This Calendar covers the period from September 2005 to August 2006.

At McMaster our purpose is the discovery, communication and preservation of knowledge. In our teaching, research, and scholarship, we are committed to creativity, innovation and excellence. We value integrity, quality, inclusiveness and teamwork in everything we do. We inspire critical thinking, personal growth, and a passion for lifelong learning. We serve the social, cultural, and economic needs of our community and our society.

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Using the Calendar

Please read carefully all sections in this Calendar which pertain to your residency at McMaster University.

The first sections describe University-wide procedures and regulations. These are Sessional Dates, Degrees, Courses and Programs, Degrees by Program, Glossary, Admission Requirements, Application Procedures and Academic Regulations, Senate Policy Statements and Financial Information.

The next sections begin with descriptions of the Arts and Science Program, the School of Business, the Engineering, Health Sciences, Humanities, Science, Social Science Faculties and the Combined B.A. Program in Indigenous Studies. The program section concludes with a description of Interdisciplinary Minors and Thematic Areas, Part-Time Degree Studies and Certificate and Diploma Programs. Each program section describes the undergraduate degree program requirements by department. The Course Listings section completes the academic part of the Calendar.

When choosing your courses, please be careful to note all prerequisites, anti-requisites, corequisites and course-listings; they may have a significant impact on your program. If you are not sure of the meanings of these terms, please consult the Glossary section of the Calendar.

Information about awards, scholarships, bursaries, loan funding, University services, the libraries, residences, computing facilities, and student activities and organizations are included in the latter sections of this Calendar.
Directory for Correspondence and Enquiries

Mailing Address
McMaster University
Hamilton, Ontario, L8S 4L8
Canada

Telephone: (905) 525-9140
Web Address: http://www.mcmaster.ca

The following is a list of University offices (with the appropriate postal code) and administrative staff members that are most frequently contacted. Other offices and services, with their addresses, telephone numbers, and email or web addresses (where available) are described throughout the Calendar.

Admissions Office (Undergraduate Studies)
Associate Registrar (Admissions): Lynn Giordano
Gilmour Hall, Room 106, L8S 4L8, ext. 24796; Fax: (905) 527-1105

Student Liaison
Associate Registrar (Liaison): Patricia Harris
Gilmour Hall, Room 102, L8S 4L8, ext. 23655; Fax: (905) 524-3550

Student Financial Aid and Scholarships
Director: Elizabeth Seymour
Gilmour Hall, Room 120, L8S 4L8, ext. 24319

Transcripts and Records
Gilmour Hall, Room 108, L8S 4L8, ext. 24796; Fax: (905) 527-1105

Examinations, Schedules and Classroom Reservations
Associate Registrar (Schedules and Examinations): Ruth Toth
Gilmour Hall, Room 114, L8S 4L8, ext. 24453; Fax: (905) 527-1105

Office of the Associate Vice-President (Student Affairs and Dean of Students)
Associate Vice-President (Student Affairs and Dean of Students): Philip Wood
Gilmour Hall, Room 207, L8S 4L8, ext. 27455

School of Graduate Studies
Dean of Graduate Studies: Fred L. Hall
Acting Dean of Graduate Studies: Laura Finsten (until June 30, 2005)
Acting Dean of Graduate Studies: David Capson (until December 31, 2005)
Gilmour Hall, Room 212, L8S 4L8, ext. 23679

Centre for Continuing Education
Director: Tracey Taylor-O'Reilly
Downtown Centre, Second Floor, ext. 24321

Alumni Association
Director of Alumni Advancement: Rod Morrison
President's Residence, L8S 4K1, ext. 23900

Housing and Conference Services
Director of Housing and Conference Services: Catherine Miller
Commons Building, Room 101, L8S 4K1, ext. 24223

Off-Campus Resource Centre
McMaster University Student Centre, Room B112, L8S 4S4, ext. 24086

Hospitability Services
Director: Albert Ng, ext. 23836
Commons Building, Room 116, L8S 4K1
Mac Express Inquiries: ext. 27448

Centre for Student Development
Director: Desmond Pouyat
McMaster University Student Centre, Room B107, L8S 4S4, ext. 24711

Services for Students with Disabilities
Program Coordinator (Disability Specialist): Tim Nolan
Disability Lead: Tim Nolan
Disability Specialist: Caroline Cayuga
McMaster University Student Centre, Room B107, L8S 4S4, ext. 24711

Career Services
Manager: Lisa Boniface
Gilmour Hall, Room 110, L8S 4L8, ext. 24254

Advice for Overseas and Exchange Students
International Student Services Supervisor/Advisor: Marcos Costa
Gilmour Hall, Room 104, L8S 4L8, ext. 24748

Grievances
University Secretary: Bruce Frank
Gilmour Hall, Room 210, L8S 4L8, ext. 24337

Other Publications for McMaster Students

- Undergraduate Studies
  - Year I Handbook
    (Available from the Office of the Registrar.)
  - Many academic departments offer information booklets about their undergraduate programs. These may be requested directly from the departments.

- Graduate Studies
  - Calendar of the School of Graduate Studies
    (Available from the Office of the Registrar.)
  - McMaster Divinity College Calendar
    (Available from Divinity College.)
  - Graduate Studies in Business (MBA and Ph.D programs)
    (Available from the DeGroote School of Business.)
  - Teaching departments that offer graduate studies also provide information booklets about their programs. