and family in memory of Barrie Reid, B.A. (Class of '75).
Requirements: To be awarded to a student in a Commerce program, who attains a high standing in either marketing course, COMMERCE 2MA3 or COMMERCE 3MC3, and who demonstrates financial need.
Typically Available: 1 x $450

THE TROY FAMILY ACADEMIC GRANT
Established in 2004 by Kenneth, B.Com. (Class of '75) and Drenda Troy in honour of Anthony and Marie Troy in support of their belief that all students should have the opportunity to pursue their educational goals.
Requirements: To be awarded to a student who has completed Business I, is continuing in the Bachelor of Commerce program, attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $2,500

THE WONG FAMILY ACADEMIC GRANT
Established in 2015 by Wilfred Wong, B.Com. (Class of '97) and his wife, Dorothy Tong, B.Com. (Hon.) (Class of '99), in memory of Wilfred's father, Yue Pak Wong, for his dedication and commitment towards his children's education.
Requirements: To be awarded to a student enrolled in the DeGroote School of Business who has completed at least Level 1 and is enrolled in a Bachelor of Commerce program, who attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,000

THE DIANE AND COLIN WOOD ACADEMIC GRANT IN BUSINESS
Established in 2008 by Diane Wood and Colin Wood, B.Com. (Class of '78).
Requirements: To be awarded to students in the DeGroote School of Business who have completed Business I with a high Fall-Winter Average, are enrolled in a Level 2 Commerce program, and have demonstrated financial need.
Typically Available: 1 x $1,800

Open to the Faculty of Engineering

THE GORDON AND AGNES (TWAMBLEY) BRASH ACADEMIC GRANT
Established in 2008 by the bequest of Ron Brash, B.Eng. (Class of '64) in memory of his parents.
Requirements: A variable number to be awarded to students enrolled in an Electrical Engineering program who attained a high Fall-Winter Average and demonstrate financial need.
Typically Available: 7 x $8,000

THE GLENN CHAPMAN & ANN CARLSEN ACADEMIC GRANT
Established in 2023 by Glenn Chapman, PhD Physics (Class of '83) and his wife, Ann Carlsen, LLB (Class of '74, Queen's University) to encourage young engineers to approach their work with a drive to discover and with an understanding of their professional responsibility.
Requirements: To be awarded to undergraduate students enrolled in Engineering Physics who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE CHAMBERS ACADEMIC GRANT
Established in 2012 by Dean Chambers, B.Eng.Mgt. (Class of '78) and his wife, Carol-Lynn Chambers, in memory of Dean's father, Leslie Wayne Chambers, who inspired his son's educational and career choices.
Requirements: To be awarded to a student who has completed at least Level 2 in a Chemical Engineering and Management program with a high Fall-Winter Average, and who demonstrates financial need.
Typically Available: 1 x $2,500

THE CORINNE DRAESNER ACADEMIC GRANT
Established in 2023 by Corinne Draesner, B.Eng. (Class of '79), MBA (Class of '90), to inspire students to use their education to pursue their dreams.
Requirements: To be awarded to undergraduate students enrolled in Level 3 or higher, specializing in the Nuclear Engineering and Energy Systems stream of the Engineering Physics program, who attain high averages and demonstrate financial need.
Typically available: 1 x $1,000

THE KRISTINA FERRIS ACADEMIC GRANT
Established in 2011 by Kristina Ferris, B.Sc. (Class of '94) and B.Eng. (Class of '99) to encourage students to pursue and continue studies in Engineering Physics.
Requirements: To be awarded to a student who has completed at least Level 2 with a high Fall-Winter Average and is continuing in an Engineering Physics program, and who demonstrates financial need.
Typically Available: 1 x $1,500

THE HATCH ACADEMIC GRANT IN ENGINEERING
Established in 2005 by Hatch to celebrate their 50th anniversary and their success in providing engineering expertise to clients around the world.
Requirements: Two grants to be awarded to students in a program in Civil, Chemical, Materials or Mechanical Engineering who have a high Fall-Winter Average and demonstrate financial need: a) one to a student in Level 3, and b) one to a student in Level 4 or above.
Typically Available: 2 x $6,500 each

THE HOWE FAMILY ACADEMIC GRANT
Established in 2019 by Stephen Howe, B.Eng. (Class of '90), in memory of his parents, Peter and Doreen Howe, who were passionate and committed educators.
Requirements: To be awarded to female students in Level 2 or above in the Faculty of Engineering who attain high averages and demonstrate financial need.
Typically Available: 1 x $6,500

THE JACK HOWETT ACADEMIC GRANT
Established in 2005 by the Organization of CANDU Industries (OCI) in honour of Jack Howett, a founding member.
Requirements: To be awarded to a student who has completed at least Level 2 with a high Fall-Winter Average and is continuing in an Engineering Physics program specializing in the Nuclear Engineering and Energy Systems Stream, and who demonstrates financial need.
Typically Available: 1 x $2,000

THE JONES FAMILY ACADEMIC GRANT
Established in 2015 by Dr. Richard Jones, B.Eng. (Class of '82), Ph.D. (Class of '93) and Kathryn Jones, B. Eng. (Class of '81), M.Eng. (Class of '86) to allow the opportunity for education to McMaster Students.
Requirements: To be awarded to a student in the Faculty of Engineering who has completed at least Level 2 with a high Fall-Winter Average and who demonstrate financial need.
Typically Available: 1 x $5,000

THE JOYCE AND ROSS KELLY ACADEMIC GRANT
Established in 2008 by Joyce and Ross Kelly to provide support for students who wish to pursue their educational goals.
Requirements: To be awarded to a student who has completed Level 1 with a high Fall-Winter Average, is enrolled in the Department of Materials Science and Engineering, and demonstrates financial need.
Typically Available: 1 x $2,000

THE LIBURDI ENGINEERING ACADEMIC GRANT
Established in 2019 by Joseph Liburdi.
Requirements: To be granted to students enrolled in Level 2 or above in the Faculty of Engineering who attain high averages and demonstrate financial need.
Typically Available: 1 x $40,000 ($10,000 per year)

THE JOHN B. MCDOUGALL ACADEMIC GRANT
Established in 2009 in memory of the late John B. McDougall, B.Sc. (Class of 1940) by his family and friends in recognition of his 25 years of service to McMaster. After 10 years at the Chalk River Reactor, John returned to McMaster in 1957 where, in 1959, he helped open the first university-based research reactor in the British Commonwealth.
Requirements: To be awarded to undergraduate students enrolled in the Engineering Physics program who attain high averages and demonstrate financial need.
Typically Available: 1 x $2,500

THE PETER MILNE ACADEMIC GRANT
Established in 2016 by Peter Milne, B.Eng. (Class of '79) to encourage students to pursue their goals and aspirations.
Requirements: To be awarded to students enrolled in the Faculty of Engineering who have completed Level 1 with a high Fall-Winter Average and who demonstrate financial need.
Typically Available: 1 x $1,000

THE RICHARD C. NEWMAN ACADEMIC GRANT
Established in 2007 by the Newman family in memory of Richard Carson Newman, father of Mark Newman, B.Sc. (Class of '86) and Toni Newman, B.A. (Class of '83).
Requirements: To be awarded to a student in the Faculty of Engineering who has completed at least Level 1, attains a high Fall-Winter Average, and demonstrates financial need.
Typically Available: 1 x $2,100

THE LYNN NICKERSON '97 ACADEMIC GRANT
Established in 2012 in memory of Lynn Nickerson, B.Eng.Society (Class of '97).
Requirements: To be awarded to a student in the Faculty of Engineering who has completed Level 2 or Level 3 of an Engineering and Society program and who has achieved notable academic standing and demonstrates financial need.
Typically Available: 1 x $2,000

THE POLLOCK FAMILY ACADEMIC GRANT
Established in 2006 by Dr. Ken Pollock, Dr. Gary Pollock, Dr. Mark Pollock and Dr. Ted Pollock.
Requirements: To be awarded to students in the Faculty of Engineering who have completed Level 1, attained high Fall-Winter Averages and demonstrate financial need.
Typically Available: 4 x $3,000

THE JOHN AND HEATHER RICCARDI ACADEMIC GRANT
Established in 2022, by John Riccardi, B.Eng. (Class of '84) and Heather Riccardi, B.Sc. (Class of '89, University of Texas) to recognize the importance of engineering education in their lives.
Requirements: To be awarded to undergraduate students enrolled in either the Department of Chemical Engineering or Mechanical Engineering who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE PATRICK TAN ACADEMIC GRANT
Established in 2008 by Dr. Patrick Guong-Ching Tan, B.Eng. (Class of '70), M.Eng. (Class of '72), LL.D. (2003).
Requirements: Two grants to be awarded to students in a program in Engineering who have a high Fall-Winter Average and demonstrate financial need.
Typically Available: 2 x $3,900

Open to the Faculty of Health Sciences

THE MARGARET ELIZABETH BURKE MEMORIAL ACADEMIC GRANT
Established in 2005 by Dr. Dennis Burke in memory of his wife, Margaret.
Requirements: To be awarded to a student who has completed Level 1 in the B.Sc.N. program and who, in the judgment of the School of Nursing, has attained the highest grade in the required Level 1 Anatomy/Physiology courses and demonstrates financial need.
Typically Available: 1 x $3,500

THE PAT FITZHENRY NURSING ACADEMIC GRANT
Established in 2016 by Sean Fitzhenry in honour of his mother, Pat Fitzhenry, in honour of her lifelong commitment to providing the best care.
To be granted to students who have completed at least Level 1 in the School of Nursing with a high Fall-Winter Average, and demonstrate financial need.
Typically Available: 2 x $10,000

THE CYNTHIA AND RUTH GOULD ACADEMIC GRANT
Established in 2016 by I. David Gould, (Class of 1962), and his wife Ruth Gould as a tribute to Cynthia, their daughter.
Requirements: To be awarded to a student enrolled in the Faculty of Health Sciences who attains a high average and demonstrates financial need.
Typically Available: 1 x $1,000

THE STEPHEN IMBERT AND NORMA KERR-IMBERT ACADEMIC GRANT
Established in 2020 by Norma Kerr-Imbert, B.A. (Class of '81), in memory of her husband, Stephen Imbert, to honour their belief that education and research will improve the outcomes of those faced with cancer.
Requirements: To be granted to students in Level 3 or above in the Bachelor of Health Sciences program who attain high averages, demonstrate financial need, and are Canadian citizens.
Typically Available: 1 x $3,000

THE KAREN M. MASON ACADEMIC GRANT IN NURSING
Established in 2017 by Ross Mason ('59), in loving memory of his wife and in honour of her compassionate palliative care nurse, Mona.

Requirements: To be awarded to a student in the School of Nursing who has attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $2,500

THE WILLIAM MCKEON MEMORIAL ACADEMIC GRANT IN PHYSICS
Established in 2007 by Mary McKeon, B.A. (Class of '46) in honour of her cousin William McKeon.
Requirements: To be awarded to a student in a Level 2 Honours Physics program who attained a high Fall-Winter Average in Level 1 and demonstrates financial need.
Typically Available: 1 x $3,100

THE ELEANOR MORRIS ACADEMIC GRANT
Established in 2005 by Sandra Morris, B.A. (Class of '82) in memory of her mother, Eleanor Morris.
Requirements: To be awarded to a student in the B.Sc.N. program in the School of Nursing who has completed Level 1 with a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,000

THE ROBERT AND DONNA WEST FAMILY ACADEMIC GRANT IN NURSING
Established in 2015 by Robert West B.A. (Class of '93) and Donna West.
Requirements: To be granted to students enrolled in the School of Nursing who have attained a high Fall-Winter Average and demonstrate financial need.
Typically Available: 2 x $2,000

Open to the Faculty of Humanities

THE DONALD H.L. BANNERMAN 1969 ACADEMIC GRANT
Established in 2017 in honour of Donald Bannerman, B.A. (Class of 1969).
Requirements: To be awarded to a student enrolled in a Communication Studies or Multimedia program who attained a high average and demonstrates financial need.
Typically Available: 1 x $1,000

THE MARGARET C. DIXON ACADEMIC GRANT
Established in 2006 by Mrs. Geraldine Phenix in memory of her mother, Margaret C. Dixon, to honour her love of music and the piano.
Requirements: To be awarded to a student in an Honours Music program who attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,600

THE FARQUHAR/FIRTH ACADEMIC GRANT
Established in 2011 by Andrea and Craig Farquhar in honour of Ben Firth, B.A. (Class of '56).
Requirements: To be awarded to a student enrolled in Level 3 of an Honours English or History program, who attains a high Fall-Winter Average, and demonstrates financial need.
Typically Available: 1 x $1,000

THE P.J. FERGUSON ACADEMIC GRANT
Established in 2007 by P. J. Ferguson, B.A. (Class of '87), President of ABL Employment Inc. in support of her belief that all students should be able to pursue their educational goals.
Requirements: To be awarded to a student enrolled in Level 3 of a History program, who attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,500

THE KUDSIA ACADEMIC GRANT
Established in 2016 by Mrs. Wendy and Dr. Chandra Kudsia.
Requirements: To be awarded to a student enrolled in a Classics program in the Faculty of Humanities who has attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $5,000

THE LINARDIC FAMILY ACADEMIC GRANT
Established in 2007 by Daniel Linardic, B.A. (Class of '91) and Kim Linardic.
Requirements: To be awarded to a student enrolled in Level 3 or above in an Honours Philosophy program, who attained a high Fall-Winter Average, and demonstrates financial need.
Typically Available: 1 x $2,500

THE GRAEME MACQUEEN ACADEMIC GRANT
Established in 2012 by Dr. Paul McArthur, B.Sc. (Class of '88) and Dr. Susan McArthur in recognition of their friend Graeme MacQueen, a retired McMaster professor who taught from 1974-2003 and was the Director, Centre for Peace Studies from 1989-1996.
Requirements: To be granted to a student who has obtained a high Fall-Winter Average in a the Global Peace and Social Justice program and who demonstrates financial need.
Typically Available: 1 x $1,500

THE MARION D. MAITLAND MEMORIAL ACADEMIC GRANT IN ART HISTORY
Established in 2010 by John O. Maitland, in memory of his beloved wife, Marion D. Maitland, in support of her belief that all students should have the opportunity to achieve their educational goals.
Requirements: To be granted to a student enrolled in the School of the Arts who has completed Level 1, achieved academic excellence in any Level 1 Art History course, and demonstrates financial need.
Typically Available: 1 x $1,750

THE OBU ACADEMIC GRANT
Established in 2014 by Marcus Udokang, B.A. (Class of '98).
Requirements: To be awarded to a student in the Department of English and Cultural Studies with a high Fall-Winter Average who demonstrates financial need.
Typically Available: 1 x $1,000

THE BARBARA PATRICIA PECKHAM ACADEMIC GRANT
Established in 2008 by John Marinucci, B.Com. (Class of '80) and Tracy Marinucci in memory of her mother, Barbara Patricia Peckham, who had a passion for dance and music and was always willing to help those who were prepared to help themselves.
Requirements: To be awarded to students who have completed Level 1 in the Faculty of Humanities with high Fall-Winter Averages, are enrolled in a Level 2 Honours program in the School of the Arts, and demonstrate financial need. The grant is tenable for up to three years provided the recipient remains enrolled full-time, maintains a minimum Fall-Winter Average of 9.5 and continues to be enrolled in the School of the Arts.
Typically Available: 1 x $15,000 ($5,000 per year)

THE DR. ROBERT AND ANDREE RHEAUME FITZHENRY ACADEMIC GRANT
Established in 2021 by Alyxandra Fitzhenry in memory of her parents, Robert Fitzhenry, B.A.Hons (Class of '54) & LLD. (Class of '09), and Andree Rheaume Fitzhenry.
Requirements: To be awarded to undergraduate students enrolled in the Studio Art program who attain high averages and demonstrate financial need.
Typically Available: 2 x $10,000

THE CARRIE SCHAMEHORN ACADEMIC GRANT
Established in 2009 to honour Carrie Schamehorn, a proud grandmother and life-long music lover.
Requirements: To be awarded to a student in a Music program who attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $800

THE MAXWELL L SCHEFFEL AND MARIE L SCHEFFEL ACADEMIC GRANT
Established in 2023 by the estate of Marie Scheffel, M.A & B.A (Class of '59 & '52) to provide support for students who wish to pursue their educational goals.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in the Faculty of Humanities who attain high grade point averages and demonstrate financial need.
Typically Available: 1 x $6,000

THE CLIFFORD AND ALINE SMITH ACADEMIC GRANT
Established in 2011 by Joyce and Ross Kelly in memory of Joyce's parents, Clifford and Aline Smith, to provide support for students who wish to pursue their educational goals.
Requirements: To be awarded to a student who is enrolled in at least a Level 2 Honours English program in the Department of English and Cultural Studies, attained a high Fall-Winter Average, and demonstrates financial need.
Typically Available: 1 x $1,500

THE LAVERNE L WALDOCK MEMORIAL ACADEMIC GRANT IN HISTORY
Established in 2023 in memory of Rev. LaVerne Waldock (nee Lofgren) (B.A., M.R.E.), honouring her legacy as a mother, educator, minister, and leader who used her many talents to empower individuals in Canada and worldwide, always doing so with courage, kindness, and humility.
Requirements: To be awarded to undergraduate students enrolled in a History program who self-identify as a member of an equity-deserving group, attain high averages and demonstrate financial need.
Typically available: 1 x $1,000

Open to the Faculty of Science

THE MANSON OLSON ACADEMIC GRANT
Established in 2005 by Marguerite Olson (Class of '50) in honour of her father Gordon Manson (Class of '38), her brother John Manson (Class of '56) and her husband Theodore Olson (Class of '51).
Requirements: To be awarded to a student in the Faculty of Science who has attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,000

THE LINDA (PAOLIN) TONINI '71 ACADEMIC GRANT
Established in 2013 by Lenora Paolin, B.A. (Class of '77).
Requirements: To be awarded to a student who is enrolled in Level 2 of a Kinesiology program, attained a high Fall-Winter Average, and demonstrates financial need.
Typically Available: 1 x $1,000

THE WALLER FAMILY ACADEMIC GRANT
Established in 2014 by the Waller Family in memory of Thomas Edward and Norma Waller.
Requirements: To be awarded to a student in a Biology program who has attained a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $2,000

THE MARY DRYDEN WILLIS ACADEMIC GRANT
Established in 1997, in memory of Mary Willis (Class of '26), by her daughter, Mary Lou Dingle and son-in-law Allan (both Class of'58), under the McMaster Student Opportunity Trust Fund initiative.
Requirements: To be granted to undergraduate students enrolled in the Faculty of Humanities, who have attained a Fall-Winter average of 9.5 and who demonstrate financial need.
Typically Available: 1 x $1,000

Open to the Faculty of Social Sciences

THE GEORGE BRECKENRIDGE MEMORIAL ACADEMIC GRANT
Established in 2020 in memory of Dr.George Breckenridge, former faculty member in the Department of Political Sciences, by his family and friends.
Requirements: To be awarded to undergraduate students enrolled in a Political Science program who attain high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE ANNE KEENLEYSIDE ANTHROPOLOGY ACADEMIC GRANT
Established in 2023 by the estate of Dr. Anne Keenleyside, Ph.D., B.A. (Class of '94 & '85).
Requirements: To be awarded to undergraduate students enrolled in an Anthropology program who attain high averages and demonstrate financial need.
Typically Available: 1 x $8,000

THE DR. STUART MESTELMAN ACADEMIC GRANT
Established in 2022 by family and friends in memory of Dr. Stuart Mestelman, Professor Emeritus, Department of Economics.
Requirements: To be awarded to undergraduate students who have completed Level 2 of any program within the Faculty of Social Sciences who attain high averages and demonstrate financial need.
Typically Available: 2 x $2,500

THE DOREEN MORRISON ACADEMIC GRANT
Established in 2007 in memory of Doreen O'Neill Morrison by her children, Rod, Brent and Jane, and the Morrison and Collis families.
Requirements: To be awarded to a student who has completed at least Level 2 of any program in the Department of Health, Aging and Society, and who attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $2,000

THE GERALD PAOLIN ACADEMIC GRANT
Established in 2023 by Lenora Paolin, B.A. (Class of 1977) in memory of her brother Gerald Paolin (Class of 1967).
Requirements: To be awarded to undergraduate students enrolled in an Economics program who attain high averages and demonstrate financial need.
Typically available: 1 x $1,000

THE DOUGLAS PERRIN ACADEMIC GRANT
Established in 2021 in memory of Douglas Perrin (Class of '49), who as an undergraduate student was enrolled in the Political Economy program.
Requirements: To be awarded to undergraduate students enrolled in an Economics program who attain high averages and demonstrate financial need.
Typically Available: 1 x $2,000

THE ALAN RENNER ACADEMIC GRANT
Established in 2018 by Alan Renner, B.A. (Class of '63) to encourage students to pursue their goals and aspirations.
Requirements: To be awarded to students enrolled in an Economics program in the Faculty of Social Sciences who attained high averages and demonstrate financial need.
Typically Available: 1 x $1,000

THE T.H.B. SYMONS ACADEMIC GRANT IN CANADIAN POLITICS
Established in 2018 by Thomas H.B. Symons.
Requirements: To be awarded to students who meet provincial residency requirements, are enrolled in level 2 or above of a Political Science program and in at least six units of Canadian Politics courses, attain a high average and demonstrate financial need.
Typically Available: 1 x $1,200

THE BRENDA SYMONS-MOULTON ACADEMIC GRANT
Established in 2018 by family to honour Brenda Symons-Moulton B.A./B.S.W (Class of '76) for her dedication to the social work community in Hamilton.
Requirements: To be granted to a student enrolled in Level 3 or above of a Social Work program who attains a high average and demonstrates financial need.
Typically Available: 1 x $3,000

THE THOMPSON ACADEMIC GRANT
Established in 2006 by family and friends in memory of Professor Robert Thompson (Economics) and his wife, Dorothy Thompson.
Requirements: To be awarded to a student enrolled in Level 3 or above in an Honours Economics program, who attains a high Fall-Winter Average and demonstrates financial need.
Typically Available: 1 x $1,000

Indigenous Student Entrance Academic Grants

Indigenous Student Entrance Academic Grant Regulations

1. Indigenous Student Entrance Academic Grants are monetary awards allocated on the basis of academic standing, and in some cases other forms of earned merit, and demonstrated financial need.
2. Indigenous Student Entrance Academic Grants are available to students entering Level 1 of their first baccalaureate degree program whether direct from high school or an alternate pathway including, but not limited to, college, an Indigenous post-secondary institution or other University.
3. Indigenous Student Entrance Academic Grants are available to students who are Canadian Citizens or Permanent Residents of Canada, and those who self-identify as First Nations, Metis, or Inuit, regardless of status under the Indian Act or where they completed their high school education.
4. Indigenous Student Entrance Academic Grants are available to full-time and part-time students entering Level 1 of their first baccalaureate degree program.
5. Indigenous Student Entrance Academic Grants first consider one or more McMaster University calculated admission and scholarship averages (e.g. final admission average).
6. Students must achieve the minimum final admission average required for their program to be eligible for an Indigenous Student Entrance Academic Grant.
7. Averages for Indigenous Student Entrance Academic Grants are calculated using the course grades that form the basis for admission to the Level 1 program. Final grades for courses completed after June 30th in the year of admission application will not be considered in assessing eligibility for Entrance Academic Grants.
8. Indigenous Student Entrance Academic Grants requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter.
9. Indigenous Student Entrance Academic Grants may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application, participating in an interview, performing an audition or developing a portfolio.
10. To be considered for an Indigenous Student Entrance Academic Grant by application, students must submit a complete application by the specified deadline date.
11. Indigenous Student Entrance Academic Grant applications which meet eligibility criteria are forwarded to a selection committee for review and ranking.
12. Indigenous Student Entrance Academic Grants are allocated on the basis of an eligible course load and financial need as demonstrated through a completed Canadian federal and/or provincial government student aid application (e.g. full-time OSAP) or a completed standard University need profile for the academic year in which the student is entering Level 1 of their program.
13. The greater calculated financial need is used to break any tie.
14. Students may receive a maximum of one Entrance Academic Grant or Indigenous Student Entrance Academic Grant.
15. Students must be enrolled in at least the full-time OSAP eligible course load used to determine their eligibility to have an Indigenous Student Entrance Academic Grant payment processed.
16. All Indigenous Student Entrance Academic Grant payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
17. Indigenous Student Entrance Academic Grants are disbursed September through the end of December.
18. Indigenous Student Entrance Academic Grant recipients will have their awards noted on their University transcript.
19. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture or adjustment in the value of the Indigenous Student Entrance Academic Grant. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
20. Students withdrawing from courses without failure by default in the Winter term will forfeit their Indigenous Student Entrance Academic Grant.
21. Students who forfeit their Indigenous Student Entrance Academic Grant will have their grant cancelled and their transcript notation removed. Students must return the Indigenous Student Entrance Academic Grant funding to their McMaster Student Account.
22. Some Indigenous Student Entrance Academic Grants are renewable (see In-Course and Renewal Academic Grant Regulations).
23. The University may choose not to grant an Indigenous Student Entrance Academic Grant in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
24. The University may remove specific Indigenous Student Entrance Academic Grants from the University Calendar, may revise the terms and stated value and/or suspend the granting of Indigenous Student Entrance Academic Grants (e.g. donor funds).
25. Indigenous Student Entrance Academic Grants supported by donor funds may have additional eligibility requirements.

ionkhihahonnién:ni

ionkhihahonnién:ni, "they're making a path for us"
ionkhihahonnién:ni, "they're making a path for us" is a financial assistance program for Indigenous students. This program was created in 2024 to support funding gaps Indigenous learners face which may include tuition, housing, childcare, food, and transportation. Members of the Haudenosaunee and Mississauga nations, whose traditional territories are the lands on which McMaster is situated, are eligible to apply. Program participants may be studying full or part time and enrolled in OSAP eligible Undergraduate and Graduate programs as well as McMaster Continuing Education courses. More information is available on the Office of the Registrar website.

In-Course and Renewal Award Regulations

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.

4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
18. In-Course Awards are typically disbursed no later than the end of September.
19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, Aid & Awards.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

In-Course Awards

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on

at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.

11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
18. In-Course Awards are typically disbursed no later than the end of September.
19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, Aid & Awards.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

In-Course Awards

Automatically Assessed

- completed common application submitted through AwardSpring is required for nominated awards.

OPEN TO TWO OR MORE FACULTIES

THE ALUMNI ASSOCIATION SCHOLARSHIP

Established in 1974 by the McMaster University Alumni Association and later augmented by bequest of Harold E. Amy.

Requirements: One scholarship to be awarded to a part-time student who has attained the highest Grade Point Average at the most recent review.

Typically Available: 1 x $475

THE ALUMNI CANADIAN GEOGRAPHY PRIZE

Established in 1985 by the Geography Branch of the McMaster University Alumni Association in recognition of Dr. Lloyd G. Reeds for his contribution to teaching during more than 35 years of service.

Requirements: To be awarded to the student who attains the highest grade in ENVSOCTY 2OC3.

Typically Available: 1 x $300

THE ANATOMY PRIZE

Established in 1992.

Requirements: To be awarded every other year to a student who has completed Level 3 (or equivalent), has studied biological structure and who, in the judgment of the Education Program in Anatomy, has demonstrated excellence in Anatomy.

Typically Available: 1 x $3,500 and a Medal

THE EDGAR R. ASHALL SCHOLARSHIP

Established in 1965 by bequest of his wife, Edith M. Ashall.

Typically Available: 1 x $200 for books

THE BATES RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE BENTALL SCHOLARSHIPS

Established in 2001 by Dr. C. Howard Bentall (Class of '37) and Dr. Shirley F. Bentall (Class of '46).

Requirements: A variable number of scholarships to be awarded to students in any Faculty who demonstrate outstanding academic achievement.

Typically Available: 3 x $1,500

THE ABE BLACK MEMORIAL PRIZE

Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology, Neuroscience & Behaviour from 1958 to 1978.

Requirements: To be awarded to students enrolled in Level 2 or above in an Honours Psychology, Neuroscience & Behaviour program who attain high averages.

Typically Available: 4 x $350

THE JAMES ROBERTSON CARRUTHERS MEMORIAL PRIZE

Established in 1984 in memory of James Robertson Carruthers (Class of '74) by his family and friends.

Requirements: To be awarded to the student who, in the judgment of the Department of History, attains notable standing in HISTORY 2R03 or HISTORY 2RR3 (United States History).

Typically Available: 1 x $425

THE WILLIAM G. CARTER SCHOLARSHIP IN GOLF

Established in 2006 by William G. Carter (Class of '50).

Requirements: To be awarded to a student who has completed Level 1 or above in any program with notable academic achievement and who demonstrates outstanding athletic achievement in men's or women's golf. The recipient must meet the eligibility requirements of the Ontario University Athletics (OUA). Not open to students in their graduating year.

Typically Available: 1 x $800

THE CFUW-HAMILTON SCHOLARSHIP

Established in 1945 by the University Women's Club of Hamilton, now the CFUW.

Requirements: To be awarded to the woman student who attains the highest Fall-Winter Average in the penultimate level of any program.

Typically Available: 1 x $2,000

THE CLASS OF '44 SCHOLARSHIP

Established by the Class of '44 in celebration of their 50th anniversary.

Requirements: To be awarded to the student entering the penultimate year of any program who has attained the highest Fall-Winter Average.

Typically Available: 2 x $1,500

THE CLASS OF 1966 50TH ANNIVERSARY SCHOLARSHIP

Established by the Class of 1966 in honour of its 50th reunion.

Requirements: A variable number of scholarships to be awarded to students who are enrolled in a Level 2 program in the Faculty of Humanities or in the Faculty of Science who have attained a high Fall-Winter Average.

Typically Available: 1 x $1,000

THE DENTON COATES MEMORIAL SCHOLARSHIP

Established in 1982 in memory of Denton E. Coates (Class of '70) by his friends.

Requirements: To be awarded to the student who, in the judgment of the Department of Materials Science and Engineering, has demonstrated outstanding achievement in independent research.

Typically Available: 1 x $900

THE RONALD LOGAN COOPER MEMORIAL SCHOLARSHIP

Established in 2022 by the Estate of Mary Connery Cooper.

Requirements: To be awarded to undergraduate students enrolled in Level 2 in any of The School of Earth, Environment and Society programs who attain high averages.

Typically Available: 1 x $2,500

THE BEATRICE CORRIGAN MEMORIAL BOOK PRIZE

Established in 1980 in memory of Professor Beatrice Corrigan by her friends and colleagues.

Requirements: To be awarded to the student enrolled in Level 2 or above and who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in Italian.

Typically Available: 1 x $125 for books

THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS

Established in 1965 by bequest of Edwin Marwin Dalley of Hamilton.

Typically Available: 38 x $800 each

THE AUDREY DIEMERT MEMORIAL BOOK PRIZE

Established in 1991 by family, friends, and colleagues in memory of Audrey Diemert.

Requirements: To be awarded to undergraduate students in any program who attain high averages in ENGLISH 2BL3 or ENGLISH 3CL3.

Typically Available: 4 x $100 for books

THE DUBECK CHEMISTRY AWARD

Established in 2004 by Dr. Michael Dubeck, B.Sc. (Class of '51) and M.Sc. (Class of '52).

Requirements: To be awarded to a student in Level 3 or above of an Honours program in Chemistry or Chemical Biology who, in the judgment of the Department of Chemistry and Chemical Biology, has achieved notable academic standing and has an interest in pursuing an academic career in basic chemical research.

Typically Available: 2 x $3,750

THE EDWARDS HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE ENVIRONMENTAL ISSUES PRIZE

Established in 1993 by the Regional Municipality of Hamilton-Wentworth in recognition of Metal Recovery Industries and Philip Environmental, Industrial Filter Fabrics Ltd., and Laidlaw Waste Systems.

Requirements: To be awarded to the student who attains the highest grade in ENVSOCTY 4MT6 A/B (or ENVSOCTY 4R06).

Typically Available: 1 x $100

THE FEDERATION OF CHINESE CANADIAN PROFESSIONALS EDUCATION FOUNDATION SCHOLARSHIPS

Established in 1988 by the Foundation of Chinese Canadian Professionals (Ontario).

Requirements: Two scholarships to be awarded to students who attained high averages: (a) one to a student in a program in Arts and Science, and (b) one, to a student enrolled in a program in Chemistry, Chemical Biology, Mechanical Engineering, or Physics.

Typically Available: 2 x $1,000

THE NEIL FORSYTH PRIZE

Established in 1992 by The Steel Founders' Society of America in honour of Neil Forsyth, president of the organization in 1990 and 1991, in recognition of his outstanding service to the steel castings industry.

Requirements: To be awarded to the student who attains the highest grade in MATLS 3E04.

Typically Available: 1 x $120

THE PETER GEORGE CENTRE FOR LIVING AND LEARNING RESIDENCE SCHOLARSHIP

Established in 2022.

Requirements: To be awarded to undergraduate students who reside in the residence and attain high averages.

Typically Available: 1 x $800

THE GILMOUR MEMORIAL PRIZE

Established in 1927 by Year '27, in memory of Dr. Joseph Leeming Gilmour, Honorary President of their first year in 1923, and subsequently enlarged by his children.

Requirements: To be awarded to the student who attains the highest standing in POLSCI 4D06 A/B RELIGST 2HH3.

Typically Available: 1 x $125

THE GUPTA FAMILY INTERNATIONAL SCHOLARSHIPS

Established in 2005 by Kulbushan (Joe) Gupta and family.

Requirements: A variable number of scholarships to be awarded to international students enrolled in Level 2 with the highest Fall-Winter Averages.

Typically Available: 2 x $2,000

THE HAMILTON INDUSTRIAL SCHOLARSHIPS

Established in 1958.

Typically Available: 1 x $800

THE HEDDEN HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE ANNA MARIE HIBBARD SCHOLARSHIP

Established in 1992 from the bequest of Anna Marie Hibbard.

Requirements: To be awarded to the student completing Level 1 who attains the highest Fall-Winter Average. The recipient may not hold another

scholarship of equal or greater value.
Typically Available: 1 x $1,500

THE DR. HARRY LYMAN HOOKER SCHOLARSHIPS

Established in 1981, and resulting from the bequest of Dr. H.L. Hooker.
Requirements: Awarded to undergraduate students who attain high Fall-Winter Averages.
Typically Available: 80 x $1,500

THE NINA LOUISE HOOPER SCHOLARSHIP

Established in 1959 by bequest of Bertram O. Hooper.
Requirements: To be awarded to students in any program with high averages.
Typically Available: 1 x $500

THE ROSS HUME HALL MEMORIAL SCHOLARSHIP

Established in 2007 by family, friends and colleagues in memory of Ross Hume Hall, the first chair of the Department of Biochemistry & Biomedical Sciences.
Requirements: To be awarded to a student enrolled in a Biochemistry program who, in the judgment of the Department of Biochemistry and Biomedical Sciences, demonstrates research excellence and a passion for promoting human and environmental health.
Typically Available: 1 x $700

THE ITCA COMMUNITY INVOLVEMENT SCHOLARSHIP

Established in 1982 by Italian Canadian Community Involvement Incorporated.
Requirements: To be awarded to students who are enrolled in Level 2 or above and who have attained notable standing in at least six units of Italian courses above Level 1. The recipient must have graduated from a secondary school in the Hamilton area.
Typically Available: 2 x $350

THE MARY E. KEYES RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term, who resides in the residence.
Typically Available: 1 x $800

THE J. BEVERLY KRUGEL SCHOLARSHIPS IN GERMAN LANGUAGE STUDIES

Established in 2010 by Mrs. J. Beverly Krugel, B.A. (Class of '53).
Requirements: To be awarded to undergraduate students enrolled in any Humanities program who have taken a minimum of 9 units in courses that focus on German studies, including German language, who attain high averages.
Typically Available: 6 x $2,500

THE ALYSSA LAI INTERNATIONAL STUDENT SCHOLARSHIP

Established in 2024 by Alyssa Lai, B. Arts Honours (Class 2012) to recognize the rich, global perspectives and contributions of international students to McMaster and the wider community.
Requirements: To be awarded to undergraduate international students enrolled in either the Faculty of Social Sciences and/or the Faculty of Humanities who attain high averages.
Typically available: 1 x $3,000

THE LATIN PRIZE

Established in 1987 by Dr. John B. Clinard.
Requirements: To be awarded to a student who, in the judgment of the Department of Greek and Roman Studies, has demonstrated notable achievement in LATIN 1Z03 and LATIN 1ZZ3.
Typically Available: 1 x $150

THE MATTHEWS HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.
Typically Available: 1 x $800

THE ANNE & ALLAN MCKAY SCHOLARSHIP

Established in 2019 by Allan McKay.
Requirements: To be awarded to students enrolled in the Faculty of Science or the Faculty of Health Sciences who attain high averages.
Typically Available: 5 x $1,500

THE MCKAY HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.
Typically Available: 1 x $800

THE MCMASTER UNDERGRADUATE SCHOLARSHIPS

Established in 1998 by McMaster University.
Requirements: To be awarded to students in any undergraduate degree program on the basis of academic merit and, in some cases, other forms of earned merit.
Typically Available: 1 x $1,500 per Faculty

THE MCMASTER UNIVERSITY - HONG KONG FOUNDATION INTERNATIONAL SCHOLARSHIP

Established in 2011 by the McMaster University - Hong Kong Foundation.
Requirements: A variable number of scholarships to be awarded to international students enrolled in Level 2 with the highest Fall-Winter Averages.
Typically Available: 3 x $1,000

THE MOFFAT FAMILY PRIZE

The Moffat Family Prize was established in 1990.
Requirements: To be awarded to undergraduate students enrolled in The School of Earth, Environment & Society who, shows outstanding achievement in urban geography.
Typically Available: 1 x $300

THE MOLSON SCHOLARSHIP IN ENVIRONMENTAL STUDIES

Established in 1992 by the Molson Companies Donations Fund.
Requirements: To be awarded to the student entering the final level of a program in Environmental Sciences, Earth and Environmental Sciences or Engineering and Society, who attains the highest Fall-Winter Average.
Typically Available: 1 x $1,100

THE MOULTON COLLEGE SCHOLARSHIPS

Established in 1957 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949 for the expansion of Moulton College.
Requirements: Two scholarships to be awarded to the students of Moulton Hall with the highest Fall-Winter Averages.
Typically Available: 2 x $1,000

THE MOULTON HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.
Typically Available: 1 x $800

THE MUNICIPAL CHAPTER OF HAMILTON, IODE, MURIEL E. SKELTON AWARD

Established in 1944 by the Municipal Chapter of Hamilton, Imperial Order Daughters of the Empire.
Requirements: To be awarded to the student who attains the highest standing in a Level 1 History course.
Typically Available: 1 x $1,000

THE P.L. NEWBIGGING SCHOLARSHIP

Established in 1994 by family, friends and colleagues in memory of Dr. P.L. Newbigging, founding Chair of the Department of Psychology, Neuroscience & Behaviour (Faculty of Science) and member of the Faculty from 1955-1990, in recognition of his outstanding contributions to the Department and the University.
Requirements: To be awarded to the student entering Level 2 of an Honours program in Psychology or Psychology, Neuroscience & Behaviour who, in the judgment of the Department of Psychology, Neuroscience & Behaviour, has demonstrated high academic achievement in PSYCH 1X03 and PSYCH 1XX3.

Typically Available: 1 x $375

THE TONY & LUCY PICKARD SCHOLARSHIP

Established in 1973 by Lucy Pickard, B.A., M.A., and family, in honour of Captain Antony F. Pickard, O.B.E., C.D., R.C.N.

Requirements: To be awarded to a student in any program with a high Fall-Winter Average.

Typically Available: 1 x $1,000

THE LES PRINCE RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student with the highest Fall-Winter Average in an undergraduate program, with the exception of those in their graduating term, who resides in the residence.

Typically Available: 1 x $800

THE PROVOST'S HONOUR ROLL MEDAL

Established in 2005.

Requirements: To be awarded to students named to the Provost's Honour Roll.

Typically Available: Variable number of medals

THE PSYCHOLOGY SOCIETY PRIZES

Established in 1985 by the Psychology Society and the Faculty and Alumni of the Department of Psychology, Neuroscience & Behaviour (Faculty of Social Sciences).

Requirements: Three prizes to be awarded to students enrolled in Level 3 with the highest Fall-Winter Average: (a) one in an Honours Psychology or Honours Psychology, Neuroscience & Behaviour B.A. program; (b) one in an Honours Psychology or Honours Psychology, Neuroscience & Behaviour B.Sc. program; and (c) one in a combined Honours program in Psychology.

Typically Available: 3 x $70

THE RETIRED TEACHERS OF ONTARIO TRUST FUND - GERONTOLOGY

Established in 1987 by the Retired Teachers of Ontario, District 13.

Requirements: To be awarded to the student who attains the highest standing in HLTHAGE 1BB3.

Typically Available: 1 x $350

THE ALMA AND WIL RICE MEMORIAL SCHOLARSHIP

Established in 2010 by Ellen Rice-Jaaku, B.Sc. (Class of '66), to honour her parents, Alma Rice, B.A. (Class of '40) and Wil Rice, B.A. (Class of '41).

Requirements: To be awarded to a student who has completed at least Level 1 in a Kinesiology program who demonstrates outstanding academic achievement. Preference will be given to a student participating in varsity football.

Typically Available: 2 x $2,000

THE HERBERT A. RICKER SCHOLARSHIPS

Established in 1982 by bequest of Mrs. Edna Elizabeth Ross Reeves of Hamilton in memory of her husband, Herbert A. Ricker.

Requirements: Four scholarships to be awarded on the basis of scholarship (Fall-Winter Average of at least 9.5) and character to: (a) two to students who have completed Engineering 1 or above of a program in Engineering, and (b) two to students who have completed Science 1 or above of a program in Science.

Typically Available: 4 x $3,000

THE MORRIS AND SARAH ROSENHEAD MEMORIAL PRIZE

Established in 1988 by bequest of Sarah Rosenhead of Hamilton.

Requirements: To be awarded to the student who attains the highest standing in at least 6 units of level 1 ENGLISH courses.

Typically Available: 1 x $125

THE ROTARY CLUB OF HAMILTON SCHOLARSHIP

Established in 1989.

Typically Available: 1 x $575

THE HILDA SAVAGE MEMORIAL SCHOLARSHIP

Established in 1960 by bequest of Bertha Savage.

Typically Available: 1 x $500

THE SHEILA SCOTT SCHOLARSHIP FOR BRANDON HALL

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE MARGARET A. SERVICE BOOK PRIZE

Established in 1990 by friends, colleagues and former students in memory of Margaret A. Service.

Requirements: To be awarded to the student who upon completion of Level 1 attains the highest average in BIOLOGY 1A03 and BIOLOGY 1M03.

Typically Available: 1 x $120 for books

THE SHAHRAM SHIRANI & MEHRNOOSH FAGHIH SCHOLARSHIP

Established by Dr. Shahram Shirani, McMaster Professor of Electrical & Computer Engineering and Dr. Mehrnoosh Faghih, Post-Graduate, Obstetrics and Gynecology who wish to acknowledge the impact McMaster made on their lives and careers.

Requirements: To be awarded to students who have completed Level 1 of the Integrated Biomedical Engineering and Health Sciences program and attained high averages.

Typically Available: 1 x $1,000

THE PATRICIA L. SMYE MEMORIAL PRIZES

Established in 1972 by the Patricia Smye Memorial Fund Committee.

Requirements: Two scholarships to be awarded to students enrolled in Level 2 and who attain the highest Fall-Winter Average: (a) one in the three-level English program and (b) one in the three-level Psychology B.A. program.

Typically Available: 2 x $400

THE SOMERVILLE SCHOLARSHIPS

Established in 1966 by bequest of William L. Somerville, architect of the McMaster University buildings of 1930.

Requirements: To be awarded to students in any program with high averages. The recipient of this award is eligible to receive the corresponding donor bursary if financial need is demonstrated.

Typically Available: 2 x $800

THE GEORGE H. STEDMAN ESTATE FOUNDATION SCHOLARSHIP

Established in 2017 by The George H. Stedman Estate Foundation.

Requirements: To be awarded to undergraduate students enrolled in any program who have attained a high average.

Typically Available: 1 x $1,000

THE STOBO SCHOLARSHIP

Established in 1957 by bequest of William Q. Stobo.

Typically Available: 2 x $400

THE SWISS MINISTER TO CANADA BOOK PRIZES

Established in 1950.

Requirements: To be awarded from time to time to in-course students for proficiency in French, German, or Italian.

Typically Available: 1 x Book

THE THEATRE & FILM STUDIES BOOK PRIZE

Established in 1974 by Professor Ronald W. Vince.

Requirements: To be awarded to the student who attains the highest grade in THTRFLM 1T03.

Typically Available: 1 x Book

THE HUGH R. THOMPSON MEMORIAL PRIZE

Established in 1960 in memory of Dr. Hugh R. Thompson.

Requirements: To be awarded to the student enrolled in Level 2 of an Honours program in the School of Earth, Environment & Society with the highest Fall-Winter Average.

Typically Available: 2 x $250

THE MICHAEL THOMSON MEMORIAL BOOK PRIZES

Established in 1975 by the members of the Departments of German and Russian in memory of Michael Thomson, Supervisor of the McMaster University language laboratories from 1961 to 1975.

Requirements: Two prizes to be awarded: (a) one to the student who attains the highest standing in GERMAN 1Z06 A/B and (b) one to the student who attains the highest standing in any Russian course.

Typically Available: 2 x $50 each for books

THE UNIVERSITY ACHIEVEMENT AWARDS

Established in 2006 by authorization of the Board of Governors of McMaster University.

Requirements: Awarded to undergraduate students who are enrolled part-time in any program and attain high averages.

Typically Available: 2 x $800 per Faculty

THE UNIVERSITY SENATE SCHOLARSHIPS

Established in 1982 by authorization of the Board of Governors of McMaster University.

Requirements: Awarded to undergraduate students who attain high Fall-Winter Averages.

Typically Available: 300 x $800

THE WHIDDEN HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

Typically Available: 1 x $800

THE R.M. WILES MEMORIAL BOOK PRIZE

Established in 1975 in memory of Professor Roy McKeen Wiles by his friends and colleagues.

Requirements: To be awarded to the student who, in the judgment of the Department of English and Cultural Studies, has written the best essay on a topic relating to English literature of the period 1660-1800.

Typically Available: 1 x $250 for books

THE WOODSTOCK HALL RESIDENCE SCHOLARSHIP

Requirements: Awarded to the student who resides in the residence with the highest Fall-Winter Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating term.

Typically Available: 1 x $800

THE IVOR WYNNE MEMORIAL PRIZE

Established in 1971 in memory of Ivor Wynne, Dean of Students.

Requirements: To be awarded to a student who has completed Level 3 of the Kinesiology program and who attained the highest Grade Point Average.

Typically Available: 1 x $300

THE MARGUERITE Z. YATES SCHOLARSHIP

Established in 1960 by bequest of Mrs. W.H. Yates of Hamilton.

Requirements: To be awarded to students in any program with high averages.

Typically Available: 1 x $225

THE YATES SCHOLARSHIPS

Established in 1963 by bequest of William Henry Yates of Hamilton.

Requirements: To be awarded to students in any program with high averages.

Typically Available: 12 x $1,000

OPEN TO THE ARTS AND SCIENCE PROGRAM

THE ARTS AND SCIENCE PROGRAM BOOK AWARD

Established in 1995.

Requirements: To be awarded from time to time to an Arts and Science student who, in the judgment of the Arts and Science Program Awards Committee, has demonstrated outstanding academic achievement in both arts and science.

Typically Available: 1 x $75

THE ARTS AND SCIENCE SCHOLARSHIPS

Established in 2019 by McMaster University.

Requirements: To be awarded to students enrolled in the Arts and Science program on the basis of academic and, in some cases, other forms of earned merit.

Typically Available: 1 x $1,500

THE BAIN-PEART AWARD

Established in 2018 by the Estate of Helen Jean Bain.

Requirements: To be awarded to students entering Level 2 of an Arts & Science Program who have demonstrated outstanding academic achievement and who, in the judgment of the Program, have made a significant contribution to the program. The award is tenable for up to 3 years provided the student remains enrolled full-time and achieves a Fall-Winter Average of 9.5.

Typically Available:: $2,000 per year

THE BARBARA FRANCIS SCHOLARSHIP

Established in 1985 by Laura Dodson (Class of 1956) in memory of her sister.

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above of an Arts and Science program and who have demonstrated outstanding achievement in both arts and science.

Typically Available: 1 x $400

OPEN TO THE FACULTY OF BUSINESS

THE SCOTT BARTLETT MEMORIAL PRIZE

Established in 1985 in memory of Scott N. Bartlett by his family and friends.

Requirements: To be awarded to a student enrolled in Level 3 of the Honours Commerce Program and who has achieved high standing in COMMERCE 3FA3 and 3FB3, taken in the Fall/Winter terms.

Typically Available: 2 x $200

THE M. BANKER BATES SCHOLARSHIP

Established in 1975 by Dr. M. Banker Bates and augmented in 1978 in his memory by his family, friends and colleagues.

Requirements: To be awarded to the student enrolled in Level 3 of a program in Commerce and who attains the highest Fall-Winter Average.

Typically Available: 1 x $1,600

THE CHARTERED PROFESSIONAL ACCOUNTANTS OF ONTARIO SCHOLARSHIP

Established in 2010 by Certified General Accountants of Ontario.

Requirements: To be awarded to students who have completed Level 2 or above in a Commerce program at the DeGroote School of Business with notable academic standing.

Typically Available: 4 x $1,000

THE CITY OF HAMILTON ECONOMIC DEVELOPMENT DEPARTMENT SCHOLARSHIPS

Established in 1976.

Requirements: (a) Two scholarships to be awarded on the basis of Fall-Winter Average to students entering Level 2 of a Commerce program; (b) Four scholarships to be awarded on the basis of Fall-Winter Average: two to students who are enrolled in Level 2, and two to students who are enrolled in Level 3 of a program in Commerce. Recipients must have obtained all their secondary school education in the Hamilton-Wentworth Region.

Typically Available: 6 x $800 each

THE DEGROOTE SCHOOL OF BUSINESS SCHOLARSHIPS

Established in 2019 by McMaster University.

Requirements: To be awarded to students enrolled in the DeGroote School of Business on the basis of academic and, in some cases, other forms of earned merit.

Typically Available: 1 x $1,500

THE DONALD HART SCHOLARSHIP

Established in 1985 by Mrs. Pamela Hart and Joel Jordan in honour of Donald Neil Hart (Class of '70).

Requirements: To be awarded to a student enrolled in Level 2 of a program in Commerce and who, in the judgment of the School of Business, has achieved high standing in the required Level 2 Commerce courses, taken in the Fall/Winter terms.

Typically Available: 2 x $500

THE HITACHI CAPITAL CANADA CORP. SCHOLARSHIP
Established in 2019 by Hitachi Capital Canada Corp.
Requirements: To be awarded to students enrolled in Level 3 or above in a Commerce program who attain high averages.
Typically Available: 1 x $1,000

THE PAUL HYPHER PRIZE
Established in 1988 in memory of Paul F. Hypher by his friends and classmates.
Requirements: To be awarded to the student in a program in Commerce who attains the highest standing in COMMERCE 1MA3.
Typically Available: 1 x $250 for books

THE ROBERT ALAN KENNEDY SCHOLARSHIP
Established in 1998 by Robert Alan Kennedy.
Requirements: To be awarded to any student entering a Level 2, 3 or 4 program in the Faculty of Business who demonstrates outstanding academic achievement.
Typically Available: 1 x $475

THE CLAUDE G. LISTER SCHOLARSHIP
Established in 1990 by bequest of Pauline Detwiler Lister in memory of her husband.
Requirements: To be awarded to a student in a program in the DeGroote School of Business.
Typically Available: 1 x $625

THE RSM CANADA SCHOLARSHIP IN BUSINESS
Established in 2024 by RSM Canada.
Requirements: To be awarded to undergraduate students enrolled in Level 3 or above in the DeGroote School of Business who attain high averages.
Typically available: 1 x $1,000

THE DR. ANDREW SZENDROVITS MEMORIAL SCHOLARSHIP
Established in 1999 by family, friends and colleagues in memory of Dr. Andrew Szendrovits, a former professor of Production and Management Science since 1962 and Dean of the Faculty of Business from 1979 to 1984 at McMaster University.
Requirements: To be awarded to undergraduate students enrolled in a Commerce program who achieves the highest average in the required operations/management science courses (COMMERCE 2OC3 and COMMERCE 2DA3) taken in the same academic year.
Typically Available: 1 x $450

THE ROBERT TAYLOR SCHOLARSHIP IN COMMERCE
Established in 2009 by Robert Taylor, M.B.A. (Class of '76).
Requirements: To be awarded to students in a Commerce program who attains a high Fall-Winter Average.
Typically Available: 2 x $2,000

THE WILLIAMSON FAMILY COMMERCE SCHOLARSHIP
Established by David Williamson (Class of '83), Margot Roberts and family in 2015.
Requirements: To be awarded to a student enrolled in the DeGroote School of Business who has completed Level 1 with a high Fall-Winter Average.
Typically Available: 1 x $2,000

THE STEVE WILSON SCHOLARSHIP IN CORPORATE FINANCE
Established in 2013 by Steve Wilson.
Requirements: To be awarded to a student enrolled in Level 3 of a Commerce program and who, in the judgment of the DeGroote School of Business, shows outstanding academic merit with a heavy concentration in corporate finance.
Typically Available: 1 x $2,000

OPEN TO THE FACULTY OF ENGINEERING

THE ADI DEVELOPMENT GROUP BACHELOR OF TECHNOLOGY SCHOLARSHIP
Established in 2018 by Saud Adi (B.Tech 2013) and Tariq Adi, Adi Development Group.
Requirements: To be awarded to students enrolled in Level 3 in the Faculty of Engineering Bachelor of Technology Programs who attained high averages.
Typically Available: 1 x $1,000

THE AIR LIQUIDE CANADA INC. SCHOLARSHIPS
Established in 1999 by Air Liquide Canada.
Requirements: One scholarship to be awarded to a student in a Level 2 or 3 program in Chemical Engineering, Materials Science and Engineering and/or Mechanical Engineering who, in the judgment of the Faculty of Engineering, has demonstrated outstanding academic achievement. The recipient must attain a minimum Fall-Winter Average of 9.5 at the most recent Fall/Winter terms.
Typically Available: 1 x $1,500

THE A.H. ATKINSON PRIZE
Established in 1980 by Atkinson Engineering Consultants Limited.
Requirements: To be awarded to undergraduate students in a Civil Engineering program who achieve the highest average in CIVENG 3G04 and CIVENG 3J04, taken in one term.
Typically Available: 1 x $200

THE DR. CHRIS BART SCHOLARSHIP
Established in 2010 by Tom Jenkins, B.Eng.Mgt. (Class of '82) and Toby Jenkins to honour Tom's Business Policy professor, Dr. Chris Bart.
Requirements: To be awarded to students who have completed Level 1 with the highest Fall-Winter Average and who are entering in a Level 2 Engineering and Management program. The recipient may not hold another scholarship of equal or greater value.
Typically Available: 1 x $6,500

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING PRIZE
Established in 1947 by the Chemical Institute of Canada.
Requirements: To be awarded to the student who is entering his/her final year of study of a program in Chemical Engineering and who attained the highest Fall-Winter Average.
Typically Available: 1 x $50, Medal and Certificate

THE GRACE DOROTHY AND WILLIAM P. CARPENTER AWARD
Established in 2001 by the Hamilton Community Foundation.
Requirements: To be awarded to a student entering Level 2 in Mechanical Engineering who has demonstrated outstanding academic achievement in a Level 1 program. Preference will be given to a student who has graduated from a publicly funded secondary school in the Hamilton or Burlington area.
Typically Available: 1 x $2,500

THE CFUW-HAMILTON PAST PRESIDENT'S PRIZE
Established in 1976 by the Past Presidents of the University Women's Club of Hamilton which became the CFUW (Hamilton) on the occasion of the Club's 50th anniversary.
Requirements: To be awarded to the woman student enrolled in Level 3 of a program in Engineering with the highest Grade Point Average.
Typically Available: 1 x $1,000

THE DR. CAMERON M. CROWE SCHOLARSHIP
Established in 2013 by Dr. Cameron M. Crowe, professor emeritus in the Faculty of Engineering.
Requirements: To be awarded to students who have completed Level 1 with the highest Fall-Winter Average and who are entering a Level 2 program in the Department of Chemical Engineering.
Typically Available: 1 x $5,000

THE FACULTY OF ENGINEERING SCHOLARSHIPS
Established in 2019 by McMaster University.
Requirements: To be awarded to students enrolled in the Faculty of Engineering on the basis of academic and, in some cases, other forms of earned merit.
Typically Available: 1 x $1,500

THE RUTH AND JACK HALL PRIZE
Established in 1983 by Jackie MacDonald in memory of her parents.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Computer Science, or enrolled in Level 3 of a program in Computer Engineering, and who attains the highest Fall-Winter Average.

Typically Available: 1 x $225

THE RONALD K. HAM MEMORIAL PRIZE

Established in 1971 in memory of Professor R.K. Ham by his friends and former colleagues.

Requirements: Awarded to the student enrolled in Level 3 or above and who, in the judgment of the Department of Materials Science and Engineering, shows most promise as a materials scientist or engineer.

Typically Available: 1 x $125

THE HAMILTON AND DISTRICT HEAVY CONSTRUCTION ASSOCIATION SCHOLARSHIPS

Established in 2003 by the Hamilton and District Heavy Construction Association.

Requirements: To be awarded to students who, in the judgment of the Department of Civil Engineering, have demonstrated outstanding academic achievement and who have attained a grade of at least A- in CIVENG 4CM4.

Typically Available: 1 x $1,000

THE PROFESSOR TERRENCE HOFFMAN SCHOLARSHIP

Established in 2013 by Dr. Terrence Hoffman, professor emeritus in the Faculty of Engineering.

Requirements: To be awarded to the student who has completed Level 1 with the highest Fall-Winter Average and who is entering a Level 2 program in the Department of Chemical Engineering.

Typically Available: 1 x $6,000

THE INTERMETCO LIMITED SCHOLARSHIP

Established in 1977.

Requirements: To be awarded to the student enrolled in Level 3 of a program in Mechanical Engineering and who, in the judgment of the Department of Mechanical Engineering, has attained notable standing.

Typically Available: 1 x $625

THE JOHARI EMBURY PURDY LEGACY MATERIALS SCHOLARSHIP

Established in 2023 by Gyan Johari, a McMaster University professor of Materials Science and Engineering from 1984 to 2006, to support students studying thermodynamics, phase transition and structure of materials.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Engineering who attain the highest combined average in MATLS 3E04, 3T04 and 3C03.

Typically available: 1 x $5,000

THE LORNA AND ALVIN KINNEAR SCHOLARSHIP

Established in 2007 by Scott Kinnear, B.Eng. (Class of '88) and Betty Ann Kinnear in honour of his parents, Lorna and Alvin Kinnear.

Requirements: To be awarded to a student entering Level 2 of a program in the Department of Chemical Engineering who attained the highest Fall-Winter Average in Level 1. The scholarship is tenable for up to three years. (To be awarded every three years.)

Typically Available: 1 x $3,000 ($1,000 per year)

THE TANNER KOLODY MEMORIAL SCHOLARSHIP

Established in 2020 by the Faculty of Engineering in memory of Tanner Kolody.

Requirements: To be awarded to students enrolled in Level 4 of the Automotive and Vehicle Engineering Technology program who attain high averages.

Typically Available: 1 x $1,000

THE KUDSIA FAMILY SCHOLARSHIP

Established in 2009 by Dr. & Mrs. Chandra & Wendy Kudsia.

Requirements: To be awarded to students enrolled in the Department of Electrical and Computer Engineering who demonstrate outstanding academic achievement.

Typically Available: 1 x $2,000

THE RAY LAWSON SCHOLARSHIPS

Established in 1975 by the Honourable Ray Lawson, O.B.E., D.C.L, D.Cn.L., LL.D., K.G.St.J., Lieutenant-Governor of Ontario from 1946 to 1952.

Requirements: Two scholarships to be awarded for the highest Fall-Winter Averages in an Engineering and Management program: (a) one to a student enrolled in Level 3, and (b) one to a student enrolled in Level 4 or above.

Typically Available: 2 x $275

THE DR. JASON LO MATERIALS SCIENCE AND ENGINEERING SCHOLARSHIP

Established in 2019 in memory of Dr. Jason Lo a leader in emerging materials, and an outstanding scientist, renowned for his deep commitment to student research, who had a passion for innovation.

Requirements: To be awarded to students enrolled in Level 2 of any Materials Science and Engineering program who attain high averages.

Typically Available: 1 x $2,500

THE DR. VOIKO LOUKANOV ENGINEERING SCHOLARSHIP

Established in 2018 in memory of Dr. Voiko Loukanov, a trailblazer in automotive electronics testing equipment, an outstanding engineering leader, renowned and respected for his many innovations and expertise, with a deep commitment to student research and a passion for innovation.

Requirements: To be awarded to students entering a Mechatronics program with a high average. The scholarship is tenable for up to three years provided the student remains enrolled in 24 units or more and achieves a Fall-Winter Average of 9.5.

Typically Available: 1 x $15,000 ($5,000/year)

THE PROFESSOR W-K LU SCHOLARSHIP IN SUSTAINABLE MANUFACTURING PROCESSES

Established in 2021 by Wei-Kao Lu, who was a McMaster Faculty member from 1965 to 1997 and was appointed Stelco Professor from 1973 to 1994, to support promising students in the Department of Materials Science and Engineering.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Engineering who attain the highest grade in Materials 4I03, Sustainable Manufacturing Processes.

Typically Available: 1 x $1,600

THE JOHN MAYBERRY SCHOLARSHIPS

Established in 1998 by John Mayberry.

Requirements: To be awarded to undergraduate students who have completed Level 2 or 3 of a program in Chemical, Mechanical or Materials Engineering and have attained high averages.

Typically Available: 1 x $1,700

THE DR. PAULA ALEXANDRA MEYER SCHOLARSHIP

Established in 2019 by the estate of Dr. E. Constance Meyer who, along with her late husband Dr. Roberto J. Meyer, acknowledge the impact of McMaster University on the life and career of their daughter Dr. Paula Alexandra Meyer.

Requirements: To be awarded to students enrolled in Level 2 or above of a Mechanical Engineering program who attain high averages.

Typically Available: 1 x $1,500

THE DR. F.A. MIRZA SCHOLARSHIP

Established in 1997 in memory of Farooque Mirza by family, friends and colleagues.

Requirements: To be awarded to a student enrolled in a Civil Engineering program who achieves the highest average in CIVENG 2C04 and ENGINEER 2P04 taken in the Fall/Winter terms.

Typically Available: 1 x $300

THE JOHN F. MOORE PRIZE

Established in 1990 by the Steel Founders' Society of America in honour of John Moore's contributions to the Society over the past 25 years.

Requirements: To be awarded to the student who attains the highest grade in MATLS 3F03.

Typically Available: 1 x $125

THE LEO SETO SCHOLARSHIP

Established in 2017 by Leo Seto, B.Eng.Mgt. (Class of '87) and M.Eng. (Class of '90).

Requirements: To be awarded to a student who has completed Level 2 or above of an Engineering Physics program with a high average.

Typically Available: 1 x $1,000

THE SHELL CANADA SCHOLARSHIPS IN ENGINEERING AND MANAGEMENT

Established in 1983.

Requirements: Three scholarships to be awarded to students enrolled in Level 4 or above of a program in Engineering and Management. Awards will be based on scholarship and on the quality of and creativity shown in written and oral reports.

Typically Available: 3 x $1,100

THE STANTEC CONSULTING LTD. ENGINEERING SCHOLARSHIP

Established in 2024 by Stantec Consulting Ltd. (Hamilton office).

Requirements: To be awarded to undergraduate students enrolled in Level 3 of Civil Engineering program who attain high averages.

Typically available: 1 x $1,500

THE MARK JOHN STOJCIC SCHOLARSHIPS

Established in 1997 by bequest of Mark John Stojcic.

Requirements: To be awarded to undergraduate students who have completed Level 3 of a Materials Science and Engineering program who, attain high averages.

Typically Available: 2 x $2,200

THE ROBERT SOWERBY MEMORIAL SCHOLARSHIP

Established in 2002 by family, friends and colleagues, in memory of Dr. R. Sowerby, a professor of Mechanical Engineering.

Requirements: To be awarded to a student who has completed at least Level 1 in the Bachelor of Technology program with the highest Grade Point Average.

Typically Available: 1 x $150

THE DR. DAVID THOMPSON SCHOLARSHIP

Established in 2010 by Tom Jenkins, B.Eng.Mgt. (Class of '82) and Toby Jenkins to honour Tom's Engineering Physics professor, Dr. David Thompson.

Requirements: To be awarded to students who have completed Level 1 with the highest Fall-Winter Average and who are entering a Level 2 Engineering Physics program. The recipient may not hold another scholarship of equal or greater value.

Typically Available: 1 x $5,000

THE PROFESSOR DAVID THOMPSON SCHOLARSHIP

Established in 2016 by Robert Walker (M.Eng. '75, Ph.D. '77 & D.Sc. 2013) and Karen Walker to honour Robert's Engineering Physics graduate supervisor Dr. David Thompson. Robert Walker was Dr. Thompson's first Ph.D. student.

Requirements: To be awarded to a student who has completed Level 1 Engineering with a high Fall-Winter Average and who is entering a Level 2 Engineering Physics program.

Typically Available: 2 x $6,400

THE VOESTALPINE HIGH PERFORMANCE METALS MEMORIAL SCHOLARSHIP

Established in 2023 in memory of Erik Svendsen, the former CEO of voestalpine High Performance Metals North America.

Requirements: To be awarded to undergraduate students enrolled in the Department of Materials Science and Engineering who attain high averages.

Typically Available: 1 x $1000

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE HENRIETTA ALDERSON SCHOLARSHIP

Established in 2002 in memory of Henrietta Jane Alderson.

Requirements: Two scholarships to be awarded to students in the B.Sc.N. program who are entering Level 2 (A or E Stream) and, in the judgment of the School of Nursing, have demonstrated exceptional achievement in required science courses.

Typically Available: 2 x $4,200 each

THE CHARU LATE BHADURI SCHOLARSHIP IN NURSING

Established in 2011 by Dr. Basanti Majumdar, M.Sc. (Class of '87) and faculty member of the School of Nursing since 1971, in memory of her mother.

Requirements: To be awarded to undergraduate students enrolled in Level 3 in the McMaster Nursing program who attain high averages and who are enrolled in, or have completed a clinical placement in either a Northern Canadian or an International location.

Typically Available: 1 x $1,000

THE DEL HARNISH AWARD

Established in 2020 in memory of Del Harnish, former Assistant Dean of the BHSc (Hons) Program, and an educator who embodied 'teh' spirit of inquiry (*this is not a typo! Del had a longstanding joke with students of deliberately typing 'teh' instead of 'the').

Requirements: To be awarded to students who have completed Level 1 of the Bachelor of Health Sciences (Honours) program who, in the judgment of the program, demonstrate the spirit of inquiry in their learning.

Typically Available: 1 x $800

THE MICHAEL KAMIN HART MEMORIAL FUND

Established in 2011 by the Michael G. DeGroote Institute for Infectious Disease Research along with family, friends and donors in memory of Michael Kamin Hart, who was a student within the Institute.

Requirements: Aligned with Michael's academic trajectory, to be awarded to: (a) an undergraduate summer student in either their third or fourth year of study who plans to go on to graduate work at McMaster; and (b) an MSc student; and (c) a PhD student and (d) a recipient of the Staff Award of Excellence. The recipients must be associated with the Michael G. DeGroote Institute for Infectious Disease Research and have demonstrated academic excellence. To be awarded on the recommendation of the Executive Committee of the Michael G. DeGroote Institute for Infectious Disease Research.

Typically Available: 1 x $500

THE FACULTY OF HEALTH SCIENCES SCHOLARSHIPS

Established in 2019 by McMaster University.

Requirements: To be awarded to students enrolled in the Faculty of Health Sciences on the basis of academic and, in some cases, other forms of earned merit.

Typically Available: 1 x $1,500

THE DR. SHIGEAKI HINOHARA SCHOLARSHIP

Established in 2003 by Dr. Shigeaki Hinohara and the School of Nursing.

Requirements: To be awarded every three years to a student who has completed Level 1 in the B.Sc.N. Program and who, in the judgment of the School of Nursing, has demonstrated outstanding academic achievement in health sciences and behavioural science courses. The scholarship is tenable for up to three years provided the recipient maintains a Grade Point Average of 8.0.

Typically Available: 1 x $2,400 ($800 each year)

THE HUTTON KAUFMAN MIDWIFERY SCHOLARSHIP

Established in 2018 by clients, colleagues, friends, and family of Dr. Eileen Hutton in celebration of her retirement and to recognize her high impact career. This award recognizes the profound influence of both Dr. Hutton, assistant dean of the Midwifery Education Program at McMaster from 2007-2018 and of founding assistant dean of the program, Dr. Karyn Kaufman who served from 1993-2006. Together with their peers, these two luminaries paved the way for midwifery care, midwifery education and midwifery research in Canada.

Requirements: To be awarded to undergraduate students, including those taking a second degree, enrolled in Level 3 of the Midwifery Education Program who attain high averages.

Typically Available: 1 x $1,500

THE DONALD LAVIGNE MEMORIAL SCHOLARSHIP

Established in 2007 by Willis McConnell and Ray Skelton in memory of Donald Lavigne to honour his dedication as a registered practical nurse at Chedoke Hospital ('65-'89).

Requirements: A variable number to be awarded to students in their first year of study who, in the judgment of the School of Nursing, have demonstrated academic excellence in a Post Registered Nursing or Post Registered Practical Nursing program.

Typically Available: 4 x $800

THE MEDICAL-SURGICAL EXCELLENCE IN CLINICAL NURSING AWARD
Established in 1998 by Professor Gerry Benson.
Requirements: To be awarded every two years to a student who has completed at least Level 2 of the Nursing Program who, in the judgment of the School of Nursing, demonstrates academic excellence in medical-surgical nursing.
Typically Available: 1 x $250

THE JANET MCKNIGHT AWARD
Established in 1994 by faculty, friends and students in memory of Janet McKnight, beloved colleague and teacher, a recognized expert in educational methodology and small-group, problem-based learning.
Requirements: To be awarded to a student entering Level 4 of a program in Nursing who, in the judgment of the School of Nursing has demonstrated notable academic achievement and leadership in clinical and educational aspects of gerontology or, problem based, self-directed learning in nursing education.
Typically Available: 2 x $800

THE DR. O.W. NIEMEIER SCHOLARSHIP
Established in 1938 and augmented in 1952 by Dr. O.W. Niemeier, M.D.FRCPS(E).
Requirements: To be awarded to the student who has completed Level 2 in the Nursing program with the highest Grade Point Average.
Typically Available: 2 x $1,100

THE O'LEARY FAMILY SCHOLARSHIP
Established in 2017 by Jennifer O'Leary, BSc (Class of '90), MA, MLT in honour of her grandparents, who valued the role of education in enriching the lives of individuals and Canadian society. This scholarship continues her grandparents' tradition of supporting education for others.
Requirements: To be awarded to an undergraduate student enrolled in the Bachelor of Health Sciences (Honours).
Typically Available: 1 x $1,000

THE SCHROEDER FOUNDATION NURSING FINISH LINE SCHOLARSHIP
Established in 2024 by the Schroeder Foundation.
Requirements: To be awarded to undergraduate students enrolled in Level 2 and above in the School of Nursing BScN programs, including shared programs who attain high averages. The recipient may not hold another scholarship of equal or greater value.
Typically available: 1 x $2,000

THE CLARENCE L. STARR PRIZE
Established in 1946 in memory of Dr. C.L. Starr, M.D., LL.D., F.A.S.S., Professor of Surgery at the University of Toronto, and an honorary alumnus of McMaster University (LL.D. 1922).
Requirements: To be awarded to the student who has completed Nursing I and who attains the highest Fall-Winter Average.
Typically Available: 1 x $150

THE CLASS OF 1966 DR. MARGARET STOREY NURSING SCHOLARSHIP
Established in 2012 by the School of Nursing, Class of 1966.
Requirements: To be awarded to undergraduate students enrolled full-time in the School of Nursing who attain high averages.
Typically Available: 1 x $1,000

THE CORELENE HELEN TOSTEVIN SCHOLARSHIPS
Established in 1998 by bequest of Corelene Tostevin.
Requirements: To be awarded to students enrolled in an accelerated BScN program and who, in the judgment of the School of Nursing, have demonstrated notable academic achievement.
Typically Available: 1 x $1,200

THE DR. SALIM YUSUF PHRI SCHOLARSHIP
Established in 2024 by the Population Health Research Institute.
Requirements: To be awarded to undergraduate students enrolled in the Faculty of Health Sciences who attain high averages.
Typically available: 1 x $2,500

OPEN TO THE FACULTY OF HUMANITIES

THE MAQBOOL AZIZ MEMORIAL SCHOLARSHIP
Established in 2001 by family, friends and colleagues in memory of Maqbool Aziz, Professor of English from 1969 to 2000.
Requirements: To be awarded to a student in an English program who attains the highest grade in ENGLISH 2BL3-Twentieth and Twenty-First Century British Literature and Film.
Typically Available: 2 x $450

THE LAURA BALDWIN SCHOLARSHIP
Established in 2005 from the bequest of Laura Baldwin.
Requirements: To be awarded to a student enrolled in a program in English who, in the judgment of the Department of English and Cultural Studies, has submitted an original literary work or poem that demonstrates the highest degree of literary excellence.
Typically Available: 1 x $650

THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS
Established in 1999 by the Bank of Montreal.
Requirements: A variable number of scholarships to be awarded to students entering Level 2 or above of the Combined Honours in Media Arts program who, in the judgment of the Department of Communication Studies and Multimedia, demonstrate outstanding academic achievement or great promise in the program.
Typically Available: 4 x $3,000

THE LOUISE E. BETTGER SCHOLARSHIPS IN MUSIC
Established in 1982 in memory of Louise E. Bettger of New Hamburg, Ontario, by her nieces and nephews.
Requirements: Three scholarships to be awarded to students in an Honours program in Music who, in the judgment of the School of the Arts, are outstanding: (a) one in the area of choral or vocal music to a student enrolled in Level 2 or above; (b) one to a keyboard student enrolled in Level 2 or above; and (c) one to a student who has completed Music 1 and who has demonstrated overall musical excellence.
Typically Available: 3 x $500 each

THE BRIAN BLAKEY MEMORIAL SCHOLARSHIP
Established in 1979 in memory of Dr. Brian Blakey, Professor of French, by his friends, colleagues and former students, on behalf of his wife, Dorothy.
Requirements: To be awarded to the student who attains the highest Fall-Winter Average in Level 3 of an Honours program in the Department of Greek and Roman Studies, Theatre & Film Studies, English, French or Linguistics and Languages. Students must have achieved a B- in either LINGUIST 1A03 or LINGUIST 1AA3.
Typically Available: 3 x $600

THE HILDA DOROTHY BORMAN SCHOLARSHIP
Established in 1998 by bequest of Hilda Dorothy Borman.
Requirements: To be awarded to a student studying piano who, in the judgment of the School of the Arts, has attained high academic standing.
Typically Available: 1 x $1,050

THE JOAN FRANCES BOWLING SCHOLARSHIPS
Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling.
Requirements: To be awarded to outstanding classical music scholars enrolled in Level 2 and above of a Music program and who, in the judgment of the School of the Arts, have demonstrated excellence in Music.
Typically Available: 1 x $1,650

THE BRIEN SCHOLARSHIP IN PHILOSOPHY
Established in 1944 by Dr. J.W. Brien of Windsor.
Requirements: To be awarded to the student who is enrolled in Level 2 of an Honours program in Philosophy and who, in the judgment of the Department of Philosophy, shows the most academic promise.
Typically Available: 1 x $475

THE TEN BROEKE-BENSEN MEMORIAL SCHOLARSHIP
Established in 1990 in memory of Dr. James Ten Broeke and Dr. Roy C. Bensen, former Heads of the Department of Philosophy.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement.
Typically Available: 2 x $1,000

THE ELLA HALSTEAD CAMPBELL PRIZE
Established in 1978 by Mrs. Verna Caskey and Miss June Caskey in memory of Ella Halstead Campbell and augmented by Mrs. Edna M. Miller in 1987.
Requirements: To be awarded to a keyboard student, enrolled in any level of a solo performance course, who is outstanding in the judgment of the School of the Arts.
Typically Available: 1 x $200

THE CANADIAN ITALIAN PROFESSIONAL ASSOCIATION OF HAMILTON-HALTON SCHOLARSHIP IN ITALIAN STUDIES
Established in 2011 by the Canadian Italian Business and Professional Association of Hamilton-Halton.
Requirements: A variable number to be awarded to students who, in the judgment of the Department of Linguistics and Languages, have demonstrated high academic achievement in Italian studies.
Typically Available: 1 x $1,000

THE NORMAN N. CASKEY MEMORIAL PRIZE
Established in 1983 by Mrs. Verna Caskey and Miss June Caskey in memory of husband and father.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated musical excellence.
Typically Available: 1 x $150

THE CHIN-CHIN AWARD IN ELECTROACOUSTIC STUDIES/SOUND ART
Established in 2011, the award celebrates the continuing artistic contribution of Chin-Chin Chen, the Taiwanese-American composer whose music degree is in both performance and composition.
Requirements: To be awarded to a student who has completed the Introduction to Digital Audio (MMEDIA 2G03) or equivalent and at least Level 2 of any program in the Faculty of Humanities who, in the judgment of the Faculty, has demonstrated a deep interest in the area of electroacoustic studies or sound art. Preference given to a student in an Honours program.
Typically Available: 1 x $900

THE COMPARATIVE LITERATURE PRIZE
Established in 1988.
Requirements: To be awarded to a student who, in the judgment of the Department of English and Cultural Studies, has achieved notable standing in Level 2 comparative literary studies courses.
Typically Available: 1 x $250

THE CRANSTON PRIZES
Established in 1958 by William H. Cranston of Midland in honour of his parents, J. Herbert Cranston (Class of '05) and Eva Wilkins Cranston (Class of '07).
Requirements: Two prizes to be awarded for excellence in the study of Canadian literature: (a) one for the highest average in ENGLISH 2CC3 and 2CL3 and (b) one for the highest average in ENGLISH 2C03.
Typically Available: 2 x $225 each

THE MARGERY E. DIXON MEMORIAL SCHOLARSHIP
Established in 2003 in loving memory of Margery E. Dixon (Class of '35) by Geraldine Phenix.
Requirements: To be awarded to a student who has completed Level 2 of an Honours English program and who attains the highest Fall-Winter Average.
Typically Available: 2 x $2,000

THE ROSEMARY DOUGLAS-MERCER MEMORIAL PRIZE
Established in 1989.
Requirements: To be awarded to undergraduate students enrolled in Level 2 of an Honours French program who have attained high averages.
Typically Available: 2 x $175

THE HORACE A. DULMAGE PRIZE IN PHILOSOPHY
Established in 1976 in honour of Professor Horace A. Dulmage by his colleagues and friends upon the occasion of his retirement from McMaster University.
Requirements: To be awarded to the full-time student in Level 2 of an Honours program in Philosophy who attained the most notable standing in his or her Level 1 program.
Typically Available: 1 x $200

THE FACULTY OF HUMANITIES SCHOLARSHIPS
Established in 2019 by McMaster University.
Requirements: To be awarded to students enrolled in the Faculty of Humanities on the basis of academic and, in some cases, other forms of earned merit.
Typically Available: 1 x $1,500

THE FEIN FAMILY SCHOLARSHIP IN GERMAN STUDIES
Established in 2024 from the estate of Otto R. Fein in memory of Otto P. Fein, Senior and Emma P. Fein.
Requirements: To be awarded to undergraduate students enrolled in any Humanities program who have taken a minimum of 9 units in courses focused on Germany, including German language, who attain high averages.
Typically available: 1 x $5,000

THE GWEN HOOVER MEMORIAL FRENCH SCHOLARSHIP
Established in 2023 by Les MacDonald and generous donors, in memory of his wife, Gwen Hoover (Class of '72), a dedicated supporter of the arts, loving wife and mother, and champion of Canadian literature.
Requirements: To be awarded to undergraduate students enrolled in a French program who attain high averages.
Typically Available: 1 x $3,000

THE FRENCH GOVERNMENT BOOK PRIZES
Requirements: To be awarded from time to time to in-course students for proficiency in Level 1 French.
Typically Available: 3 x Book

THE FRENCH SCHOLARSHIP
Established in 2006 by James McCollum, M.A. (Class of '67).
Requirements: To be awarded to a student who is enrolled in a program in French and who, in the judgment of the Department of French, demonstrates high academic achievement.
Typically Available: 1 x $6,000

THE MERRILL FRANCIS GAGE SCHOLARSHIPS
Established in 1982 from the estate of Merrill Francis Gage of Hamilton.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above of an Honours program in Music who demonstrate excellence in performance on a keyboard or orchestral instrument.
Typically Available: 2 x $550 each

THE SAMUEL GELLER MEMORIAL BOOK PRIZE
Established in 1999 by Libby Geller in memory of her husband Samuel Geller (Class of '33).
Requirements: To be awarded to a student who has completed Level 3 of an Honours Program in History and who, in the judgment of the Department of History, has attained notable academic standing.
Typically Available: 1 x $425 for books

THE GERMAN CONSULATE TORONTO BOOK AWARD
Established in 2012 by the Consulate General of the Federal Republic of Germany, Toronto.
Requirements: To be awarded from time to time to in-course students for proficiency in German.
Typically Available: 1 Book

THE JIM & MARGARET GIBSON MEMORIAL SCHOLARSHIP
Established in 2020 by the Estate of Margaret Janet Wilson Gibson B.A. (Class of '89), in memory of Jim and Margaret Gibson.
Requirements: To be awarded to students enrolled in Level 3 or above of an English and Cultural Studies program in the Faculty of Humanities who attain high averages.
Typically Available: 1 x $4,800

THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN ENGLISH
Established in 1989, in memory of a former student and dedicated servant of the University, by her friends, family, and Professor Emeritus R.P. Graham.
Requirements: To be awarded to students enrolled in Level 2 or above in an English program who attain high averages.
Typically Available: 1 x $975

THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN HISTORY
Established in 1997 in memory of a former student and dedicated servant of the University, by her friends, family and Professor Emeritus R.P. Graham.
Requirements: To be awarded to students enrolled in Level 2 or above in a History program who attain high averages.
Typically Available: 1 x $1,000

THE H.B. GREENING BOOK PRIZE
Established in 1969 by bequest of Gladys Powis Greening in memory of her husband, Herald Benjamin Greening.
Requirements: To be awarded to the student enrolled in Level 2 of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in music.
Typically Available: 1 x $100 for books

THE ALISE ALEXANIAN HASSEL MEMORIAL SCHOLARSHIP
Established in 2007 by family and friends in memory of Alise Alexanian Hassel, B.A. (Class of '98). A gifted young artist and graduate of the Studio Art Program who did not live to fulfill her potential.
Requirements: To be awarded to a student enrolled in Level 2 or above in an Honours Art program who, in the judgment of the School of the Arts, has demonstrated outstanding achievement in Studio Arts.
Typically Available: 1 x $1,000

THE BERTRAM OSMER HOOPER SCHOLARSHIP
Established in 1957 by bequest of Isobel F. Hooper.
Requirements: To be awarded in Arts.
Typically Available: 1 x $250

THE HUGHES SCHOLARSHIP
Established in 1993 by Heidi Dickensen-Hughes in memory of her husband Peter Hughes (Class of '69).
Requirements: To be awarded to a student enrolled in Level 2 or above of the Music Program who, in the judgment of the School of the Arts, has displayed outstanding achievement in Music Education.
Typically Available: 1 x $200

THE JOSH AND JANE HUNTER SCHOLARSHIP
Established in 2015 by Josh Hunter, B.A.Hon. (Class of 1999), and Jane (Sterling) Hunter, B.Eng.Mgt. (Class of 1999), MBA (Class of 2002), M.Sc. (Class of 2013), to recognize outstanding academic achievement.
Requirements: To be awarded to undergraduate students in a Department of Greek and Roman Studies or English program with the highest GPA.
Typically Available: 1 x $1,000

THE ROBERT H. JOHNSTON UNDERGRADUATE SCHOLARSHIP IN HISTORY
Established in 2005 to honour Bob Johnston's contribution to undergraduate teaching in history.
Requirements: To be awarded to a student entering Level 2 of an Honours History program who, in the judgment of the Faculty of Humanities, has achieved the highest Fall-Winter Average in a Level 1 program.
Typically Available: 1 x $800

THE JURY PRIZE
Established in 1941 by bequest of J.H. Jury of Bowmanville.
Requirements: To be awarded to the student enrolled in Level 2 of the Honours History program and who attains the highest Fall-Winter Average.
Typically Available: 1 x $1,500

THE KILPATRICK SCHOLARSHIP IN ENGLISH
Established in 2018 from the estate of Eleanor Jean McLeish.
Requirements: To be awarded to undergraduate students enrolled in a Level 1 program in the Faculty of Humanities who attain high grades in one or more Level 1 English courses.
Typically Available: 1 x $4,000

THE KIT MEMORIAL SCHOLARSHIP
Established in 1936 by the Hamilton Branch of the Canadian Women's Press Club (now the Media Club of Canada, Hamilton Branch) in memory of the brilliant journalist and writer, the first president of the Canadian Women's Press Club, Kathleen Blake Coleman, widely known on this continent as Kit.
Requirements: To be awarded to a woman student either enrolled in Level 2 on the basis of journalistic ability or enrolled in Level 3 of an Honours program in English on the basis of Fall-Winter Average.
Typically Available: 1 x $200

THE E. DORIS LAWRENCE SCHOLARSHIP
Established in 1999 in memory of E. Doris Lawrence (Class of '47).
Requirements: To be awarded to a student who, in the judgment of the Department of French, has demonstrated academic excellence in French.
Typically Available: 2 x $2,200

THE LINGUISTICS PRIZE
Established in 1988.
Requirements: To be awarded to a student in an Honours program in Linguistics who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in Level 2 courses in Linguistics.
Typically Available: 2 x $250

THE ELEANOR DORNBUSH MARPLES PRIZE IN ART HISTORY
Established in 1985 by Mrs. Barbara Niedermeier and her family in memory of her sister.
Requirements: To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated outstanding achievement.
Typically Available: 2 x $175

THE ELEANOR DORNBUSH MARPLES PRIZE IN THEATRE & FILM STUDIES
Established in 1987 by Vaughan W. Marples in memory of his wife.
Requirements: To be awarded to a student in Level 2 of a Theatre & Film program who, in the judgment of the School of the Arts, has achieved academic excellence.
Typically Available: 1 x $150

THE H.W. MCCREADY PRIZE IN BRITISH HISTORY
Established in 1981 in memory of Professor H.W. McCready, a member of the Department of History from 1943 to 1975, by former students, colleagues, and friends.
Requirements: To be awarded to a Level 2 student who, in the judgment of the Department of History, attains notable standing in British History courses.
Typically Available: 1 x $100

THE MCGREGOR-SMITH-BURR MEMORIAL SCHOLARSHIP
Established in 1910 by the Class of 1912 in Arts, in memory of their classmates, Percy Neil McGregor, Lee Wilson Smith and George William Burr, and supplemented in 1944 by bequest from Professor R. Wilson Smith, father of Lee Wilson Smith.
Requirements: To be awarded to the student enrolled in Level 3 of the Honours English and History program and who has the highest Fall-Winter Average.
Typically Available: 1 x $525

THE ALEXANDER GORDON MCKAY SCHOLARSHIP
Established in 1990 by friends and colleagues of Professor A.G. McKay, first Dean of the Faculty of Humanities from 1968 to 1973, to mark his retirement after 33 years of service at McMaster University.
Requirements: To be awarded to undergraduate students from the Regional

Municipality of Hamilton-Wentworth who are enrolled in Level 3 of an Honours Department of Greek and Roman Studies program and attain high averages.
Typically Available: 1 x $500

THE EVELYN RUTH MCLEAN SCHOLARSHIP IN CANADIAN HISTORY

Established in 2012 by Laurie R. McLean (Class of '74) in memory of her mother Evelyn Ruth McLean who loved teaching, believed in the value of education and had a passion for Canadian history.
Requirements: To be awarded to a student taking courses in Canadian history who, in the judgment of the Department of History, has demonstrated outstanding academic achievement and the desire to excel in the study of Canada's past.
Typically Available: 1 x $1,150

THE PETER MCPHATER MEMORIAL SCHOLARSHIP

Established in 1988 by Peter McPhater's friends in recognition of his art, craftsmanship and humanitarianism.
Requirements: To be awarded to a student enrolled in Level 3 of a program in Honours Art or Honours Art History and who, in the judgment of the School of the Arts, is outstanding.
Typically Available: 1 x $450

THE ANNE MURRAY SCHOLARSHIP

Established in 1985 in memory of Anne M. Murray (Class of '82) by her family.
Requirements: To be awarded to a student enrolled in Level 2 or above and who, in the judgment of the Department of Linguistics and Languages, has attained notable standing in at least nine units of German courses above Level 1.
Typically Available: 2 x $300

THE MUSIC MAN SCHOLARSHIP

Established in 2022.
Requirements: To be awarded to undergraduate students enrolled in a Music program who attain high averages.
Typically Available: 1 x $2,000

THE IRENE PEARCE SCHOLARSHIP

Established in 1994 by Centenary United Church of Hamilton in honour of Irene Pearce, organist and choir director for fifty-four years.
Requirements: To be awarded to a student enrolled in Level 1 or above of an Honours Music Program who, in the judgment of the School of the Arts, has attained notable academic standing and demonstrated excellence in keyboard performance.
Typically Available: 1 x $1,500

THE BRIAN POCKNELL MEMORIAL SCHOLARSHIP

Established in 2004 in memory of Brian Pocknell.
Requirements: To be awarded to an undergraduate student who has completed Level 2 in a French program and, in the judgment of the Department of French, has achieved notable academic standing.
Typically Available: 1 x $750

THE DR. JOHN A. PYLYPIUK SCHOLARSHIP

Established in 1967 in memory of Dr. John A. Pylypiuk and in recognition of Canada's Centennial Year.
Requirements: To be awarded to the student who has completed Level 2 of an Honours program in History with the highest Fall-Winter Average and who in that term achieves a grade of at least A- in HISTORY 2T03 or HISTORY 2TT3.
Typically Available: 1 x $700

THE RAND MEMORIAL PRIZE OF CLASS 1898

Established by the Class of 1898 in Arts, on the occasion of the 25th anniversary of graduation, 1923, in memory of Chancellor Theodore Harding Rand, to encourage original literary work.
Requirements: To be awarded to undergraduate students enrolled in any English and Cultural Studies program, who in the judgement of the Department of English and Cultural Studies, has made the most notable original contribution to student publications.
Typically Available: 1 x $350

THE HELEN RAY SCHOLARSHIP IN FINE ARTS

Established in 2012 by Dr. Jim Ray (Class of '75) and Annette Ray, in honour of Jim's mother, Helen (Burkholder) Ray, and in recognition of her lifelong passion for the fine arts.
Requirements: To be awarded to a student in the Studio Art program who has completed Studio Art I and who, in the judgment of the School of the Arts, has demonstrated outstanding academic achievement in Studio Art.
Typically Available: 1 x $2,500

THE SHARON REEVES SCHOLARSHIP

Established in 1987 by Kevin W. Reeves (Class of '80) in memory of his wife, Sharon (Class of '79).
Requirements: To be awarded to a student entering Level 3 or 4 of an Honours program in Music (Education) and who, in the judgment of the School of the Arts, has attained notable standing.
Typically Available: 1 x $425

THE ELLA JULIA REYNOLDS SCHOLARSHIPS

Established in 1984 by bequest of Ella Julia Reynolds of Hamilton.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in either English and Cultural Studies or History programs who attain high averages.
Typically Available: 2 x $1,000

THE GLADYS RICHARDS SCHOLARSHIP

Established in 2002 by bequest of Gladys Richards.
Requirements: To be awarded to undergraduate students who have completed at least Level 2 of Honours English & Cultural Studies or a combined Honours English & Cultural Studies and History program who attain high averages.
Typically Available: 2 x $2,500

THE RONALD J. ROLLS SCHOLARSHIP

Established in 2012 by bequest to recognize the exceptional achievements of Ronald J. Rolls, B.A. (Class of '54), LL.B., Q.C., L.S.M.
Requirements: To be awarded to a student who has completed Humanities I with the highest Fall-Winter Average and who is entering an Honours English program.
Typically Available: 2 x $2,000

THE E. TOGO SALMON PRIZE IN HISTORY

Established in 1973 by friends and colleagues of Professor E.T. Salmon on his retirement, in recognition of his outstanding contribution to the Department of History.
Requirements: To be awarded to the student enrolled in Level 3 and who, in the judgment of the Department of History, attains notable standing in an Honours program in History.
Typically Available: 1 x $200

THE NOEL SANDUSKY MEMORIAL PRIZE

Established in 1994 by family and friends in memory of Noel Sandusky.
Requirements: To be awarded to a student enrolled in Level 2 of a program in History who, in the judgment of the Department of History, attains notable academic standing in at least nine units of History courses.
Typically Available: 1 x $200 for books

THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY

Established in 1983 in memory of Larry P. Sayers (Class of '82) by his friends.
Requirements: To be awarded to the student who, in the judgment of the Department of History, has demonstrated outstanding achievement in at least six units of courses work in East Asian history.
Typically Available: 1 x $275

THE FEDOR SCHNEIDER SCHOLARSHIP IN ITALIAN

Established in 2004 by bequest of Mary Anna Schneider.
Requirements: To be awarded to a student entering Level 3 who, in the judgment of the Department of Linguistics and Languages, has achieved notable academic standing in Italian courses. Open to non-native speakers of Italian only.
Typically Available: 3 x $2,000

THE SCHOOL OF THE ARTS SCHOLARSHIP IN MUSIC
Established in 1993 by the Department of Music which later became part of the School of the Arts.
Requirements: To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated academic excellence in Music.
Typically Available: 1 x $1,000

THE SHEILA SCOTT SCHOLARSHIP IN ENGLISH
Established in 1983 by graduates of McMaster University and friends in honour of Sheila Scott, Dean of Women from 1965 to 1982, in recognition of her outstanding contribution to the University community during 25 years of service.
Requirements: To be awarded to the student enrolled in Level 3 of the Honours English program, and who attains the highest Fall-Winter Average.
Typically Available: 2 x $800

THE LOUIS J. SHEIN SCHOLARSHIP
Established in 1990 by family and friends in memory of Dr. L.J. Shein, founding chair of the Russian Studies program and faculty member from 1958 to 1980.
Requirements: To be awarded to a student who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in a Russian language course.
Typically Available: 1 x $375

THE LEONA ALLERSTON RYAN AND GORDON HENRY STEVENS MEMORIAL SCHOLARSHIP
Established in 1995 by Elaine Keillor in memory of Leona and Gordon Stevens.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours program in Music or Art who, in the judgment of the School of the Arts, has demonstrated outstanding achievement.
Typically Available: 1 x $525

THE MARIE L. STOCK SCHOLARSHIP
Established in 1987 by the French Section of the Department of Romance Languages in honour of Marie L. Stock, Professor Emeritus of French, and Chair of the Department of Romance Languages from 1962 to 1965.
Requirements: To be awarded to the student enrolled in Level 3 of an Honours program in French and who, in the judgment of the Department of French, has achieved notable academic standing.
Typically Available: 1 x $450

THE JOHN TOTH MEMORIAL PRIZE
Established in 1983 in memory of John Toth by his friends.
Requirements: To be awarded to the student who attains the highest average in any six units of Level 3 or 4 Latin courses.
Typically Available: 1 x $50

THE JOHN H. TRUEMAN SCHOLARSHIP
Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University.
Requirements: To be awarded to the student who has completed Level 1, and who in the judgment of the Department of History, has achieved notable academic standing in Level 1 History courses.
Typically Available: 1 x $600

THE VAREY SCHOLARSHIP
Established in 1978 by J.C. Varey, Dundas, in memory of Albert E. Varey.
Requirements: To be awarded to undergraduate students in an Honours Program in the Department of Greek and Roman Studies who attain high averages.
Typically Available: 1 x $300

THE WALLER FAMILY MUSIC SCHOLARSHIP
Established in 2014 by the Waller Family in memory of Thomas Edward and Norma Waller.
Requirements: To be awarded to a student in Honours Music who, in the judgment of the School of the Arts, has attained notable academic standing and musical proficiency. Preference will be given to students studying brass instruments.
Typically Available: 1 x $3,500

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY
Established in 1990 by the former students, colleagues and friends of Dr. F.W. Waters, Professor from 1935 to 1959.
Requirements: To be awarded to the student entering Level 4 of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, shows the most academic promise.
Typically Available: 1 x $750

THE THOMAS E. WILLEY SCHOLARSHIP
Established in memory of Dr. Thomas E. Willey in 1996 by his family, colleagues and friends.
Requirements: To be awarded to undergraduate students enrolled in in a History program who attain high averages.
Typically Available: 1 x $800

OPEN TO THE FACULTY OF SCIENCE

THE W.K. ALLAN MEMORIAL SCHOLARSHIP
Established in 1994 in memory of William Kellock Allan (Class of '31) by his wife, Yvonne and augmented in 2002 by his family.
Requirements: To be awarded to a student entering in the final level of a program in Mathematics or Physics who attains the highest Fall-Winter Average.
Typically Available: 1 x $1,100

THE CHARLES MURRAY BALL SCHOLARSHIPS IN EARTH SCIENCES
Established in 1991 by May A. Ball in memory of her brother Murray Ball.
Requirements: Four scholarships to be awarded to students entering Level 2, 3, 4 or 5 of a B.Sc. program in the School of Earth, Environment & Society who, in the judgment of the School of Earth, Environment & Society, have attained notable standing. Ordinarily, not more than one scholarship will be awarded to any one program.
Typically Available: 4 x $2,500

THE J. DOUGLAS BANKIER MEMORIAL SCHOLARSHIP
Established in 1977 in memory of Professor J. Douglas Bankier by his friends, colleagues, and former students.
Requirements: To be awarded to the student enrolled in Level 3 or above of an Honours program in the Department of Mathematics and Statistics, who attains the highest Fall-Winter Average and who in that term achieves a grade of at least B in STATS 3D03.
Typically Available: 1 x $400

THE STANLEY T. BAYLEY SCHOLARSHIP IN BIOLOGY
Established in 2007 by the friends, former students and colleagues of Stanley T. Bayley in recognition of contributions to research and leadership in the Department of Biology.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours Biology Core program who, in the judgment of the Department of Biology, has demonstrated outstanding academic achievement and has focused on studies in Cell Biology.
Typically Available: 2 x $1,000

THE BEAUTY COUNSELORS OF CANADA SCHOLARSHIP
Established in 1956 by Beauty Counselors of Canada Limited.
Requirements: To be awarded to the student who has completed Level 1 with the highest Fall-Winter Average and who is entering in Level 2 of the Honours Biochemistry, Honours Chemistry, or Honours Chemical Biology program.
Typically Available: 1 x $350

THE DR. AND MRS. F.R. BRITTON SCHOLARSHIP IN MATHEMATICS
Established in 1962 by Dr. and Mrs. F.R. Britton and augmented by Mrs. Britton's bequest in 1982.
Requirements: To be awarded to the student enrolled in Level 2 of an Honours program in Mathematical Sciences who attains the highest Fall-Winter Average. Tenable in Levels 3 and 4 provided that the recipient maintains satisfactory standing in an Honours program in which mathematics, pure or

applied, is the major subject of study.
Typically Available: 1 x $1,200 ($600 each year)

THE CRISPIN CALVO SCHOLARSHIPS

Established in 1992 by Dr. J.S. Kirkaldy and Dr. W.W. Smeltzer.
Requirements: Two scholarships to be awarded, one to a student with the highest combined average in CHEM 2LB3 and CHEM 2PD3, the other to a student with the highest combined average in MATLS 2B03 and 2D03.
Typically Available: 2 x $2,000 each

THE CANADIAN SOCIETY FOR CHEMISTRY PRIZES

Established in 1947 by the Chemical Institute of Canada.
Requirements: Two awards to be made to students who are entering their final year of study: (a) one to a student in an Honours Chemistry program who attained high standing; (b) one to a student in an Honours Biochemistry or Honours Chemical Biology program who attained high standing.
Typically Available: 2 x Medal and Certificate

THE DOUGLAS DAVIDSON SCHOLARSHIP IN GENETICS

Established in 2006 by the friends and colleagues of Dr. D. Davidson in recognition of his many years of contributions to research and undergraduate teaching.
Requirements: To be awarded to a student enrolled in Honours Molecular Biology and Genetics Research Specialization who obtains the highest grade in MOLBIOL 2C03.
Typically Available: 1 x $400

THE HELEN EMERY SCHOLARSHIPS IN ENVIRONMENTAL SCIENCE

Established in 1990 by Miss Helen Emery of Barrie, Ontario.
Requirements: Two scholarships to be awarded to students in Level 2, 3, 4 or 5 of a B.Sc. program in the School of Earth, Environment & Society who, in the judgment of the School of Earth, Environment & Society, demonstrate leadership and influence in addressing environmental matters. Recipients must have attained a Fall-Winter Average of 9.5 or greater.
Typically Available: 2 x $1,850

THE SARA ETEHADOLHAGH MEMORIAL SCHOLARSHIP

Established in 2023 through generous donations made by Sara Etehadolhagh's friends and family.
Requirements: To be awarded to undergraduate students enrolled in a Physics and Astronomy program who attain high averages.
Typically Available: 1 x $1,000

THE FACULTY OF SCIENCE SCHOLARSHIPS

Established in 2019 by McMaster University.
Requirements: To be awarded to students enrolled in the Faculty of Science on the basis of academic and, in some cases, other forms of earned merit.
Typically Available: 1 x $1,500

THE KLAUS FRITZE MEMORIAL PRIZE

Established in 1980 by friends of Professor K. Fritze.
Requirements: To be awarded to the student enrolled in Level 2 of an Honours Chemistry or Chemical Biology program with the highest Fall-Winter Average.
Typically Available: 1 x $350

THE R. LOUIS GENTILCORE PRIZE

Established in 1989 by the family and friends of Professor R. Louis Gentilcore on the occasion of his retirement from the Department of Geography.
Requirements: To be awarded to a student in an Environment & Society program in the School of Earth, Environment & Society who, in the judgment of the School, has demonstrated exceptional achievement in regional geography.
Typically Available: 1 x $550

THE J.L.W. GILL PRIZES

Established in 1944 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical School.
Requirements: Nine scholarships to be awarded on the basis of Grade Point Averages to students enrolled in Level 3 of Honours B.Sc. programs. Ordinarily, not more than one scholarship will be awarded in any one discipline.
Typically Available: 9 x $380

THE DR. RAM NATH GUPTA SCHOLARSHIP

Established in 2021 by the Gupta family in honour of Ram Nath Gupta.
Requirements: To be awarded to undergraduate students enrolled in a Chemistry or Chemical Biology program who attain high averages.
Typically Available: 1 x $1,000

THE HAMILTON CHEMICAL ASSOCIATION PRIZE

Established in 1953 by the Trustees of the Hamilton Chemical Association in memory of Dean C.E. Burke.
Requirements: To be awarded to the student who has completed Level 1 and an additional 30 - 45 units of an Honours program in Chemistry or Chemical Biology and who attains the highest Grade Point Average.
Typically Available: 1 x $150

THE BILL AND RIA HART SCHOLARSHIP

Established in 2011 by bequest of Ria Maude Hart.
Requirements: To be awarded to a student in an Honours B.Sc. program in the School of Earth, Environment & Society who, in the judgment of the School of Earth, Environment & Society, has demonstrated outstanding academic achievement in the area of environmental or ecological studies.
Typically Available: 2 x $1,000

THE RUSSELL AND WINIFRED HEWETSON SCHOLARSHIP

Established in 2017 by the estate of Winifred Patricia Hewetson.
Requirements: Scholarships to be awarded to students enrolled in Level 3 and above in an Earth and Environmental Sciences program.
Typically Available: 1 x $2,500

THE H.L. JACKSON MEMORIAL SCHOLARSHIP

Established in 1989 in memory of Professor H.L. Jackson by his friends and colleagues.
Requirements: To be awarded to the student enrolled in Level 3 or above of an Honours program in the Department of Mathematics and Statistics, who in the judgment of the department has demonstrated achievement in MATH 3A03 and MATH 3X03 taken in the same Fall/Winter terms.
Typically Available: 1 x $450

THE STANFORD N. KATAMBALA EARTH SCIENCES PRIZE

Established in 1965 by contributions from friends and associates of Stanford N. Katambala, a Year 3 Honours Geology student from Tanzania, killed in a mine accident in Northern Ontario in September 1964.
Requirements: To be awarded to a student enrolled in Level 3 of the Honours Earth and Environmental Sciences program and who attains high standing.
Typically Available: 1 x $100

THE KINESIOLOGY PRIZE

Established in 1982.
Requirements: To be awarded to a student who has completed Level 3 Kinesiology with a high Grade Point Average and who, in the judgment of the Department of Kinesiology, demonstrates outstanding academic achievement.
Typically Available: 1 x $100

THE GEORGE P. AND LEATHA M. KEYS SCHOLARSHIPS

Established in 1982 by Mrs. Leatha Keys.
Requirements: Two scholarships to be awarded to students who, in the judgment of the Department of Mathematics and Statistics, have demonstrated outstanding achievement in an Honours program in that Department: (a) one to a student enrolled in Level 2; (b) one to a student enrolled in Level 3.
Typically Available: 2 x $750

THE JOHN N.A. LOTT SCHOLARSHIP IN BIOLOGY

Established in 2007 by the friends and colleagues of John N.A. Lott in recognition of his many years of contributions to the Department of Biology.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours Biology Core program who, in the judgment of the Department of Biology, has demonstrated outstanding academic achievement and shows an interest in biological structure (sub cellular to ecosystem) and function. Preference to be given to a student who demonstrates an interest in plants.
Typically Available: 1 x $500

THE JOHN AND HELEN MAXWELL SCHOLARSHIP
Established in 2012 by the bequest of Helen Catharine Maxwell.
Requirements: To be awarded to students in a Chemistry or Chemical Biology program who, in the judgment of the Department of Chemistry and Chemical Biology, demonstrate an aptitude in analytical chemistry.
Typically Available: 4 x $5,000

THE A.B. MCLAY SCHOLARSHIP IN PHYSICS
Established in 1991 by C. Lucy McLay in memory of her late husband, A. Boyd McLay (Ph.D., F.R.S.C.), a member of the Department of Physics from 1930 to 1967.
Requirements: To be awarded to a student enrolled in Level 2 of an Honours program in Physics and who, in the judgment of the Department of Physics and Astronomy, has attained notable standing.
Typically Available: 1 x $500

THE BOYD MCLAY SCHOLARSHIP IN PHYSICS
Established in 1977 to commemorate the contributions of Dr. A. Boyd McLay (Class of '22) to teaching and research in optics and spectroscopy at McMaster University from 1930 to 1967.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Physics with a high Fall-Winter Average.
Typically Available: 1 x $625

THE J.J. MILLER PRIZE
Established in 1984 by friends, colleagues and former students in recognition of Professor J.J. Miller for his outstanding contribution to the Department of Biology during 37 years of service.
Requirements: To be awarded to a student in an Honours Biology Core program with an outstanding Fall-Winter Average and a minimum grade of A- in BIOLOGY 2EE3.
Typically Available: 1 x $600

THE MICHAEL J. MORTON MEMORIAL BOOK PRIZE
Established in 1979 in memory of Dr. M.J. Morton.
Requirements: To be awarded to a student enrolled in Level 3 in an Honours program in Chemistry or Chemical Biology and who, in the judgment of the Department of Chemistry and Chemical Biology, is outstanding in the field of inorganic chemistry.
Typically Available: 1 x $175 for books

THE FREDRIC P. OLSEN BOOK PRIZE
Established in 1974 in memory of Professor F.P. Olsen by his family, friends and former colleagues.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Chemistry or Chemical Biology and who, in the judgment of the Department of Chemistry and Chemical Biology, shows particular promise as an experimental scientist.
Typically Available: 1 x $150 for books

THE DR. PHILLIPA HERITAGE MEMORIAL SCHOLARSHIP IN SCIENCE
Established in 2020 by family & friends of Dr. Philippa Heritage.
Requirements: To be awarded to female undergraduate students enrolled in the Faculty of Science who identify as racialized, Black, or Indigenous students and attain high averages.
Typically Available: 1 x $1,000

THE DR. JOHN POTTER SCHOLARSHIP
Established in 2019 by the family of Dr. John Potter, B.Sc. Honours (Class of '58) to honour his memory and life achievements.
Requirements: To be awarded to students enrolled in a Physics or Mathematics program who attain high averages.
Typically Available: 5 x $1,500

THE BILL PRESTWICH SCHOLARSHIP IN MEDICAL PHYSICS
Established in 2003 by friends, colleagues and students in recognition of Bill Prestwich and his career as a teacher and researcher.
Requirements: To be awarded to a student entering Level 2 of the Medical and Biological Physics program with the highest Fall-Winter Average in any Level 1 program.
Typically Available: 2 x $800

THE CATHERINE AND ALBERT ROEDER MEMORIAL SCHOLARSHIP
Established in 2007 by Dr. Robert Roeder, B.Sc. (Class of '59), M.Sc. (Class of '60) in memory of his parents.
Requirements: To be awarded to the student in an Honours Physics program with the highest Grade Point Average.
Typically Available: 1 x $1,200

THE DR. SINA SAZGAR MEMORIAL SCHOLARSHIP
Established in 1999 in memory of Dr. Sina Sazgar, Hon. B.Sc. (Class of '93), a young, exceptionally gifted and caring medical doctor who tragically passed away on October 26, 1993.
Requirements: One scholarship to be awarded to a student enrolled in an Honours Bachelor of Science program who, in the judgment of the Faculty of Science, has demonstrated outstanding academic performance.
Typically Available: 1 x $1,000

THE SHENSTONE PRIZE
Established in 1903 by J.N. Shenstone of Toronto, and continued by members of his family.
Requirements: To be awarded to the student who has completed Science I and who attains the highest average in any four of the Level 1 courses in Chemistry, Physics and Biology.
Typically Available: 1 x $200

THE GERALD AND VERNA SIMPSON MEMORIAL SCHOLARSHIP
Established in 1957 by Paul R. Simpson, B.Sc. (Class of 1956) and James R. Simpson, B.A.(Class of 1954) in memory of their parents, Gerald & Verna Simpson.
Requirements: To be awarded to undergraduate students enrolled in Level 2 of an Honours Physics program who attain high averages.
Typically Available: 3 x $1,000

THE DR. BALRAJ SINGH SCHOLARSHIP IN PHYSICS & ASTRONOMY
Established in 2024 by the family of Dr. Balraj Singh.
Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in any program in the Department of Physics & Astronomy who attain high averages.
Typically available: 1 x $1,000

THE S.L. SQUIRE SCHOLARSHIPS
Established in 1938 by bequest of S.L. Squire of Toronto.
Requirements: Two scholarships to be awarded to students entering Level 2 of a Mathematics and Statistics program who, in the judgment of the Department of Mathematics and Statistics, attained notable standing in Mathematics and Statistics Gateway.
Typically Available: 2 x $1000

THE DR. R.A. THOMPSON PRIZE IN MATHEMATICS
Established in 1954 by bequest of Dr. William Bethune, in memory of R.A. Thompson, B.A., LL.D., Principal of Central Collegiate Institute, Hamilton, from 1897-1919, in recognition of his contribution to education in Hamilton.
Requirements: To be awarded to the student enrolled in Level 3 of an Honours program in Mathematics and/or Statistics, who attains a high Fall-Winter Average.
Typically Available: 1 x $300

THE VALLEY CITY MANUFACTURING CO. LTD. SCHOLARSHIPS
Established in 1991 by the Valley City Manufacturing Co. Ltd. of Dundas, Ontario.
Requirements: Two scholarships to be awarded to the students enrolled in an Honours B.Sc. program: one to the student entering Level 2 and one to the student entering Level 3 who attain the highest Fall-Winter Average. Recipients may not hold another scholarship of equal or greater value.
Typically Available: 2 x $1,950

THE JIM WADDINGTON PRIZE IN PHYSICS AND ASTRONOMY
Established in 2004 by friends, colleagues and students in recognition of Jim Waddington and his career as a teacher and researcher.
Requirements: To be awarded to students entering Level 2 of an Honours program in the Department of Physics and Astronomy who, in the judgment of the Department, have demonstrated outstanding academic achievement in Physics.
Typically Available: 2 x $1,700

THE WALLER FAMILY MUSIC COGNITION SCHOLARSHIP
Established in 2014 in memory of Thomas Edward and Norma Waller.
Requirements: To be awarded to a student in the Faculty of Science who has completed at least Level 2 in the Music Cognition Program, and who demonstrates outstanding academic achievement.
Typically Available: 1 x $2,000

THE EMANUEL WILLIAMS SCHOLARSHIP IN PHYSICS
Established in 1948 by Arabel M. Williams of Port Colborne as a memorial to her brother.
Requirements: To be awarded to the student enrolled in Level 2 of an Honours program in Physics with the highest Fall-Winter Average.
Typically Available: 1 x $1,200

THE GLADYS A. YOUNG SCHOLARSHIP
Established in 1991 by T.G. Harvey in honour of his wife, Gladys B.Sc., (Class of '37), M.Sc., (Class of '38), one of a group of researchers who commenced radio astronomy research with the National Research Council of Canada.
Requirements: To be awarded to the student enrolled in Level 2 or above of an Honours program in Mathematics or Physics with the highest Fall-Winter Average. The recipient must not hold another scholarship of equal or greater value.
Typically Available: 1 x $1,600

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE CITIZEN ACTION GROUP AWARD IN MEMORY OF HARRY PENNY
Established in 1984 by the Citizen Action Group, Hamilton, to honour Professor Harry L. Penny, founding Director of the School of Social Work and Board Member of Citizen Action Group.
Requirements: To be awarded to the student in a program in Social Work who achieves the highest grade in SOCWORK 2CC3.
Typically Available: 1 x $1,500

THE HUGH CLARK SCHOLARSHIP
Established in 1989 by Hugh Clark in celebration of McMaster's fiftieth year since moving to Hamilton.
Requirements: To be awarded to the student enrolled in Level 3 of an Honours program in Social Sciences who attains the highest Fall-Winter Average.
Typically Available: 1 x $2,200

THE PHILIP F. CONNELL SCHOLARSHIP
Established by Philip F. Connell, B.A. Hon. (Class of '46).
Requirements: To be awarded to undergraduate students who are enrolled in Level 2 of an Honours Economics program who, attain high averages. Tenable in Level 4 provided that the recipient maintains a Grade Point Average of 9.5 or greater.
Typically Available: 1 x $20,000 ($10,000 per year)

THE MARGARET CUDMORE SCHOLARSHIP IN POLITICAL SCIENCE
Established in 2010 by bequest of Margaret Georgina Cudmore.
Requirements: To be awarded to a student in the Faculty of Social Sciences enrolled in Level 3 of an Honours Political Science program with a high Fall-Winter Average.
Typically Available: 1 x $2,000

THE ALICE AND WALTER DAY SCHOLARSHIP
Established in 2012 by Dr. Graham Knight in honour of his grandparents.
Requirements: To be awarded to students enrolled in the Work and Labour Studies program who attain high averages.
Typically Available: 1 x $500

THE SUSAN FARLEY AND BETH FARLEY-GROVES SCHOLARSHIP
Established in 2009 by the parents of Susan Farley (Class of '08) in her memory. Susan earned her B.A in Gerontology.
Requirements: To be awarded to a student in a program in the Department of Health, Aging and Society who, in the judgment of the Department, has demonstrated notable academic achievement.
Typically Available: 1 x $500

THE CHRISTINE FEAVER SCHOLARSHIP IN ECONOMICS
Established in 2012 by colleagues of Christine Feaver (Class of 1970), Honours Economics and Mathematics, in her memory, and in recognition of her long and distinguished career as a Research Associate in the Department of Economics.
Requirements: To be awarded to a student enrolled in Level 3 of any Honours Economics program with the highest Grade Point Average, and who is entering Level 4.
Typically Available: 1 x $1,000

THE DR. THOMAS HOBLEY PRIZE
Established in 1936 by bequest of Mrs. A. McNee of Windsor.
Requirements: To be awarded to a student on the basis of the Fall-Winter Average obtained in the penultimate level of a program in Economics or Political Science.
Typically Available: 1 x $300

THE HUMAN RIGHTS AWARD
Established in 1998 by the Theme School on International Justice and Human Rights.
Requirements: To be awarded to the student who attains the highest grade in POLSCI 3Y03 or POLSCI 4D06 A/B.
Typically Available: 1 x $275 for books

THE WILLIAM D.G. HUNTER PRIZE
Established in 1995 by family, friends and colleagues in memory of Professor William D.G. Hunter, member of the Department of Economics from 1951 to 1984.
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses within the area of economic history.
Typically Available: 2 x $1,000

THE LAWRENCE AND KATHLEEN MARY JOHNSTON MEMORIAL PRIZE
Established in 1963.
Requirements: To be awarded to the student enrolled in Level 2 of an Honours program in Religious Studies and who attains the highest Fall-Winter Average.
Typically Available: 1 x $450

THE NORMAN G. KOETHER SCHOLARSHIP
Established in 2021 by the late Gerhard and Liselotte Koether and their daughter Marina Koether, B.Sc. Hons.(Class of '89) in memory of their son and brother, Norman G. Koether, B.A. Hons. (Class of '86).
Requirements: To be awarded to undergraduate students enrolled in Level 3 or above in an Economics program who attain high averages.
Typically Available: 2 x $1,000

THE SAM LAWRENCE PRIZE
Established in 1957 by the East Hamilton Independent Labour Party C.C.F. Club in honour of Sam Lawrence.
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses in labour economics.
Typically Available: 1 x $200

THE MACGIBBON SCHOLARSHIP
Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08).
Requirements: To be awarded to the student in a program in Economics who, in the judgment of the Department of Economics, stands highest in courses in economic history.
Typically Available: 1 x $500

THE WILLIAM MACKENZIE MEMORIAL PRIZE
Established in 1977 in memory of Professor William MacKenzie by his friends and colleagues.
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in either ECON 3T03 (Economic Development) or in exceptional circumstances, for work in a related area.
Typically Available: 1 x $425

THE BETTY MACMILLAN PRIZE
Established in 1960 by her classmates in memory of Elizabeth Johnstone MacMillan (Class of '50).
Requirements: To be awarded to the student enrolled in Level 3 of an Honours program in Sociology and who, in the judgment of the Department of Sociology, is the most promising student.
Typically Available: 1 x $200

THE MCMASTER UNIVERSITY RETIREES ASSOCIATION SCHOLARSHIP
Established in 1991 by the McMaster University Retirees Association.
Requirements: To be awarded to the student enrolled in Level 2 or above of a program in Aging and Society and who attains the highest Fall-Winter Average. The student must enroll in a program in Aging and Society in the subsequent Fall/Winter terms.
Typically Available: 1 x $2,500

THE JEANNE AND PETER NOLAN AWARD
Established in 2014 by Kim (Class of 2004 and 2009) and Tim (Class of '86 and 2004) Nolan to celebrate the lives of Jeanne and Peter Nolan.
Requirements: To be awarded to a student in a Social Work program who is registered with Student Accessibility Services.
Typically Available: 1 x $1,000

THE DERRY NOVAK PRIZE
Established in 1984 by the Political Science alumni and colleagues in honour of Professor Derry Novak.
Requirements: To be awarded to a student in a program in Political Science who, in the judgment of the Department of Political Science, has achieved high standing in Level 2 and/or 3 courses in political theory or political philosophy.
Typically Available: 1 x $1,000

THE TONY PAVER MEMORIAL SCHOLARSHIP
Established in 2020 by CUPE Local 5167 in loving memory of Tony Paver.
Requirements: To be awarded to a student enrolled in the Work and Labour Studies program who attains high averages.
Typically Available: 1 x $1,000

THE PEVENSING SCHOLARSHIP
Established in 1987 by David C. Hannaford (Class of '64).
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Economics and who, in the judgment of the Department of Economics, has attained notable academic standing.
Typically Available: 2 x $1,000

THE JACK RICHARDSON MEMORIAL SCHOLARSHIP
Established in 2002 in memory of Jack Richardson by family, friends and colleagues.
Requirements: To be awarded to a part-time student who has completed at least Level 2 in an Honours Sociology program and who attains the highest Grade Point Average at the most recent review.
Typically Available: 2 x $675

THE ROSART PROPERTIES INC. SCHOLARSHIP
Established in 1988 by John D. and Dominic J. Rosart of Burlington.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Earth, Environment & Society and who, in the judgment of the School of Earth, Environment & Society, has attained high academic standing.
Typically Available: 1 x $325

THE MARY C. SHANE SCHOLARSHIP
Established in 2016 by the Estate of George Gregory Shane, in honour of Mary Shane, the first female representative of the United Steelworkers of America and secretary to long-standing USWA member Larry Sefton and Lynn Williams.
Requirements: To be granted to a student enrolled in Level 3 or 4 of the Work and Labour Studies Program with a high Fall-Winter Average.
Typically Available: 1 x $2,000

THE FACULTY OF SOCIAL SCIENCES SCHOLARSHIPS
Established in 2019 by McMaster University.
Requirements: To be awarded to students enrolled in the Faculty of Social Sciences on the basis of academic and, in some cases, other forms of earned merit.
Typically Available: 1 x $1,500

THE SOCIAL WORK PRIZE
Established in 1982.
Requirements: To be awarded to the student who attains the highest grade in SOCWORK 2A06 A/B.
Typically Available: 1 x $100

THE ANNE STEIN MEMORIAL PRIZE
Established in 1971 by friends and colleagues of Anne Stein.
Requirements: To be awarded to the student who successfully completes SOCWORK 3DD6 A/B S and attains the highest grade inSOCWORK 3D06 A/B S in the same term.
Courses must be taken during the Fall/Winter terms.
Typically Available: 2 x $125

THE KENNETH W. TAYLOR BOOK PRIZE
Established in 1976 by his children in memory of Dr. Kenneth W. Taylor (Class of '21), LL.D. (Class of '50).
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses within the areas of monetary economics and financial institutions, and of public finance.
Typically Available: 2 x $100 for books

THE THOMAS TRUMAN MEMORIAL PRIZE
Established in 1992 by friends and colleagues in memory of Professor Thomas Truman, a member of the Department of Political Science from 1966 to 1990.
Requirements: To be awarded to the student entering the final level of an Honours program in Political Science who, in the judgment of the Department of Political Science, has achieved notable academic standing in at least nine units of Comparative Politics courses.
Typically Available: 1 x $75

THE ALLAN R. VEALL SCHOLARSHIP IN ENVIRONMENTAL ECONOMICS
Established in 2009 by the Veall family in memory of Allan R. Veall, B.A. (Class of '45).
Requirements: To be awarded to a student enrolled in Level 3 or above of an Economics program and who, in the judgment of the Department of Economics, has demonstrated significant academic achievement in Environmental Economics as well as outstanding overall academic merit.
Typically Available: 1 x $1,000

THE MELINDA WAPSHAW ACHIEVEMENT AWARD
Established in 1993 by the Labour Studies Student Association and the Labour Studies Program.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours Program in Work and Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.
Typically Available: 1 x $375

THE RALPH WEEKES SCHOLARSHIP
Established in 1994 by the Investors Group Financial Services to recognize the accomplishments of Ralph Weekes (Class of '73).
Requirements: To be awarded to undergraduate students enrolled in a program in Economics who attain high averages.

Typically Available: 1 x $800

THE MARJORIE AND CHARLES WILKINSON SCHOLARSHIP

Established in 1991 by the family in honour of Marjorie Wilkinson, author of many books and addresses on religion, and co-founder of the Hamilton Lay School of Theology at McMaster in 1966, and Charles Wilkinson, religion editor and writer for the Hamilton Spectator from 1963-1985.

Requirements: To be awarded to the student enrolled in Level 2 or above of an Honours program in Religious Studies and who, in the judgment of the Department of Religious Studies, has attained notable academic standing in courses in Christian thought.

Typically Available: 1 x $450

THE WOUTERS FAMILY SCHOLARSHIP

Established in 2011 by Peter Anthony Wouters, B.A. (Class of '76) and B.Sc. (Class of '77).

Requirements: To be awarded to a student who has completed at least Level 2 of any program in the Department of Health, Aging and Society and who attains the highest Fall-Winter Average.

Typically Available: 1 x $1,000

Awards by Application

OPEN TO TWO OR MORE FACULTIES

THE ACCENTURE INC. SCHOLARSHIP

Established in 1998 by Andersen Consulting.

Requirements: To be awarded to a student entering the final year of study who, in the judgment of a Selection Committee, demonstrates a strong interest in Management Information Systems and qualities of leadership through service to McMaster University and/or the community in athletic, professional or social organizations.

Typically Available: 1 x $1000

THE ACHIEVEMENT AWARDS OF EXCELLENCE

Established in 1998.

Requirements: A variable number of scholarships to be awarded to students who, demonstrate outstanding academic achievement and are registered with Student Accessibility Services (SAS).

Typically Available: 1 x $800

THE HERBERT S. ARMSTRONG MEMORIAL FUND

Established in 1997 in memory of Herbert S. Armstrong.

Requirements: To be awarded to a student enrolled in Level 2 or above who, in the judgment of the School of Earth, Environment & Society, has achieved notable academic standing and who has made a significant contribution to university life through extra-curricular activities.

Typically Available: 1 x $100

THE NELLIE BELLUZ SCHOLARSHIP

Established in 2024 by Nellie Belluz to demonstrate her commitment to supporting women first-generation Canadian students and their access to higher education.

Requirements: To be awarded to undergraduate students who self-identify as women enrolled in any program who are first-generation Canadian and attain high averages.

Typically available: 2 x $3,500

THE ADELLA MARGARET BRAGG SCHOLARSHIPS

Established in 2010 by bequest of Adella Margaret Bragg.

Requirements: To be awarded to female students from the Six Nations of the Grand River territory enrolled at McMaster University in any undergraduate program. The award is tenable up to three years.

Value: $12,000 ($4,000 per year)

THE JOSEPHINE STAPLES BRIEN SCHOLARSHIP

Established in 1936 by Dr. J.W. Brien of Windsor.

Requirements: To be awarded to a female student who is entering in her graduating term and who qualifies on the basis of academic standing and interest in undergraduate activities.

Typically Available: 1 x $350

THE DONALD OSCAR CANNON SCHOLARSHIP

Established in 2012 by the Cannon Family.

Requirements: To be awarded to a student registered with Student Accessibility Services (SAS) who obtained a high Grade Point Average.

Typically Available: 1 x $2,000

THE CHANCELLOR'S GOLD MEDAL

Established in 1938.

Requirements: To be awarded to the student who has completed the penultimate year of any four or five-level program at the most recent spring review, and who ranks highest in scholarship, leadership and influence.

Typically Available: 1 x Medal

THE CNL INNOVATION AND ACADEMIC EXCELLENCE SCHOLARSHIP

Established in 2024 by CNL.

Requirements: To be awarded to undergraduate students enrolled in either the Faculty of Engineering or the Faculty of Science who attain high averages and demonstrate an interest in nuclear studies through coursework, and/or participation in clubs or societies.

Typically available: 2 x $,4,000

THE PATRICK DEANE AWARD FOR COMMUNITY ENGAGEMENT

Established in 2019 in honour of Dr. Patrick Deane, the seventh President and Vice-Chancellor of McMaster University, to recognize his service to the University and deep commitment to community engagement throughout his nine years as President.

Requirements: To be awarded to students enrolled in Level 3 or above in any program who have demonstrated exceptional leadership and commitment to community-focused initiatives during their time at McMaster and who intend to continue their engagement by undertaking a community-focused project or initiative while completing their degree at McMaster.

Typically Available: 1 x $2,500

THE DUBECK BIOCHEMISTRY AWARD

Established in 2004 by Dr. Michael Dubeck, B.Sc. (Class of '51) and M.Sc. (Class of '52).

Requirements: To be awarded to a student enrolled in Level 3 or above of an Honours program in Biochemistry who, in the judgment of the Department of Biochemistry and Biomedical Sciences, has achieved notable academic standing and has an interest in pursuing an academic career in basic biochemical research.

Typically Available: 2 x $3,750

THE MAHATMA GANDHI SCHOLARSHIP

Established in 2017 to promote the Gandhian concepts of non-violence and help foster peace and harmony in the world.

Requirements: To be awarded to a student enrolled in any program who has completed at least 6 units in Global Peace and Social Justice courses and attained a high average in those courses.

Typically Available: 1 x $1,000

THE GEN7 INDIGENOUS SCHOLARSHIP

Established in 2022 by Gen7 Brands LP.

Requirements: To be awarded to undergraduate students enrolled in any program who identify as Indigenous and demonstrate involvement in their community.

Typically Available: 1 x $3,000

THE GWEN GEORGE AWARD

Established in 1997 in loving memory of Gwen George by her family and friends.

Requirements: To be awarded to students completing any Level 1 program in the current term who, in the judgment of a Selection Committee, have achieved notable academic standing and demonstrated qualities of leadership and service to McMaster University and/or the City of Hamilton, surrounding or world communities.

Typically Available: 5 x $1,500

THE GWEN GEORGE MEDAL

Established in 2001 in loving memory of Gwen George by her family.

Requirements: To be awarded to a part-time student who has completed at least Level 1 of any program and who, in the judgment of the of a selection committee, has achieved notable academic standing and has demonstrated qualities of leadership and service to McMaster University and/or the Hamilton-Wentworth, surrounding or world communities.

Applications may be submitted at the end of Levels I, II and III (IV if in a five-year program). Students must have completed a minimum of 18 graded units to be eligible.

Typically Available: 1 x $400 and a Medal

THE INTER-RESIDENCE COUNCIL SCHOLARSHIP

Established in 1995 by the McMaster Inter-Residence Council in recognition of the IRC's continued support of the University and its students.

Requirements: To be awarded to undergraduate students who are enrolled in Level 2 of any program who attain high averages and demonstrate leadership and influence in residence life.

Typically Available: 1 x $400

THE EDWARD JENKINS AWARD

Established in 2010 by Tom Jenkins, B. Eng. Mgt. (Class of '82) and Toby Jenkins in honour of Tom's father, Edward Jenkins.

Requirements: To be awarded to students who have completed any Level 1 program, are current or former members of the Canadian Forces, or are the children or grandchildren of a member of the Canadian Forces, and who have displayed both academic excellence and community leadership. Preference will be given to students who are current or former members of the Canadian Forces.

Typically Available: 9 x $6,400

THE DR. RONALD V. JOYCE "AMAZING" GRACE AWARDS

Established in 2003 by Dr. Ronald V. Joyce '98 in honour of his mother, Grace Joyce.

Requirements: A variable number to be awarded to students in Level 2 or above of any program who, in the judgment of the selection committee, demonstrate a commitment to community service by volunteering during the academic year with children who have special needs. Preference will be given to those students who volunteer with underprivileged children. Not open to students in their graduating year.

Typically Available: 2 x $2,500

THE DR. RONALD V. JOYCE AWARDS FOR ATHLETES

Established in 2003 by Dr. Ronald V. Joyce '98.

Requirements: A variable number to be awarded to students who have completed at least Level 1 of any program who, in the judgment of a selection committee, have demonstrated outstanding athletic ability as members of a McMaster varsity team which competes in USports. Students must meet the eligibility requirements of USports and Ontario University Athletics (OUA). Applications may be submitted at the end of Levels 1, 2 & 3 (Level 4 if in a 5-year program).

Typically Available: 5 x $2,500

THE KALANI FAMILY SCHOLARSHIP

Established in 2020 by the Kalani Family.

Requirements: To be awarded to undergraduate students enrolled in any program who identify as racialized students, attain high averages, and who demonstrate a commitment to sustainability through community involvement.

Typically Available: 1 x $2,500

THE KONRAD GROUP DIGITAL INNOVATION SCHOLARSHIP

Established in 2018 by Konrad Group, a global digital agency, to support students who have a passion for digital technology.

Requirements: To be awarded to students enrolled in Level 3 or above in an Engineering or Business program who attain high averages and demonstrate an interest in pursuing a career in digital technology.

Typically Available: 2 x $2,500

THE KONRAD GROUP WOMEN IN TECHNOLOGY SCHOLARSHIP

Established in 2021 by Konrad Group, a global digital agency, to support students who have a passion for digital technology.

Requirements: To be awarded to female undergraduate students enrolled in Level 3 or above in an Engineering or Business program who attain high averages and demonstrate an interest pursuing a career in digital technology.

Typically Available: 1 x $2,500

THE DR. ATIF A. KUBURSI SCHOLARSHIP

Established in 2024 by former students and friends in honour of Dr. Atif A. Kubursi, an internationally acknowledged scholar and highly respected professor in Economics at McMaster University.

Requirements: To be awarded to undergraduate students enrolled in either an Arts & Science or Economics program who attain high averages and demonstrate qualities of leadership and altruistic service. The awarding of this scholarship will alternate between even years to Arts & Science students and odd years to Economics students.

Typically available: 1 x $3,000

THE GARY LAUTENS MEMORIAL SCHOLARSHIP

Established in 1992 by family, friends and colleagues in memory of Gary Lautens (Class of '50), columnist and editor of the Toronto Star (1962-92), the Hamilton Spectator (1950-62) and the McMaster Silhouette (1948-50), remembered as a journalist with wit and insight.

Requirements: To be awarded to a student who is completing any Level 1 program who, in the judgment of a Selection Committee, has achieved notable academic standing and has demonstrated journalistic skills in the written media. The scholarship is renewable at the end of Level 2 provided the recipient maintains a Grade Point Average of 8.0.

Typically Available: 1 x $5,000 ($2,500 each year)

The recipient of this award is eligible to receive the corresponding donor bursary if financial need is demonstrated.

THE JAMES B. LAWSON SCHOLARSHIP

Established in 1999 by a grateful student and friend of Professor Lawson.

Requirements: To be awarded to a student who has completed either GERMAN 1Z06 A/B or 1BB3 in Level 1 or to a student who has completed GERMAN 2ZZ3 in Level 2 and who, in the judgment of the Department of Linguistics and Languages, has demonstrated progress and interest in German. Eligibility for this award is restricted to non-native speakers of German. The award may be used for travel and study in a German-speaking country and/or for other expenses associated with the student's German studies.

Typically Available: 1 x $150

THE MARGARET AND ED LYONS SCHOLARSHIP

Established in 2023 by the estates of Margaret and Edward Lyons.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Humanities or Social Sciences who are actively involved in any of McMaster's performing arts activities and are Canadian citizens.

Typically Available: 1 x $5,000

THE MCMASTER UNIVERSITY FUTURES FUND IN-COURSE AWARDS

Established in 2000.

Requirements: To be awarded to undergraduate students who are children of members of the McMaster University salaried pension plan who have demonstrated outstanding academic achievement. Recipient must obtain a Grade Point Average of 8.0 or greater. Not open to graduating students.

Typically Available: 4 x $1,800

THE MCMASTER WELCOME WEEK REPRESENTATIVE AWARD

Established in 2023 in recognition of the dedication and contributions of McMaster University's Welcome Week Representatives in fostering an inclusive, and seamless transition to university life of first year students.

Requirements: To be awarded to Welcome Week representatives who volunteer their time and demonstrate significant involvement and leadership during Welcome Week.

Typically available: 10 x $3,000

THE JOHN D. MCNIE ACHIEVEMENT AWARD OF EXCELLENCE
Established in 2001 by David O. Davis in honour of John D. McNie.
Requirements: To be awarded to a student with a visual impairment who, in the judgment of the *Student Accessibility Services (SAS)*, demonstrates notable academic achievement.
Typically Available: 1 x $700
Students who wish to be considered for this award must be enrolled with *Student Accessibility Services (SAS).*

THE ELIZABETH MOSGROVE SCHOLARSHIP
Established in 1959 by bequest of John W. Mosgrove in memory of his mother.
Requirements: To be awarded to descendants of members of Her Majesty's Canadian Armed Forces on the basis of high Grade Point Average. Not open to students in their graduating year.
Typically Available: 1 x $1,500

THE DRS. JOLIE RINGASH AND GLEN BANDIERA RENAISSANCE AWARD
Established in 2012 by Drs. Jolie Ringash and Glen Bandiera. The award, with its emphasis on experiential learning, is intended to create transformative opportunities for students from all Faculties and programs, from undergraduate to graduate and professional.
Requirements: The recipient of the award shall be an individual who wishes to engage in a 4-12 month, self-directed, enrichment experience outside his/her chosen program of study, and who wishes to explore a project of personal significance that will amplify the recipient's University experience while engaging in experiential learning at home or abroad.
Typically Available: 1 x $25,000

THE MARNIE SPEARS SCHOLARSHIP
Established in 1993 by many friends, colleagues and alumni of McMaster University as a tribute to Marnie Spears (Class of '69), Executive Director, Development and Public Relations from 1986-93 and dedicated alumna who served as President of the McMaster Alumni Council in 1980, in recognition of her outstanding contribution to the University.
Requirements: To be awarded to the student enrolled in Level 2 or above of an Honours program with notable academic standing and who, in the judgment of a Selection Committee, has demonstrated leadership in public, community or University alumni relations. Not open to students in their graduating year. Students may only receive this award once.
Typically Available: 2 x $2,000

THE MABEL STOAKLEY SCHOLARSHIP
Established in 1956 by the Young Women's Canadian Club of Toronto (now the Career Women's Canadian Club of Toronto).
Requirements: To be awarded to a woman student enrolled in Level 2 of any program and who gives evidence of outstanding academic achievement and leadership.
Typically Available: 1 x $500 for books

THE FRANK AND CAROL TRISTANI BUSINESS AND IBEHS SCHOLARSHIP
Established in 2023 by Frank and Carol Tristani.
Requirements: To be awarded to undergraduate students entering Level 2 in the DeGroote School of Business and/or entering Level 2 of the Integrated Biomedical Engineering and Health Sciences program who attain high averages and demonstrate leadership qualities on campus or in the community-at-large.
Typically Available: 2 x $3,000

OPEN TO THE ARTS & SCIENCE PROGRAM

THE CHARON BURKE MCCAIN MEMORIAL SCHOLARSHIP
Established in 2004 in memory of Charon Burke McCain by family, friends, colleagues and students.
Requirements: To be awarded to an Honours Arts and Science student who has completed Level 3 and who, in the judgment of the Arts and Science Program, has demonstrated exceptional qualities of leadership and service at McMaster University or in the community, as well as notable academic achievement.
Typically Available: 1 x $1,000

THE CLASS OF 1953 50TH ANNIVERSARY SCHOLARSHIP
Established by the Class of 1953 in honour of its 50th reunion.
Requirements: A variable number of scholarships to be awarded to students in Level 2 and above in a program in Arts and Science who, in the judgment of the Arts and Science Program, have attained high academic standing and demonstrated community involvement.
Typically Available: 3 x $4,500

THE GEORGE P. GILMOUR MEMORIAL SCHOLARSHIP
Established in 1987 by the Graduating Class of 1962 in honour of Dr. G.P. Gilmour (Class of '21), Chancellor of McMaster University from 1941 to 1950 and President and Vice-Chancellor from 1950 to 1961.
Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in the Arts and Science Program and who, in the judgment of the Arts and Science Program Admissions, Awards, and Review Committee, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in extracurricular activities.
Typically Available: 1 x $375
The recipient of this award is eligible to receive the corresponding bursary if financial need is demonstrated.

THE HERBERT M. JENKINS PRIZE
Established in 1990 as a tribute to Dr. Herbert M. Jenkins, first Director of the Arts and Science Program, by his many friends, colleagues and students on the occasion of his retirement from McMaster University.
Requirements: To be awarded to a student in an Arts and Science program whose work, in the judgment of the Arts and Science Program Awards and Review Committee, best reflects scholarship and the spirit of inquiry.
Typically Available: 1 x $150

OPEN TO THE DEGROOTE SCHOOL OF BUSINESS

THE DEGROOTE SCHOOL OF BUSINESS ALUMNI UNDERGRADUATE SCHOLARSHIP
Established in 2004 through the generosity of the DeGroote School of Business alumni and friends.
Requirements: To be awarded to students enrolled in Level 2 of a Commerce program who, in the judgment of the Faculty of Business, attain high averages and demonstrate leadership ability through school activities, work and/or community involvement.
Typically Available: 1 x $800

THE DELOITTE SCHOLARSHIP
Established in 2000 by Deloitte & Touche.
Requirements: A variable number of scholarships to be awarded to students enrolled in Level 3 of the Honours Commerce program who, in the judgment of the Faculty of Business, have achieved notable academic standing in COMMERCE 3AB3 and COMMERCE 3AC3 (taken in the same Fall/Winter terms), and have demonstrated qualities of leadership at McMaster University or in the community.
Typically Available: 1 x $6,000

THE RICK D. HACKETT SCHOLARSHIP IN HUMAN RESOURCES MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR
Established in 2009 by Professor Rick D. Hackett.
Requirements: To be awarded to a student enrolled in the DeGroote School of Business entering the 4th year of their program who, in the judgment of the School of Business, has demonstrated outstanding academic achievement in human resource management and organizational behaviour courses, and community service.
Typically Available: 1 x $1,400

THE HAZELVIEW BUSINESS SCHOLARSHIP
Established in 2023 by the Hazelview.
Requirements: To be awarded to undergraduate students enrolled in Level 3 or above in the DeGroote School of Business who attain high averages and demonstrate an interest in sustainability.

Typically available: 1 x $3,000

THE HOPA PORTS SCHOLARSHIP

Established in 1994 by the Commissioners in recognition of outstanding Canadian students who continue their studies at McMaster University.

Requirements: To be awarded to a student enrolled in Level 3 of a program in Commerce who, in the judgment of the Faculty of Business, has demonstrated outstanding academic achievement and involvement in the local community.

Typically Available: 2 x $1,500

THE HAWKRIGG FAMILY SCHOLARSHIPS IN BUSINESS

Established in 1999 by the Hawkrigg Family.

Requirements: To be awarded to a student who, in the judgment of the Faculty of Business, has attained notable academic standing in Business I and demonstrated involvement in University or community activities, and outstanding athletic ability. This scholarship is tenable for up to three years provided the recipient maintains a Grade Point Average of 8.0.

Typically Available: 1 x $7,500 ($2,500 each year)

THE KPMG SCHOLARSHIP

Established in 2015 by the KPMG Foundation.

Requirements: To be awarded to a full-time student in the DeGroote School of Business enrolled in Level 3 of the Honours Commerce program who, in the judgment of the DeGroote School of Business, demonstrates outstanding academic achievement, an interest in the accounting profession, and a commitment to volunteerism. Applicants must include a statement concerning their career aspirations in the accounting profession and volunteer leadership in the community.

Typically Available: 1 x $3,400

THE PWC CANADA SCHOLARSHIPS

Established in 2000 by PwC Canada (PricewaterhouseCoopers).

Requirements: To be awarded to well-rounded full-time students in the DeGroote School of Business who have completed Level 2 or above of the Honours Commerce program, and who, in the judgment of the DeGroote School of Business, demonstrate outstanding academic achievement, an interest in the accounting profession, leadership attributes, and a commitment to community volunteerism.

Typically Available: 2 x $3,000

THE MOJTABA YOUSEFPOUR SCHOLARSHIP

Established in 2023 by Haniyeh Yousefpour, Ph.D. (Class of '10) in honour of her uncle, Mojtaba Yousefpour who lost his ability to walk in his early 20's but continued to live a purposeful life with enthusiasm. He worked hard towards his goals with optimism and was a source of inspiration to many.

Requirements: To be awarded to undergraduate students enrolled in The DeGroote School of Business who experience mobility limitations in their daily activities and are registered with Student Accessibility Services (SAS).

Typically available: 1 x $2,500

OPEN TO THE FACULTY OF ENGINEERING

THE CAE SCHOLARSHIPS IN COMPUTING AND SOFTWARE ENGINEERING

Established in 2001 by CAE Inc.

Requirements: To be awarded to a student who has completed Level 2 of a Software Engineering program who, in the judgment of the Department of Computing and Software, has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Typically Available: 1 x $5,000

THE CASEY FAMILY SCHOLARSHIP

Established in 2008 by the Casey Family.

Requirements: To be awarded to a student enrolled in Level 2 of Civil Engineering with a high Grade Point Average who, in the judgment of the Department of Civil Engineering, has demonstrated outstanding academic achievement in an Engineering course promoting sustainability or environmental stewardship and involvement in extra-curricular environmental initiatives.

Typically Available: 1 x $2,000

THE CIBC FUTURE TECHNOLOGY LEADERS BLACK & INDIGENOUS SCHOLARSHIP

Established in 2024 by CIBC.

Requirements: To be awarded to undergraduate students enrolled in Level 2 of a Faculty of Engineering co-op program who self-identify as Black and/or Indigenous and who are interested in working in the financial technology industry to build a more secure, equitable and sustainable future.

Typically available: 10 x $10,000

THE CIMA+ SCHOLARSHIP FOR WOMEN IN ENGINEERING

Established in 2023 by CIMA+.

Requirements: To be awarded to undergraduate students entering Level 2 or above in the Department of Civil Engineering who self-identify as women and attain high averages.

Typically available: 1 x $2,000

THE DAIFUKU MANUFACTURING CANADA CORPORATION SCHOLARSHIP

Established in 2019 by the Jervis B. Webb Company of Canada (Daifuku) Scholarship Fund at Hamilton Community Foundation.

Requirements: To be awarded to full-time students enrolled in a Bachelor of Technology program who graduated from a publicly funded Ontario high school and who demonstrate leadership experience and involvment in extracurricular activities.

Typically Available: 1 x $2,500

THE ECLIPSE AUTOMATION SCHOLARSHIP FOR LEADERS IN AUTOMATION

Established in 2023 by Eclipse Automation.

Requirements: To be awarded to undergraduate students enrolled in Level 2 of the Electrical, Mechanical, Mechatronics, Physics or Nuclear-based Engineering who attain high averages and demonstrate leadership qualities within the McMaster community.

Typically available: 1 x $6,000

THE HATCH ENGINEERING SCHOLARSHIP

Established in 2020 by Hatch, a world-renowned engineering consulting firm.

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in a Chemical, Civil, Electrical, Mechanical or Materials Science Engineering program who attain high averages, demonstrate involvement in extracurricular or volunteer activities, and have an interest in pursuing an engineering consulting career.

Typically Available: Variable x $8,000

THE HAZELVIEW ENGINEERING SCHOLARSHIP

Established in 2023 by the Hazelview.

Requirements: To be awarded to undergraduate students enrolled in Level 3 or above in the Faculty of Engineering who attain high averages and demonstrate an interest in sustainability.

Typically available: 1 x $3,000

THE WILLIAM BARRY HILL SCHOLARSHIP

Established in 2022 by William Barry Hill, B.Eng. (Class of '66) and M.Eng. (Class of '68) in appreciation of the impact McMaster made on his life and career, and in recognition of his Mohawk heritage.

Requirements: To be awarded to undergraduate students enrolled in Level 3 or above in the Faculty of Engineering who identify as Indigenous and attain high averages.

Typically Available: 1 x $8,000

THE A.I. JOHNSON SCHOLARSHIP

Established in 1977 in memory of Dr. A.I. Johnson by his friends and former colleagues.

Requirements: To be awarded to a student in Level 4 of a program in Engineering and Management. Award to be based on distinguished academic performance during the student's undergraduate career. Consideration will also be given to noteworthy contribution in extracurricular activities.

Typically Available: 1 x $1,500

THE ROBERT J. KULPERGER SCHOLARSHIP

Established in 2015 by Robert Kulperger, B.Eng. Chemical (Class of '63), and Arlene Price McKay in memory of President Emeritus Harry Thode and Dean Emeritus John Hodgin, and in honour of Professor Emeritus Cameron Crowe.

Requirements: To be awarded to a student enrolled in Level 2 or above in a Chemical Engineering program and who, in the judgment of a Selection Committee, has demonstrated academic achievement, leadership on campus or in the community-at-large, and an interest in becoming an entrepreneur in the future.

Typically Available: 1 x $15,000

Applications may be submitted at the end of Levels 2 & 3 (& 4 if in a 5-year program).

THE LORNEVILLE EDI SCHOLARSHIP

Established in 2023 by Lorneville.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Engineering who self-identify as a member of an equity-deserving group and attain high averages.

Typically Available: 1 x $2,000

THE SIMON MCNALLY SCHOLARSHIP

Established in 1972 by S. McNally and Sons Limited, in honour of Simon McNally.

Requirements: One or two scholarships to be awarded to students enrolled in Level 2 of a program in Civil Engineering. Awards are based on scholarship and evidence of practical engineering experience and background.

Typically Available: 2 x $1,400

THE MOTOROLA SOFTWARE ENGINEERING SCHOLARSHIP

Established in 1999 by the Motorola Foundation.

Requirements: To be awarded to a student entering Level 3 in a Software Engineering program who, in the judgment of the Department of Computing and Software, has achieved notable academic standing, displayed strong communication skills, demonstrated leadership and involvement in extra-curricular activities.

Typically Available: 2 x $1,500

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION UNDERGRADUATE SCHOLARSHIPS

Established in 1961 by the Ontario Professional Engineers Foundation for Education.

Requirements: To be awarded to undergraduate students enrolled in a CEAB (Canadian Engineering Accreditation Board) accredited program in the Faculty of Engineering who demonstrate leadership qualities in professional affairs and involvement in extra-curricular activities.

Typically Available: 8 x $1,500

THE STANLEY ROBERTSON SCHOLARSHIP

Established in 2006 by LaDema Dorrine Robertson Macnab in memory of her father, Charles Stanley Robertson (Class of 1911), a scholar, an athlete and a volunteer.

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in the Faculty of Engineering who attain high averages and demonstrate qualities of leadership, service and/or participation in athletics and/or music.

Typically Available: 1 x $3,000

THE TINNERMAN PALNUT ENGINEERED PRODUCTS SCHOLARSHIP IN MECHANICAL ENGINEERING

Established in 2001 by Tinnerman Palnut Engineered Products.

Requirements: To be awarded to a student entering Level 2 of a Mechanical Engineering Program who, in the judgment of the Department of Mechanical Engineering, has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Typically Available: 1 x $3,500

THE LAWRENCE TSE SCHOLARSHIP IN ELECTRICAL AND COMPUTER ENGINEERING

Established in 2021 by Lawrence Tse, B.Eng. Electrical (Class of '81).

Requirements: To be awarded to undergraduate students entering Level 2 in an Electrical or Computer Engineering program who attain high averages and demonstrate leadership qualities on campus or in the community-at-large. The recipient may not hold another scholarship of equal or greater value.

Typically Available: To be determined annually to cover the equivalent of domestic tuition fees.

THE F.W. PAULIN SCHOLARSHIP

Established in 1981 by the Canadian Engineering and Contracting Co. Limited in honour of its founder.

Requirements: To be awarded to a student enrolled in Level 3 of the Civil Engineering program, or Level 4 of the Civil Engineering and Management program. Award is based on scholarship Fall-Winter Average of at least 9.5 and evidence of leadership, self-motivation, and practical aptitude appropriate for a future in the construction industry.

Typically Available: 1 x $1,500

THE PCL SCHOLARSHIP IN ENGINEERING AND MANAGEMENT

Established in 2010 by PCL to support and encourage academic excellence and creativity, a committed work ethic and service to the community.

Requirements: To be awarded to a student who has completed Level 3 of an Engineering and Management program and who, in the judgment of the Faculty of Engineering, has achieved notable academic standing and has made a significant contribution to university life through extra-curricular activities.

Typically Available: 1 x $1,000

THE VALE CANADA LTD. SCHOLARSHIP IN MATERIALS ENGINEERING

Established in 2000 by Inco Limited.

Requirements: To be awarded to a student entering Level 2 of the Materials Engineering, Materials Engineering and Management or Materials Engineering and Society program who, in the judgment of the Department of Materials Science and Engineering has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Typically Available: 1 x $2,500

THE WALTERS INC. SCHOLARSHIP

Established in 2024 by Walters Inc.

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in either Civil Engineering or Civil Engineering and Management who are specializing in Structural Engineering, attain high averages and demonstrate an exceptional aptitude/interest in steel.

Typically available: 2 x $7,500

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE HONOURS HEALTH SCIENCES PROGRAM SCHOLARSHIP

Established in 2004 by students, alumni, faculty, staff, and friends of the Honours Health Sciences Program in the Faculty of Health Sciences.

Requirements: To be awarded to undergraduate students in the Honours Health Sciences program who attain high averages and have made volunteer contributions within either the Hamilton and/or McMaster University communities.

Typically Available: 1 x $2,500

THE DR. GARTH BOULTER MEMORIAL AWARD

Established in 2007 by G. Stanley Boulter, B.A. (Class of '49) and Irma E. Boulter in memory of their son, Garth E. Boulter, Associate Professor of Obstetrics and Gynecology in the School of Medicine.

Requirements: A variable number to be awarded to students who have completed an overseas' clinical placement elective in Level 3 of the Midwifery program and who, in the judgment of the Midwifery Program, have demonstrated academic excellence, leadership and social awareness. Preference will be given to students who have completed their electives in Africa.

Typically Available: 1 x $4,000

THE ELIZABETH PETRA COOKE MEMORIAL SCHOLARSHIP

Established in 2006 in memory of Elizabeth Petra Cooke, B.Sc.N. (Class of '03).

Requirements: To be awarded to a student in a Post R.N. or Post R.P.N.

program who, in the judgment of the School of Nursing, has demonstrated a commitment to the nursing profession as a frontline healthcare provider and/or to mentoring nurses as they further their education.
Typically Available: 1 x $1,000

THE CLARA I. ELMAN SCHOLARSHIPS
Established in 2002 by Clara I. (Graham) Elman (Class of '46), faculty member of the School of Nursing from 1949 to 1953.
Requirements: A variable number of scholarships to be awarded to students who have completed at least Level 2 in a program in Nursing who, in the judgment of the School of Nursing, demonstrate academic excellence and a commitment to the patient nurse relationship.
Typically Available: 5 x $8,000

THE EXCELLENCE IN MIDWIFERY STUDENT LEADERSHIP SCHOLARSHIP
Established in 2020 by members of the midwifery community.
Requirements: To be awarded to undergraduate students enrolled in the Midwifery Education Program who identify as Indigenous or racialized, attain high averages, and demonstrates excellence in one of three areas:1. exemplary client care, 2. innovative community outreach, or 3. exceptional engagement in campus life.Students may only receive this award once. This award is open to second degree students.
Typically Available: 1 x $2,500

THE GLENN AND MANDY PAGE INDIGENOUS SCHOLARSHIP
Established in 2022 by Glenn and Mandy Page.
Requirements: To be awarded to undergraduate students enrolled in the Faculty of Health Sciences who identify as Indigenous and demonstrate leadership at McMaster University and in their community.
Typically Available: 1 x $3,000

THE DARREN LEE PRATT MEMORIAL AWARD FOR ACADEMIC/CLINICAL ACHIEVEMENT
Established in 2017 by Maria Pratt (Class of '98, 2004, & 2016), faculty member of the School of Nursing, in loving memory of her husband.
Requirements: To be awarded to an undergraduate student who has completed Level 2 or higher of a Nursing program who, in the judgment of the School of Nursing demonstrates academic excellence, an interest in Oncology nursing and commitment to patient and family-centered care.
Typically Available: 1 x $1,000

THE LORIE SCOTT NURSING SCHOLARSHIP
Established in 2016 by Lorie Scott, B.Sc.N. (Class of '79) CD.
Requirements: To be awarded to students in the School of Nursing who have completed at least Level 1 and who, in the judgment of the School of Nursing, have demonstrated a significant commitment to community through service, teaching, advocacy and/or health promotion in Canada. This award is open to second degree students.
Typically Available: 1 x $5,000

OPEN TO THE FACULTY OF HUMANITIES

THE CLASS OF '38 SCHOLARSHIP IN HONOUR OF AMELIA HALL
Established in 1985 to mark the fiftieth anniversary of the graduation of the Class of '38 and to commemorate the contribution of Amelia Hall, the distinguished actress, to theatre in Canada.
Requirements: To be awarded to one or two students in Theatre & Film Studies who, in the judgment of the School of the Arts, have attained notable academic achievement and demonstrated the ability to make a strong contribution to the study of dramatic performance.
Typically Available: 2 x $5,000

THE CLASS OF '43 GOLDEN ANNIVERSARY SCHOLARSHIP
Established by the Class of '43 in celebration of their 50th anniversary.
Requirements: To be awarded to the student who is enrolled in Level 3 or above of an Honours program in Theatre & Film Studies who, in the judgment of the School of the Arts, has achieved notable academic standing and has made a significant contribution to theatre on campus.
Typically Available: 3 x $1,350

THE MERRIAM SCHOOL OF MUSIC SCHOLARSHIP
Established in 2003 by the Merriam School of Music.
Requirements: To be awarded to an Honours Music student enrolled in Level 2 or above and who, in the judgment of the School of the Arts, has demonstrated good academic standing, excellent musicianship skills, a strong commitment to teaching and community service.
Typically Available: 2 x $1,000

THE ELAINE NARDOCCHIO MEMORIAL SCHOLARSHIP FUND
Established in 1998 by family, colleagues and many friends in memory of Dr. Elaine Nardocchio, a professor for over 23 years at McMaster University, Chair of the Department of French from 1990 to 1993 and President of the Canadian Federation for the Humanities from 1994 to 1996.
Requirements: To be awarded to an undergraduate student enrolled in a French program who, in the judgment of the Department of French, has shown a strong interest in computer skills as applied to the Humanities.
Typically Available: 2 x $250

THE NEWCOMBE PRIZE IN PEACE STUDIES
Established in 1991 in memory of Dr. Alan G. Newcombe (1923-1991) and Dr. Hanna Newcombe (1922-2011) who devoted their lives to Peace Studies and were co-founders, of the Canadian Peace Research and Education Association and the Peace Research Institute - Dundas.
Requirements: To be awarded to a student who, in the judgment of the Global Peace and Social Justice program, demonstrates leadership in extracurricular endeavours and high academic achievement.
Typically Available: 1 x $1,200

THE ROBERT NIXON SCHOLARSHIP
Established in 1991 by the Brant-Haldimand Liberal Association in honour of Dr. Robert Nixon (Class of '50, LL.D, '76).
Requirements: To be awarded to a student who, in the judgment of the Department of History, has demonstrated academic excellence and an active involvement in community life.
Typically Available: 1 x $650

THE MARGARET E. ORR AND EDWARD C. ALLEN PRIZE
Established in 2011 in memory of Margaret Elizabeth Orr and Edward Charles Allen.
Requirements: To be awarded to a student enrolled in a program in English who, in the judgment of the Department of English and Cultural Studies, has submitted an essay on post-colonial literature that demonstrates the highest degree of analytical skill and critical insight.
Typically Available: 1 x $1,500

THE GRAHAM RONALD TOOP SCHOLARSHIP
Established in 1989 in memory of Graham Toop (Class of '89) by family and friends.
Requirements: To be awarded to the student entering Level 4 of an Honours Philosophy program and who, in the judgment of the Department of Philosophy, has demonstrated leadership and influence in scholarly activities related to the field of philosophy.
Typically Available: 1 x $500

THE EDGAR LEE WARE MEMORIAL AWARD
Established in 2022 by Syrus Marcus Ware.
Requirements: To be awarded to undergraduate students enrolled in the School of the Arts who identify as Black, Indigenous, and/or racialized and demonstrate community involvement and leadership potential.
Typically Available: 1 x $3,000

OPEN TO THE FACULTY OF SCIENCE

THE CO-OPERATORS LIFE INSURANCE COMPANY SCHOLARSHIP
Established in 2022 by The Co-operators Life Insurance Company.
Requirements: To be awarded to undergraduate students enrolled in the Honours Actuarial and Financial Mathematics program who identify as members of an equity-deserving group and aspire to work in the insurance industry.

Typically Available: 1 x $4,000

THE HAMILTON INDUSTRIAL ENVIRONMENTAL SCHOLARSHIP IN SUSTAINABLE CHEMISTRY

Established in 2021 by the Hamilton Industrial Environmental Association in recognition of their objective to support Environmental Education and Awareness Programs for Post-Secondary schools in Hamilton.

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above of the Sustainable Chemistry program who graduated from a high school in the City of Hamilton, or the regions of Halton, Niagara, Brant, Haldimand, Norfolk, Wellington, or Waterloo, and demonstrate involvement in extracurricular or volunteer activities in their community.

Typically Available: 1 x $2,500

THE D. KEITH MACDONALD EARTH SCIENCES UNDERGRADUATE SCHOLARSHIP

Established in 2020 by D. Keith MacDonald (Hons. B.Sc., Magna Cum Laude, Class of 1980).

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above in an Earth and Environmental Sciences program who attain high averages, are Canadian Citizens, and who demonstrate a strong interest in studying Earth Sciences.

Typically Available: 2 x $5,000

THE EVA ELIZABETH AND LLOYD EDWARD MAY SCIENCE SCHOLARSHIP

Established in 2022 from the Estate of Eva Elizabeth May and Lloyd Edward May.

Requirements: To be awarded to undergraduate students enrolled in the Faculty of Science who self-identify as a member of an equity-deserving group and attain high averages.

Typically Available: 2 x $1,000

THE DONALD G. MCNABB SCHOLARSHIP

Established in 1989 in memory of Donald G. McNabb (Class of 1942) by friends, family and business associates.

Requirements: To be awarded to undergraduate students enrolled in Level 3 of an Honours program in Chemistry or Chemical Biology who attain high averages and demonstrate leadership, self-motivation, and practical aptitude appropriate for a future in the chemical industry.

Typically Available: 1 x $1,000

THE BETTY TAYLOR CAMPBELL SCHOLARSHIP

Established in 1998 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medallist in 1936 and 1990 inductee into the Athletics Hall of Fame.

Requirements: To be awarded to a student who has completed Level 1 in a program in Kinesiology and who, in the judgment of the Department of Kinesiology, demonstrates academic excellence and outstanding athletic ability. The award is renewable for up to three years provided the recipient maintains a Grade Point Average of 8.0.

Typically Available: 1 x $4,500 ($1,500 each year)

The recipient of this award is eligible to receive the corresponding donor bursary if financial need is demonstrated.

THE NANCY CAR MEMORIAL SCHOLARSHIP IN KINESIOLOGY

Established in 2001 in loving memory of Kinesiology student Nancy Car.

Requirements: To be awarded to a student entering Level 4 of Kinesiology who, in the judgment of the Faculty of Science, has attained notable academic standing and demonstrated leadership at McMaster University or in the community.

Typically Available: 1 x $600

THE ROSE HILL SCHOLARSHIPS

Established in 1985 by the alumni, faculty and staff of the School of Physical Education and Athletics as a tribute to Professor Rose Hill, long-time teacher, coach and administrator in the School.

Requirements: To be awarded to undergraduate students who have completed at least Level 2 in a Kinesiology program and who, in the judgment of the Department of Kinesiology, best demonstrate the philosophy of physical education espoused by Professor Hill throughout her career, namely, excellence in scholarship and leadership and participation in sport, dance or fitness.

Typically Available: 2 x $1,400 each

THE ERNEST ROBERT MACKENZIE KAY SCHOLARSHIPS

Established in 1999 by Ernest Robert MacKenzie Kay.

Requirements: To be awarded to undergraduate students in a program in Biology, Biochemistry, Chemical Biology or Chemistry who attain high averages and plan to continue in the field of medical research.

Typically Available: 9 x $5,000

THE PITCHER-RATFORD AWARDS

Established in 2000 by Bruce Ratford (Class of 1971) and Elda Ratford (Pitcher) (Class of 1971).

Requirements: To be awarded to undergraduate students enrolled in Level 2 or above of an Honours Environment & Society program who attain high averages and, in the judgment of the School of Earth, Environment & Society, have demonstrated qualities of leadership at McMaster or in the community.

Typically Available: 2 x $3,000 each

THE SCIENCE ALUMNI SCHOLARSHIPS

Established in 2001 by the Faculty of Science through the generosity of its alumni and friends.

Requirements: A variable number of scholarships to be awarded to students entering a Level 3 program in Science who, in the judgment of the Faculty of Science, have demonstrated outstanding academic achievement and leadership.

Typically Available: 3 x $1,000

THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL SCHOLARSHIPS

Established in 1973 by the South Ontario (formerly Niagara) Economic Development Council.

Requirements: To be awarded to undergraduate students in the Honours Environment & Society program who demonstrate interest and outstanding achievement in the areas of regional development and urban planning.

Typically Available: 2 x $2,300

THE VALE CANADA LTD. SCHOLARSHIP IN ENVIRONMENTAL SCIENCE

Established in 2000 by Inco Limited.

Requirements: To be awarded to a student entering Level 3, 4 (or Year 5 of a Co-op program) in the Honours Earth and Environmental Sciences program who, in the judgment of the School of Earth, Environment & Society has achieved notable academic standing and demonstrated qualities of leadership at McMaster or in the community.

Typically Available: 1 x $2,500

THE WALKER/MIDDLETON FIELDWORK SCHOLARSHIP

Established in 2010 in honour of Gerard Middleton and Roger Walker by a generation of grateful students who studied under them from the mid-1960s until 2000.

Requirements: To be awarded to students who are participating in field courses or research undertaken as part of the students' program of study, who have completed at least Level 2 of an Honours B.Sc. program in the School of Earth, Environment & Society and who, in the judgment of the School, have demonstrated notable academic standing.

Typically Available: 1 x $1000

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE BARBARA AND RONALD BAYNE AWARD

Established in 2001 by Barbara and Ronald Bayne to provide support to students who are engaged in practical learning experience as part of their undergraduate studies.

Requirements: To be awarded to a student who has completed at least Level 3 in an Honours program in the Department of Health, Aging and Society, has demonstrated outstanding performance in a field experience course and who, in the judgment of the Department, has demonstrated notable academic achievement and qualities of leadership at McMaster or in the community.

Typically Available: 1 x $1,500

THE MIKE BRAGA SCHOLARSHIP

Established in 2013 by Mike Braga (Class of '01).

Requirements: To be awarded to a student in the Faculty of Social Sciences who has demonstrated notable academic achievement and who, in the judgment of the Faculty, demonstrates a commitment to improving his or her community.

Typically Available: 1 x $1,000

THE CLASS OF '50 SCHOLARSHIP IN HONOURS ECONOMICS

Established in 1982 by members of the Class of 1950 who graduated in Honours Economics.

Requirements: To be awarded to the student who has completed at least Level 2 of an Honours program in Economics, and who, in the judgment of the Department of Economics, has attained a high Fall-Winter Average and has demonstrated leadership in undergraduate extracurricular activities.

Typically Available: 1 x $1,500

THE TONY DEAN SCHOLARSHIP IN WORK AND LABOUR STUDIES

Established in 2009 by The Association of Management, Administrative and Professional Crown Employees of Ontario (AMAPCEO) in honour of Mr. Tony Dean, M.A. (Class of '80) for his distinguished thirty-year career in public service in the Province of Ontario.

Requirements: To be awarded to students enrolled in Level 2 or above of the Work and Labour Studies program who have attained notable academic standing and have demonstrated qualities of leadership at McMaster University or in the community. Preference will be given to a student who displays a commitment to social justice. Students may receive this award only once.

Typically Available: 1 x $1,000

THE BRUCE M. HAMILTON AWARD

Established in 1999 by Bruce M. Hamilton.

Requirements: To be awarded to a student graduating from the Faculty of Social Sciences who, in the judgment of the Faculty of Social Sciences, has made a significant contribution through extra-curricular activities to the benefit of McMaster University or the local community.

Typically Available: 1 x $1,000

THE LIANNE MARKS SCHOLARSHIP

Established by her family, in 1980 as a bursary and in 1985 as a scholarship, in honour of Lianne Marks, a student at McMaster University (1977-80).

Requirements: To be awarded to a student enrolled in Level 3 of an Honours program in Sociology and who, in the judgment of the Department of Sociology, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in activities other than sports.

Typically Available: 6 x $900

THE PIONEER ENERGY LP SCHOLARSHIP IN GERONTOLOGY

Established in 1988.

Requirements: To be awarded to students enrolled in a program in the Department of Health, Aging and Society, who in the judgment of the Department, demonstrate leadership in the field of Gerontology.

Typically Available: 1 x $4,500

THE PIONEER ENERGY LP PRIZE IN AGING AND SOCIETY

Established in 1990.

Requirements: To be awarded to a student in an Aging and Society program who, in the judgment of the Department of Health, Aging and Society, has achieved notable academic standing, and demonstrates practical aptitude for a career in health care of the elderly.

Typically Available: 1 x $350

THE ELLEN BOUCHARD RYAN SCHOLARSHIP

Established in 2000 by the McMaster Centre for Gerontological Studies, and supported by family, in recognition of Dr. Ellen Bouchard Ryan's outstanding contribution to the field of aging.

Requirements: To be awarded to a student who, in the judgment of the Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in age related community activities.

Typically Available: 2 x $400

THE LARRY SEFTON SCHOLARSHIPS

Established in 1985 by the Hamilton Steelworkers Area Council in memory of Larry Sefton, area supervisor (1946-53) and director of District 6 (1953-73) of the United Steelworkers of America, to recognize his commitment to education, to working people, to unions and to the City of Hamilton.

Requirements: Three scholarships to be awarded to students in the Work and Labour Studies program who, in the judgment of the Committee of Instruction for Work and Labour Studies, have achieved notable standing in any level.

Typically Available: 2 x $800

Part-Time In-Course Awards

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.

15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
18. In-Course Awards are typically disbursed no later than the end of September.
19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit the award.
23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, Aid & Awards.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

Automatically Assessed

- completed common application submitted through AwardSpring is required for nominated awards.

OPEN TO TWO OR MORE FACULTIES

THE ALUMNI ASSOCIATION SCHOLARSHIP

Established in 1974 by the McMaster University Alumni Association and later augmented by bequest of Harold E. Amy.
Requirements: One scholarship to be awarded to a part-time student who has attained the highest Grade Point Average at the most recent review.
Typically Available: 1 x $475

THE MAPS GOLD MEDAL

Established in 1996 by the McMaster Association of Part-time Students.
Requirements: To be awarded to the graduating student completing studies primarily on a part-time basis and who attains the highest Grade Point Average.
Typically Available: 1 x Medal

THE WILLIAM J. MCCALLION SCHOLARSHIPS

Established in 1984 in honour of Professor McCallion, B.A. (Class of '43), M.A. (Class of '46), first Dean of the School of Adult Education from 1970 to 1978, in recognition of his outstanding contribution to adult education and to the Department of Mathematical Sciences during 41 years of service.
Requirements: To be awarded to graduating students who have completed a program primarily on a part-time basis with high averages.
Typically Available: 2 x $800

THE PART-TIME STUDENTS SCHOLARSHIPS

Established in 2019 by McMaster University.
Requirements: To be awarded to part-time students enrolled in any undergraduate degree program on the basis of academic and, in some cases, other forms of earned merit.
Typically Available: 1 x $800

OPEN TO THE FACULTY OF HUMANITIES

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY FOR PART-TIME STUDENTS

Established in 1998 by former students, colleagues and friends of Dr. F. W. Waters, Professor from 1935 to 1959.
Requirements: To be awarded to a part-time student in a Philosophy program who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement. No student will be eligible to receive this award more than once.
Typically Available: 1 x $250

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE RUTH LANDES PRIZE

Established in 1982 in honour of Professor Ruth Landes for her outstanding contributions to the Department of Anthropology.
Requirements: To be awarded to graduating students who have completed a program in Anthropology primarily on a part-time basis with high averages.
Typically Available: 1 x $100

THE POLITICAL SCIENCE PRIZE

Established in 1982.
Requirements: To be awarded to graduating students who have completed a program in Political Science primarily on a part-time basis with high averages.
Typically Available: 1 x $200

THE RELIGIOUS STUDIES PRIZES

Established in 1982.
Requirements: To be awarded to graduating students who have completed a program in Religious Studies primarily on a part-time basis with high averages.
Typically Available: 2 x $100 each

THE JACK RICHARDSON MEMORIAL SCHOLARSHIP

Established in 2002 in memory of Jack Richardson by family, friends and colleagues.
Requirements: To be awarded to a part-time student who has completed at least Level 2 in an Honours Sociology program and who attains the highest Grade Point Average at the most recent review.
Typically Available: 2 x $400

THE SOCIOLOGY PRIZES

Established in 1982.

Requirements: To be awarded to graduating students who have completed a program in Sociology primarily on a part-time basis with high averages.

Typically Available: 2 x $100 each

THE ANNE STEIN MEMORIAL PRIZE

Established in 1981.

Requirements: To be awarded to the part-time student who successfully completes SOCWORK 3DD6 A/B S and attains the highest grade in SOCWORK 3D06 A/B S in the same term.

Typically Available: 1 x $125

Courses must be taken during the Fall/Winter terms.

THE DAVID WINCH MEMORIAL SCHOLARSHIP

Established in 2003 in memory of Professor David Winch by his family, friends and colleagues.

Requirements: To be awarded to a part-time student in the Faculty of Social Sciences who has completed at least Level 2 and who, in the judgment of the Faculty, has demonstrated notable academic achievement.

Typically Available: 1 x $500

Awards by Application

OPEN TO TWO OR MORE FACULTIES

THE GWEN GEORGE MEDAL

Established in 2001 in loving memory of Gwen George by her family.

Requirements: To be awarded to a part-time student who has completed at least Level 1 of any program and who, in the judgment of a selection committee, has achieved notable academic standing and has demonstrated qualities of leadership and service to McMaster University and/or the Hamilton-Wentworth, surrounding or world communities.

Typically Available: 1 x $400 and a Medal

Applications may be submitted at the end of Levels I, II and III (IV if in a five-year program). Students must have completed a minimum of 18 graded units to be eligible.

THE CONNIE O'SHAUGHNESSY MEMORIAL PRIZE

Established in 1988 by family, friends and associates of Connie O'Shaughnessy (Class of '88), a part-time student who chose to return to complete her degree on a full time basis.

Requirements: To be awarded to a student who has completed at least Level 1 and who, in the judgment of a Selection Committee has made a significant contribution to the University life of part-time students.

Typically Available: 2 x $425

THE GORDON RAYMOND COMMUNITY CONTRIBUTION AWARD

Established in 1996 by the McMaster Association of Part-time Students and other friends and colleagues in honour of Gord Raymond in recognition of his 27 years of service to McMaster University including 15 years as Coordinator of Part-time Degree Studies.

Requirements: To be awarded to the part-time student who, in the judgment of a selection committee, demonstrates enthusiasm for life-long learning and/or had an influence on the lives of part-time students.

Typically Available: 1

In Course Awards-Second Degree Eligible

In-Course and Renewal Award Regulations

1. In-Course Awards are monetary and non-monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit. Non-monetary awards such as medals and books as well as monetary awards of nominal value (currently $100 or less) are called prizes.
2. In-Course Awards are available to full-time and part-time students enrolled in an undergraduate degree program (excluding the Physician Assistant and M.D. Programs), at the time of award application and selection, who are returning to McMaster to continue their studies.
3. In-Course Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. In-Course Awards requiring part-time status are available to students who are not enrolled full-time in the fall and/or winter terms. In addition, true part-time awards are only available to students who have completed at least 50% of all units attempted at McMaster on a part-time basis.
5. In-Course Awards are available to all domestic and international students.
6. In-Course Awards are not available to second degree students unless the terms of a donor award specify eligibility and they have not received the award previously.
7. In-Course Awards are not available to students in their graduating term.
8. In-Course Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including, but not limited to, submitting an application.
9. In-Course Awards requiring an application that are determined by Cumulative Grade Point Average require a minimum Cumulative Grade Point Average of 8.0 on at least 18 graded units, while those determined by Fall-Winter Average require a minimum Fall-Winter Average of 9.5 on at least 18 graded units.
10. In-Course Awards adjudicated without need of an application that are determined by Cumulative Grade Point Average require a minimum 8.0 on at least 24 graded units, while those determined by Fall-Winter Average require a minimum 9.5 on at least 24 graded units.
11. For nursing specific In-Course awards, due to the structure of the program, they are open to full-time and part-time course loads with a minimum of 24 Cumulative Units.
12. Available averages, units upon which averages are calculated, program level, and enrolled units, may be used to break any ties in an award competition.
13. To be considered for an In-Course Award by application or by nomination, students must submit a complete application by the specified deadline date.
14. In-Course Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. Some In-Course Awards are renewable.
16. Entrance, Indigenous Entrance, and In-Course Award renewals determined by Cumulative Grade Point Average or Fall-Winter Average require a minimum 8.0 on at least 18 graded units.
17. All In-Course Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
18. In-Course Awards are typically disbursed no later than the end of September.
19. In-Course Awards will be disbursed if the recipient continues to be enrolled in a McMaster degree program, or a specific McMaster program, when explicitly required by the terms of the award, or the student's record reflects they are on exchange, on letter of permission, or participating in a coop or internship opportunity at McMaster University.
20. In-Course Award recipients will have their awards noted on their University transcripts. Entrance and In-Course renewals are not noted on transcripts.
21. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of an In-Course Award or Entrance or In-Course Award renewal. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
22. If a student is approved to graduate or transfers to graduate in the fall, after the awarding decision and/or disbursement is made, the student will forfeit

the award.

23. Students withdrawing from courses without failure by default will forfeit their In-Course Award or Entrance or In-Course Award renewal.
24. Students who forfeit their In-Course award will have their award cancelled and their transcript notation removed if forfeited in first year of payment only. Students must return the In-Course Award or Entrance or In-Course Award renewal funding to their McMaster Student Account.
25. Forfeiture of a renewable Entrance or In-Course Award also cancels all future instalments of the award.
26. Students wishing to defer the stated value of an In-Course Award or Entrance or In-Course Award renewal to the next academic year should make the request in writing to the Office of the Registrar, Aid & Awards. Approval is not automatic and deferments are not normally granted for more than one academic year.
27. Students holding renewable Entrance or In-Course Awards who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer courses and who wish to employ the benefits of their renewable Entrance and/or In-Course Awards to defray the tuition and compulsory fees for those courses should make the request in writing to the Office of the Registrar, Aid & Awards.
28. The University may choose not to grant an In-Course Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
29. The University may remove specific In-Course Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of In-Course Awards (e.g. donor funds).
30. In-Course Awards supported by donor funds may have additional eligibility and renewal requirements.

Automatically Assessed

- completed common application submitted through AwardSpring is required for nominated awards.

OPEN TO TWO OR MORE FACULTIES

THE JAMES ROBERTSON CARRUTHERS MEMORIAL PRIZE

Established in 1984 in memory of James Robertson Carruthers (Class of '74) by his family and friends.

Requirements: To be awarded to the student who, in the judgment of the Department of History, attains notable standing in HISTORY 2R03 or HISTORY 2RR3 (United States History).

Typically Available: 1 x $425

THE ENVIRONMENTAL ISSUES PRIZE

Established in 1993 by the Regional Municipality of Hamilton-Wentworth in recognition of Metal Recovery Industries and Philip Environmental, Industrial Filter Fabrics Ltd., and Laidlaw Waste Systems.

Requirements: To be awarded to the student who attains the highest grade in GEOG 4MT6 A/B (or GEO 4R06).

Typically Available: 1 x $100

THE NEIL FORSYTH PRIZE

Established in 1992 by The Steel Founders' Society of America in honour of Neil Forsyth, president of the organization in 1990 and 1991, in recognition of his outstanding service to the steel castings industry.

Requirements: To be awarded to the student who attains the highest grade in MATLS 3E04.

Typically Available: 1 x $120

THE GILMOUR MEMORIAL PRIZE

Established in 1927 by Year '27, in memory of Dr. Joseph Leeming Gilmour, Honorary President of their first year in 1923, and subsequently enlarged by his children.

Requirements: To be awarded to the student who attains the highest standing in POLSCI 4D06 A/B RELIGST 2HH3.

Typically Available: 1 x $125

THE LATIN PRIZE

Established in 1987 by Dr. John B. Clinard.

Requirements: To be awarded to a student who, in the judgment of the Department of Classics, has demonstrated notable achievement in LATIN 1Z03 and LATIN 1ZZ3.

Typically Available: 1 x $150

THE PROVOST'S HONOUR ROLL MEDAL

Established in 2005.

Requirements: To be awarded to students named to the Provost's Honour Roll.

Typically Available: Variable number of medals

THE UNIVERSITY PRIZES FOR SPECIAL ACHIEVEMENT

Established in 1973.

Requirements: Two prizes to be awarded in each Faculty and other academic units to individual students who exhibit exceptional skill and originality in a creative project (such as an essay, poem, sculpture, mathematical or scientific problem, engineering design) or a related series of such projects.

Typically Available: 2 per Faculty x $500

THE R.M. WILES MEMORIAL BOOK PRIZE

Established in 1975 in memory of Professor Roy McKeen Wiles by his friends and colleagues.

Requirements: To be awarded to the student who, in the judgment of the Department of English and Cultural Studies, has written the best essay on a topic relating to English literature of the period 1660-1800.

Typically Available: 1 x $250 for books

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE DR. GARTH BOULTER MEMORIAL AWARD

Established in 2007 by G. Stanley Boulter, B.A. (Class of '49) and Irma E. Boulter in memory of their son, Garth E. Boulter, Associate Professor of Obstetrics and Gynecology in the School of Medicine.

Requirements: A variable number to be awarded to students who have completed an overseas' clinical placement elective in Level 3 of the Midwifery program and who, in the judgment of the Midwifery Program, have demonstrated academic excellence, leadership and social awareness. Preference will be given to students who have completed their electives in Africa.

Typically Available: 11 x $1,000

THE CLASS OF 1966 NURSING SCHOLARSHIP

Established in 2012 by the School of Nursing, Class of '66.

Requirements: One scholarship to be awarded to a student in the School of Nursing who, in the judgment of the School of Nursing, has demonstrated outstanding academic achievement in any level.

Typically Available: 1 x $1,000

THE EXCELLENCE IN MIDWIFERY STUDENT LEADERSHIP SCHOLARSHIP

Established in 2020 by members of the midwifery community.

Requirements: To be awarded to undergraduate students enrolled in the Midwifery Education Program who identify as Indigenous or racialized, attain high averages, and demonstrate excellence in one of three areas: 1. exemplary client care, 2. innovative community outreach, or 3. exceptional engagement in campus life. Students may only receive this award once. This award is open to second degree students.

Typically Available: 1 x $2,500

THE HUTTON KAUFMAN MIDWIFERY SCHOLARSHIP

Established in 2018 by clients, colleagues, friends, and family of Dr. Eileen Hutton in celebration of her retirement and to recognize her high impact career. This award recognizes the profound influence of both
Dr. Hutton, assistant dean of the Midwifery Education Program at McMaster from 2007-2018 and of founding assistant dean of the program, Dr. Karyn Kaufman who served from 1993-2006. Together with their peers, these

two luminaries paved the way for midwifery care, midwifery education and midwifery research in Canada.
Requirements: To be awarded to undergraduate students, including those taking a second degree, enrolled in Level 3 of the Midwifery Education Program who attain high averages.
Typically Available: 1 x $1,500

THE LINDA NASH BSCN MEMORIAL SCHOLARSHIP

Established in 2024 by Julie, Melanie, and Stephen Nash in memory of Linda Nash.
Requirements: To be awarded to undergraduate students in their graduating year of any Nursing program (BScN), who are Canadian Citizens, who attain high averages and demonstrate compassion toward patients in the healthcare environment. This award is eligible to second degree students.
Typically Available: 1 x $2,000

THE LORIE SCOTT NURSING SCHOLARSHIP

Established in 2016 by Lorie Scott, B.Sc.N. (Class of '79) CD.
Requirements: To be awarded to students in the School of Nursing who have completed at least Level I and who, in the judgment of the School of Nursing, have demonstrated a significant commitment to community through service, teaching, advocacy and/or health promotion in Canada. This award is open to second degree students.
Typically Available: 1 x $5,000

THE CORELENE HELEN TOSTEVIN SCHOLARSHIPS

Established in 1998 by bequest of Corelene Tostevin.
Requirements: To be awarded to students enrolled in an accelerated BScN program and who, in the judgment of the School of Nursing, have demonstrated notable academic achievement.
Typically Available: 5 x $250

OPEN TO THE FACULTY OF HUMANITIES

THE COMPARATIVE LITERATURE PRIZE

Established in 1988.
Requirements: To be awarded to a student who, in the judgment of the Department of English and Cultural Studies, has achieved notable standing in Level 2 comparative literary studies courses.
Typically Available: 1 x $250

THE CRANSTON PRIZES

Established in 1958 by William H. Cranston of Midland in honour of his parents, J. Herbert Cranston (Class of '05) and Eva Wilkins Cranston (Class of '07).
Requirements: Two prizes to be awarded for excellence in the study of Canadian literature: (a) one for the highest grade in ENGLISH 2G06 A/B, and (b) one for the highest grade in ENGLISH 2C03.
Typically Available: 2 x $175 each

THE ELEANOR DORNBUSH MARPLES PRIZE IN ART HISTORY

Established in 1985 by Mrs. Barbara Niedermeier and her family in memory of her sister.
Requirements: To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated outstanding achievement.
Typically Available: 2 x $175

THE ELEANOR DORNBUSH MARPLES PRIZE IN THEATRE & FILM STUDIES

Established in 1987 by Vaughan W. Marples in memory of his wife.
Requirements: To be awarded to a student in Level 2 of a Theatre & Film program who, in the judgment of the School of the Arts, has achieved academic excellence.
Typically Available: 1 x $125

THE H.W. MCCREADY PRIZE IN BRITISH HISTORY

Established in 1981 in memory of Professor H.W. McCready, a member of the Department of History from 1943 to 1975, by former students, colleagues, and friends.
Requirements: To be awarded to a Level 2 student who, in the judgment of the Department of History, attains notable standing in British History courses.
Typically Available: 1 x $100

THE NOEL SANDUSKY MEMORIAL PRIZE

Established in 1994 by family and friends in memory of Noel Sandusky.
Requirements: To be awarded to a student who has completed Level 1 and an additional 30 - 45 units of a program in History who, in the judgment of the Department of History, attains notable academic standing in at least nine units of History courses.
Typically Available: 1 x $150 for books

THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY

Established in 1983 in memory of Larry P. Sayers (Class of '82) by his friends.
Requirements: To be awarded to the student who, in the judgment of the Department of History, has demonstrated outstanding achievement in at least six units of courses work in East Asian history.
Typically Available: 1 x $275

THE JOHN TOTH MEMORIAL PRIZE

Established in 1983 in memory of John Toth by his friends.
Requirements: To be awarded to the student who attains the highest average in any six units of Level 3 or 4 Latin courses.
Typically Available: 1 x $50

THE JOHN H. TRUEMAN SCHOLARSHIP

Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University.
Requirements: To be awarded to the student who has completed Level 1 and who, in the judgment of the Department of History, has achieved notable academic standing in medieval history.
Typically Available: 1 x $250

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE CITIZEN ACTION GROUP AWARD IN MEMORY OF HARRY PENNY

Established in 1984 by the Citizen Action Group, Hamilton, to honour Professor Harry L. Penny, founding Director of the School of Social Work and Board Member of Citizen Action Group.
Requirements: To be awarded to the student in a program in Social Work who achieves the highest grade in SOCWORK 4O03.
Typically Available: 1 x $1,000

THE SAM LAWRENCE PRIZE

Established in 1957 by the East Hamilton Independent Labour Party C.C.F. Club in honour of Sam Lawrence.
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses in labour economics.
Typically Available: 1 x $200

THE MACGIBBON SCHOLARSHIP

Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08).
Requirements: To be awarded to the student in a program in Economics who, in the judgment of the Department of Economics, stands highest in courses in economic history.
Typically Available: 1 x $500

THE WILLIAM MACKENZIE MEMORIAL PRIZE

Established in 1977 in memory of Professor William MacKenzie by his friends and colleagues.
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in either ECON 3T03 (Economic Development: Agriculture and Population) or ECON 2F03 (Globalization and Economic Development) or, in exceptional circumstances, for work in a related area.
Typically Available: 1 x $425

THE AUDREY EVELYN MEPHAM AWARD

Established in 2001 by Gordon W. Mepham in loving memory of his wife Audrey Evelyn Mepham.

Requirements: To be awarded to a student graduating from an Honours program in the Department of Health, Aging and Society who, in the judgment of the Department of Health, Aging and Society, has demonstrated notable academic achievement. Preference will be given to a student who has completed a thesis or course paper on issues relating to Alzheimer's disease.
Typically Available: 3 x $5,000

THE KENNETH W. TAYLOR BOOK PRIZE

Established in 1976 by his children in memory of Dr. Kenneth W. Taylor (Class of '21), LL.D. (Class of '50).
Requirements: To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses within the areas of monetary economics and financial institutions, and of public finance.
Typically Available: 2 x $100 for books

THE MELINDA WAPSHAW ACHIEVEMENT AWARD

Established in 1993 by the Labour Studies Student Association and the Labour Studies Program.
Requirements: To be awarded to a student who has completed Level 1 and an additional 60 - 75 units of an Honours Program in Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.
Typically Available: 1 x $300

THE RALPH WEEKES SCHOLARSHIP

Established in 1994 by the Investors Group Financial Services to recognize the accomplishments of Ralph Weekes (Class of '73).
Requirements: To be awarded to a student enrolled in a program in Economics who, in the judgment of the Department of Economics, has attained notable standing. Preference to be given to a student pursuing studies on a part-time basis.
Typically Available: 1 x $800

Awards by Application

OPEN TO TWO OR MORE FACULTIES

THE ACHIEVEMENT AWARDS OF EXCELLENCE

Established in 1998.
Requirements: A variable number of scholarships to be awarded to students who, in the judgment of the *Student Accessibility Services (SAS)*, demonstrate outstanding academic achievement. Preference will be given to first-degree students. Students who wish to be considered for this award must be enrolled with the *Student Accessibility Services (SAS)*. Applications may be submitted at the end of Levels I, II, III & IV (or V if in a 5-year program).
Typically Available: 1 x $800

THE JOHN D. MCNIE ACHIEVEMENT AWARD OF EXCELLENCE

Established in 2001 by David O. Davis in honour of John D. McNie.
University salaried pension plan who have demonstrated outstanding academic achievement.
Requirements: To be awarded to a student with a visual impairment who, in the judgment of the *Student Accessibility Services (SAS)*, demonstrates notable academic achievement.
Typically Available: 2 x $800
Students who wish to be considered for this award must be enrolled with *Student Accessibility Services (SAS)*.

THE CONNIE O'SHAUGHNESSY MEMORIAL PRIZE

Established in 1988 by family, friends and associates of Connie O'Shaughnessy (Class of '88), a part-time student who chose to return to complete her degree on a full time basis.
Requirements: To be awarded to a student who has completed at least Level 1 and who, in the judgment of a Selection Committee has made a significant contribution to the University life of part-time students.
Typically Available: 2 x $425

THE DRS. JOLIE RINGASH AND GLEN BANDIERA RENAISSANCE AWARD

Established in 2012 by Drs. Jolie Ringash and Glen Bandiera. The award, with its emphasis on experiential learning, is intended to create transformative opportunities for students from all Faculties and programs, from undergraduate to graduate and professional.
Requirements: The recipient of the award shall be an individual who wishes to engage in a 4-12 month, self-directed, enrichment experience outside his/her chosen program of study, and who wishes to explore a project of personal significance that will amplify the recipient's University experience while engaging in experiential learning at home or abroad.
Typically Available: 1 x $25,000

OPEN TO THE FACULTY OF SOCIAL SCIENCES

THE BARBARA AND RONALD BAYNE AWARD

Established in 2001 by Barbara and Ronald Bayne to provide support to students who are engaged in practical learning experience as part of their undergraduate studies.
Requirements: To be awarded to a student who has completed at least Level 3 in an Honours program in the Department of Health, Aging and Society, has demonstrated outstanding performance in a field experience course and who, in the judgment of the Department, has demonstrated notable academic achievement and qualities of leadership at McMaster or in the community.
Typically Available: 1 x $750

The Ellen Bouchard Ryan Scholarship

Established in 2000 by the McMaster Centre for Gerontological Studies, and supported by family, in recognition of Dr. Ellen Bouchard Ryan's outstanding contribution to the field of aging.
Requirements: To be awarded to a student who, in the judgment of the Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in ages related community activities.
Typically Available: 2 x $400

THE LARRY SEFTON SCHOLARSHIPS

Established in 1985 by the Hamilton Steelworkers Area Council in memory of Larry Sefton, area supervisor (1946-53) and director of District 6 (1953-73) of the United Steelworkers of America, to recognize his commitment to education, to working people, to unions and to the City of Hamilton.
Requirements: Three scholarships to be awarded to students in the Labour Studies program who, in the judgment of the Committee of Instruction for Labour Studies, have achieved notable standing in any level.
Typically Available: 3 x $500 each

OPEN TO THE FACULTY OF HEALTH SCIENCES

THE JANET MCKNIGHT AWARD

Established in 1994 by faculty, friends and students in memory of Janet McKnight, beloved colleague and teacher, a recognized expert in educational methodology and small-group, problem-based learning.
Requirements: To be awarded to a student entering Level 4 of a program in Nursing who, in the judgment of the School of Nursing has demonstrated notable academic achievement and leadership in clinical and educational aspects of gerontology or, problem based, self-directed learning in nursing education.
Typically Available: 2 x $600

THE LINDA NASH BSCN MEMORIAL SCHOLARSHIP

Established in 2024 by Julie, Melanie, and Stephen Nash in memory of Linda Nash.
Requirements: To be awarded to students in their graduating year of any Nursing program (BScN), who are Canadian Citizens, who attain high averages and demonstrate compassion toward patients in the healthcare environment. This award is eligible to second degree students.
Typically available: 2 x $2,000

THE MCMASTER NURSING ALUMNI MEMORIAL PRIZE

Established in 1984 and augmented in 2001 by the McMaster Nursing Alumni Branch to recognize graduates from the McMaster University School of Nursing.

Requirements: To be awarded to a student who, in the judgment of the School of Nursing, has demonstrated leadership while participating in undergraduate activities.

Typically Available: 1 x $300

THE GRACE SENRA-FONTES MEMORIAL PRIZE

Established in 1989 by the graduating class (Class of '88) in association with the McMaster University Nursing Society and the McMaster Nursing Alumni Executive in memory of Grace Senra-Fontes (Class of '88) of Toronto.

Requirements: To be awarded to a student in Level 3 or 4 of the Nursing program and who, in the judgment of the School of Nursing, best demonstrates excellence in scholarship and leadership, and has served as a valuable role model for those qualities deemed important to success in a nursing career. Preference will be given to students enrolled in Level 4 of the Nursing Program.

Typically Available: 1 x $250

Awards for Physician Assistant Education Program

THE SCHROEDER FOUNDATION PHYSICIAN ASSISTANT SCHOLARSHIP

Established in 2024 by the Schroeder Foundation.

Requirements: To be awarded to undergraduate students enrolled in the Physician Assistant program. This scholarship is open to second degree students.

Typically available: 5 x $2,000

Awards for the Michael G. DeGroote School of Medicine

Michael G. DeGroote School of Medicine Award Regulations

1. M.D. Awards are monetary awards allocated on the basis of specific criteria, which may include a minimum expectation of academic standing, or earned merit.
2. M.D. Awards are available to students in good standing enrolled in the M.D. Program.
3. M.D. Awards are available to students who are Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada.
4. Students who are not Canadian Citizens, Permanent Residents, Convention Refugees or Protected Persons of Canada are not eligible for M.D. Awards.
5. M.D. Program students may receive more than one M.D. Award up to the amount for which they are eligible as determined by the M.D. Program Office.
6. M.D. Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements, including but not limited to, submitting an application.
7. To be considered for an M.D. Award that is a named donor award, students must submit a completed application by the specified deadline date.
8. All M.D. Award applications are evaluated for eligibility, and reviewed and ranked according to specific criteria. A selection committee may be struck depending on the award and donor requirements.
9. Students must be enrolled in the M.D. Program to have the M.D. Award payment processed.
10. If an M.D. Award is renewable, students must meet the renewal requirements specified in the award terms to receive a renewal payment.
11. All M.D. Award payments are disbursed through the McMaster Student Account and are applied to outstanding charges. A few exceptions to this regulation may be approved by the M.D. Program Office.
12. All M.D. Awards are typically disbursed no later than the end of November.
13. Forfeiture of a renewable M.D. Award also cancels all future instalments of the award.
14. Change in course load may result in forfeiture or adjustment in the value of the M.D. Award. Students are advised to consult with their M.D. Program Office prior to making any changes to their course load.
15. Students who withdraw or take a leave of absence from the program may see an adjustment in the value of their M.D. Award or see the full amount returned to the University.
16. Any adjustment made to a student's account, in order to return all or a portion of an M.D. Award to the University, will consider the balance available at the time of the adjustment and may put a student's account into deficit.
17. The University may choose not to grant an M.D. Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools for awards by application, where complete applications have not been received.
18. The University may remove specific M.D. Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of M.D. Awards (e.g. donor funds).
19. M.D. Awards supported by donor funds may have additional eligibility requirements.

Awards for the Michael G. DeGroote School of Medicine

Automatically Assessed

THE DR. ROBERT CHU MEMORIAL AWARD

Established in 2017 by Mr. Terrence Donnelly in memory of the late Dr. Robert Chu.

Requirements:To be awarded to a graduating student in the Michael G. DeGroote School of Medicine who is pursuing a residency program in radiology. To be awarded annually by the Faculty of Health Sciences on the recommendation of the Dean and Vice-President (or delegate) and the Chair of the Department of Radiology (or delegate).

Awards by Application

THE JAISAL CHAUHAN RESEARCH BOOK AWARD

Established in 2015 by medical professionals in the Niagara region.

Requirements: To be awarded to a student from the Niagara Regional Campus of the Michael G. DeGroote School of Medicine who, in the judgment of the Assistant Dean of the Niagara Regional Campus, has demonstrated inspiring leadership during their undergraduate medical program; exceeded expectations of medical students as researchers; contributed to a successful quality improvement project in health care.

Typically Available: 1 x $500

THE CANADIAN MEDICAL ASSOCIATION 150TH ANNIVERSARY AWARD

Established in 2017 by the Canadian Medical Association Foundation in honour of the CMA's 150th anniversary.

Requirements: To be awarded to a student enrolled in the Michael G. DeGroote School of Medicine, and is Canadian citizen, permanent resident, or person with protected/refugee status. The Award will be given to students who demonstrate values of medical professionalism, including: honesty and

integrity, respect, responsibility and accountability, commitment to self-improvement and collaboration. Preference may be given to members of the Canadian Medical Association.
Typically Available: 1 x $15,000

THE DRS. JOLIE RINGASH AND GLEN BANDIERA RENAISSANCE AWARD
Established in 2012 by Drs. Jolie Ringash and Glen Bandiera. The award, with its emphasis on experiential learning, is intended to create transformative opportunities for students from all Faculties and programs, from undergraduate to graduate and professional.
Requirements: The recipient of the award shall be an individual who wishes to engage in a 4-12 month, self-directed, enrichment experience outside his/her chosen program of study, and who wishes to explore a project of personal significance that will amplify the recipient's University experience while engaging in experiential learning at home or abroad.
Typically Available: 1 x $25,000

Travel and Exchange Awards

Travel and Exchange Award Regulations

1. Travel and Exchange Awards are monetary awards allocated on the basis of academic standing and, in some cases, other forms of earned merit.
2. Travel and Exchange Awards are available to full-time and part-time students enrolled in Level 2 or above of their first undergraduate degree program, at the time of award application and selection, who are returning to McMaster to continue their studies.
3. Travel and Exchange Awards requiring full-time status are available to students enrolled full-time or equivalent in both the fall and winter terms.
4. Travel and Exchange Awards are available to all domestic and international students.
5. Travel and Exchange Awards are not available to second degree students.
6. Travel and Exchange Awards are not available to students in their graduating term.
7. Students are limited to one Travel and Exchange Award per application cycle.
8. Travel and Exchange Awards are available to students with a minimum Cumulative Grade Point Average of 7.0 on a minimum of 18 graded units.
9. Available averages, units upon which averages are calculated, program level, and enrolled units may be used to break any ties in an award competition.
10. Exchange Awards are available to students participating in an approved formal exchange program during the academic year immediately following the application deadline.
11. Travel Awards are available to students travelling to earn academic credit, pursue experiential learning opportunities, complete research or projects, participate in relief efforts, volunteer or work. Some Travel Awards may be for travel within Canada, while others may support the student outside Canada or internationally. Travel Award recipients must travel during the summer, fall and/or winter terms immediately following the application deadline.
12. Travel and Exchange Awards may also consider other forms of earned merit. To evaluate earned merit, students may need to complete one or more additional requirements including, but not limited to, submitting an application.
13. To be considered for a Travel and Exchange Award by application, students must submit a complete application by the specified deadline date.
14. Travel and Exchange Award applications which meet award eligibility criteria are forwarded to a selection committee for review and ranking.
15. All Travel and Exchange Award payments are disbursed through the McMaster Student Account and applied to outstanding charges. A few exceptions to this regulation may be approved by the Office of the Registrar, Aid & Awards.
16. Travel and Exchange Awards are typically disbursed no later than the end of April.
17. Travel and Exchange Award recipients will have their awards noted on their University transcripts.
18. It is the responsibility of Travel and Exchange Award recipients to make all travel and exchange arrangements. Recipients are required to assess travel risks, have a plan of action in place for emergencies, and ensure they have proper medical and other insurance in place prior to departure.
19. Travel and Exchange Awards will not be issued for travel when University advisories and/or official global travel advisories have been issued to avoid non-essential travel outside Canada and to areas deemed as 'do not travel areas' per Global Affairs Canada.
20. Travel and Exchange Award recipients may be required to complete a risk assessment and/or safety component and/or waiver prior to departure as dictated by other University policies. Those participating in exchange opportunities must attend mandatory Exchange Pre-Departure Orientation sessions and complete Terms for Participation Forms, Liability Waivers, and Statement of Responsibilities Forms.
21. Travel and Exchange Award recipients are asked to submit, and consent to the publication of, a report of their travel or exchange experience when they return to their studies at McMaster. Reports are submitted to the Office of the Registrar. Student submitted reports are included in the annual reports made to the Undergraduate Council Awards Committee, Undergraduate Council and Senate, and are shared with donors.
22. Travel and Exchange Awards allocated to students who do not travel or participate in their formal exchange as indicated on their application will forfeit their award.
23. Registration in, or transfer to, another program of study and/or a change in course load may result in forfeiture of a Travel and Exchange Award. Students are advised to consult with the Office of the Registrar prior to making any changes to their program of study or course load.
24. Students who forfeit their award will have their award cancelled and their transcript notation removed. Students must return the Travel and Exchange Award funding to their McMaster Student Account.
25. The University may choose not to grant a Travel and Exchange Award in the absence of a suitable candidate; may choose to limit the number of recipients selected where funding is limited; may choose to limit the number of recipients selected where too few suitable candidates exist; and/or may choose to generate applicant pools where complete applications have not been received.
26. The University may remove specific Travel and Exchange Awards from the University Calendar, may revise the terms and stated value and/or suspend the granting of Travel and Exchange Awards.
27. Travel and Exchange Awards supported by donor funds may have additional eligibility requirements.

Travel and Exchange Awards by Application

Open to Two or More Faculties

THE BEALE-LINCOLN-HALL TRAVEL SCHOLARSHIP
Established in 1996 by Arnold A. Beale in memory of his parents F. Arnold Beale and Margaret S. Beale and Mr. and Mrs. Walter Gould Lincoln and Commander Harley H. Hall, U.S.N.
Requirements: To be awarded to students who demonstrate high academic standing and are participating in one of McMaster's formal exchange programs. Preference will be given to students enrolled in a program in Biochemistry, Biology, Chemistry, Cognitive Science of Language, Commerce,

Earth and Environmental Sciences, Engineering Physics, English, French, Geography, History, Linguistics, Materials Science, Mathematics, Physics or Religious Studies and who demonstrate a lively interest in the humanities and the human and social implications of scientific developments.
Typically Available: 1 x $2,000

THE JOHN P. EVANS TRAVEL SCHOLARSHIP

Established in 1991 by many friends, colleagues, students and graduates of McMaster University as a tribute to John (Jack) P. Evans upon his retirement as Associate Vice-President, University Services and Secretary of the Board of Governors in recognition of his 25 years of outstanding contribution to the University Community.
Requirements: To be awarded to a student enrolled in Level 2 or above of an Honours program with notable academic standing and has demonstrated a scholarly interest in some aspect of Asian languages, history or cultures, with preference being given to a student wishing to study in China.
Typically Available: 1 x $1,500

THE JIMMY FONG INTERNATIONAL OUTREACH TRAVEL AWARD IN ENGINEERING

Established in 2006 by Jimmy Fong, B.Eng.Mgt. (Class of '82).
Requirements: To be awarded to students who, in the judgment of a selection committee, demonstrate high academic achievement, and are pursuing either an international relief and development project in an underdeveloped, disadvantaged area or a study, work or co-op placement outside of North America. Preference to be given to students in the Faculty of Engineering.
Typically Available: 1 x $3,000

THE RUNDLE FOREIGN STUDY SCHOLARSHIP

Established in 2011 by the Rundle Foreign Study Bursary at the Hamilton Community Foundation.
Requirements: To be awarded to a student enrolled in Level 2 or above and who, in the judgment of the Selection Committee, has attained notable academic achievement. The purpose of the scholarship is to provide financial assistance to students who are participating in one of McMaster's formal exchange programs in a country where English is not the first language and who have graduated from a publicly funded secondary school in the Hamilton-Wentworth area.
Typically Available: 1 x $2,500

THE SUSAN VAJOCZKI LEGACY TRAVEL SCHOLARSHIP

Established in 2013 by the family, friends and colleagues in memory of Susan Vajoczki, Professor of Geography and Earth Sciences, and Director of the Centre for Leadership and Learning.
Requirements: To be awarded to a student who has completed at least Level 2 in any program in the Faculty of Science, Faculty of Social Sciences, or the Arts and Science Program and who, in the judgment of the School of Earth, Environment & Society, has achieved notable academic standing, and is pursuing research in the fields of pedagogy (teaching and learning) or Earth Sciences who could benefit from travel.
Typically Available: 1 x $2,000

THE HOWARD P. WHIDDEN SCHOLARSHIP

Established in 1941 by the Honourable Jacob Nicol (Class of '00) of Sherbrooke, Quebec, in honour of Chancellor Howard P. Whidden, with a view to fostering relations of friendship and understanding between French-speaking and English-speaking Canadians.
Requirements: To be awarded to a student who has completed six units of French and who shows ability and promise in the use of the French language. The recipient will study at a Quebec university during the summer.
Typically Available: 1 x $2,500

THE T. RUSSELL WILKINS MEMORIAL SCHOLARSHIPS

Established in 1963 by bequest of Mrs. T. Russell Wilkins (B.A. '18 Brandon, M.A. '32), daughter of former Chancellor Howard P. Whidden, in memory of her husband, Dr. T. Russell Wilkins (Class of '11).
Requirements: Two scholarships to be awarded to students in their penultimate level of an Honours program in Arts and Science, Health Sciences or Science who have demonstrated outstanding academic achievement. In addition, the students should demonstrate a lively interest in the humanities and in the human and social implications of scientific developments. The purpose of the scholarship is to enable the winners to spend the summer before the final Fall/Winter session in travel and study outside Canada.
Typically Available: 2 x $7,500 each

Open to the Arts and Science Program

THE CLASS OF '37 TRAVEL SCHOLARSHIP IN ARTS AND SCIENCE

Established in 1989 by the Graduating Class of 1937 in celebration of their 50th anniversary and augmented by friends of the Arts and Science Program.
Requirements: To be awarded to a student who is enrolled in Level 2 or above of an Honours program in the Arts and Science Program. Applicants should have demonstrated a lively interest in developing countries. The purpose of this award is to enable the winner to spend the summer, immediately following its receipt, working and/or studying in a developing country.
Typically Available: 1 x $2,500

Open to the DeGroote School of Business

THE MARIA CHAN SCHOLARSHIPS FOR INTERNATIONAL STUDIES IN BUSINESS

Established in 1999 by Professor Luke Chan and his family in support of students in the DeGroote School of Business who wish to pursue academic studies abroad.
Requirements: A variable number of scholarships to be awarded to students participating in one of McMaster's formal exchange programs who, in the judgment of the Faculty of Business, demonstrate notable academic achievement.
Typically Available: Variable x $1,500

THE SCOTIABANK COMMERCE EXCHANGE PROGRAM AWARDS

Established in 2011 by Scotiabank in support of students in the DeGroote School of Business who wish to pursue academic studies abroad.
Requirements: To be awarded to students who demonstrate notable academic achievement and are participating in one of McMaster's formal exchange programs in the DeGroote School of Business in a country in which Scotiabank has operations.
Typically Available: 9 x $2,500

Open to the Faculty of Engineering

THE LIBURDI FAMILY FOUNDATION INTERNATIONAL EXCHANGE SCHOLARSHIP

Established in 2019 by Joseph Liburdi in loving memory of his parents, Carlo and Domenica.
Requirements: To be awarded to students enrolled in the Faculty of Engineering who attain high averages and are participating in one of McMaster's formal exchange programs.
Typically Available: 1 x $10,000

THE RONALD WILLIAM MERKEL TRAVEL SCHOLARSHIP IN ENGINEERING

Established in 2008 by Brad Merkel, B.Eng.Mgt. (Class of '85).
Requirements: To be awarded to a student in the Faculty of Engineering who, in the judgment of a selection committee, demonstrates high academic achievement and is pursuing either a study, work or co-op placement outside of North America or an international relief or development project in an underdeveloped, disadvantaged area outside of North America. Preference to be given to a student involved with Engineers without Borders.
Typically Available: 1 x $3,500

Open to the Faculty of Health Sciences

THE CIM INTERNATIONAL OUTREACH TRAVEL AWARD

Established in 2006 by Michael P. Smith and CIM Limited.

Requirements: To be awarded to a student in the Bachelor of Health Sciences (Honours) program who will be taking Health Sciences courses in the following Spring/Summer or in the following Fall/Winter terms which include travelling and volunteering in underdeveloped, disadvantaged areas outside of Canada. The student must demonstrate contributions to the betterment of life through special initiatives.

- 500-word essay on the value of the experience in meeting the stated personal learning goals established by the student is required. Students should build into their learning goals a presentation to an external group after the travel is completed.

Typically Available: 1 x $1,000

THE CLARA I. ELMAN TRAVEL SCHOLARSHIPS

Established in 2006 by Clara I. (Graham) Elman (Class of '46), Faculty member in the School of Nursing from 1949 to 1953.

Requirements: To be awarded to students who are enrolled in Level 3 of a B.Sc.N. program and who will be completing a Level 4 clinical course in a Northern Canadian placement.

Typically Available: 1 x $1,000

THE LINDY WEE WONG INTERNATIONAL OUTREACH AWARD

Established in 2010 by Hong Eie Wong, B.Eng. (Class of '82) in honour of his wife.

Requirements: To be awarded to a student in the Bachelor of Health Sciences (Honours) program who will be travelling and volunteering in underdeveloped, disadvantaged areas outside of Canada and who, in the judgment of the Program, demonstrates contribution to the betterment of life through special initiatives.

Typically Available: 1 x $1,250

Open to the Faculty of Humanities

THE A.G. ALEXANDER SCHOLARSHIPS

Established in 1938 and augmented in 1946 by Sir Douglas Alexander, and members of his family, in memory of Archibald Grieg Alexander.

Requirements: A variable number of scholarships to be awarded to students enrolled in Level 2 or above on the basis of excellence in an Honours program in the Faculty of Humanities. The purpose of the scholarships is to enable the recipients to study outside Canada during the twelve months prior to the final Fall/Winter terms.

Typically Available: 3 x $5,500 each

THE DISCOVERY OF LANGUAGES STUDY ABROAD SCHOLARSHIP

Established in 2011 by Linda White B.A. (Class of '80), M.A. (Class of '83).

Requirements: To be awarded to a student enrolled in Level 2 or above in a program in the Department of Linguistics & Languages or the Department of French, and who has attained notable academic standing. The purpose of the scholarship is to assist students with travel and study for academic credit during the Fall/Winter terms in a country where English is not the first language. Preference given to those who are participating in one of McMaster's formal exchange programs.

Typically Available: 3 x $2,500

THE JOAN JACKSON DUNBAR TRAVEL SCHOLARSHIP

Established in 1960 by Mayor Lloyd D. Jackson (Class of '09), LL.D (Class of '55) and Mrs. Jackson of Hamilton in memory of their daughter, Joan (Class of '40).

Requirements: To be awarded to a woman student enrolled in Level 3 or above of an Honours program in English for excellence in the work of the program (with emphasis on English). The winner must have secured all her secondary school education in Canada. The award is to be used for study and travel in the United Kingdom and Continental Europe during the vacation before the final Fall/Winter terms.

Typically Available: 1 x $3,675

THE GABRIELE ERASMI TRAVEL SCHOLARSHIP TO ITALY

Established in 2003 by the Dante Alighieri Society of Hamilton, the Department of Linguistics and Languages, the Julian-Dalmatians of Hamilton, and friends, in honour of Dr. Gabriele Erasmi, distinguished Faculty member of the Department of Linguistics and Languages.

Requirements: To be awarded to an outstanding student who has completed Level 2 of a Humanities program. The purpose of the scholarship is to assist with the expenses of travel and study in Italy for academic credit at McMaster University. The applicant must submit a plan of study for approval.

Typically Available: 3 x $1,000

THE LINGUISTICS AND LANGUAGES TRAVEL SCHOLARSHIP

Established in 1991 by the Department of Modern Languages and Linguistics.

Requirements: To be awarded to students enrolled in Level 2 or above in a program in Cognitive Science of Language or Linguistics and who, in the judgment of the Department of Linguistics and Languages, attain high averages. The purpose of the scholarship is to assist with travel expenses to study and travel abroad.

Typically Available: 3 x $1,000

THE E.T. SALMON SCHOLARSHIP

Established in 1991 by Mrs. Edward Togo Salmon in memory of her husband, world-renowned Roman historian and member of the faculty for 43 years.

Requirements: To be awarded to undergraduate students enrolled in Level 3 of any Honours Department of Greek and Roman Studies or Honours History program, including at least 12 units of Ancient History and Archaeology, and who, in the judgment of the selection committee shows outstanding achievement and promise. The purpose of the scholarship is to enable the winner to travel and study abroad during the vacation before the final Fall/Winter term, and/or to fund the final year of study at McMaster; candidates should submit to the committee a statement of their aims and plans for study.

Typically Available: 2 x $2,000

THE HAROLD AND GERTRUDE FREEMAN SCHOLARSHIP IN FRENCH

Established in 1981 by members of the Class of '43 as a grateful tribute to Harold A. and Gertrude Freeman; Professor Freeman was honorary president of the Class of '43 and was a long-time teacher of French at McMaster University.

Requirements: To be awarded to students enrolled in Level 2 or above of an Honours French program who are confirmed as travelling abroad as part of Humanities Study Abroad and who, in the judgment of the Department of French, has attained the highest level of accomplishment in knowledge of French language, literature and culture.

Typically Available: 2 x $1,000

THE ALBERT SHALOM TRAVEL SCHOLARSHIP

Established in 1994 by family, friends and colleagues in memory of Albert Shalom, Professor of Philosophy at McMaster University from 1966 to 1991.

Requirements: To be awarded to undergraduate and/or graduate students enrolled in any Department of Philosophy program, who will be engaged in travel or an exchange program and demonstrate academic excellence.

Typically Available: 1 x $800

THE VIOLA E. WEBSTER FOREIGN STUDY AWARD

Established in 2012 in memory of Viola E. Webster B.A. (Class of '43) by her nephew, Ion Webster.

Requirements: To be granted to a student in the Faculty of Humanities who is participating in an international exchange program and who demonstrates financial need. Preference to be given to students who have taken courses in French and German.

Only current OSAP recipients are eligible.

Typically Available: 1 x $3,000

Open to the Faculty of Science

THE D.M. DAVIES PRIZE

Established in 1984 by friends, colleagues and former students in recognition of Professor Douglas Davies for his outstanding contribution to the Department of Biology during 34 years of service.

Requirements: To be awarded to a student who has completed Level 1 and at least an additional 30 units of an Honours Biology Core program and who, in the judgment of the Department of Biology, attains a grade of at least A- in BIOLOGY 2F03 - Fundamental and Applied Ecology and who registers in BIOLOGY 3R03 - Field Biology I or BIOLOGY 4J03 - Field Biology II in the following summer session.

Typically Available: 1 x $700

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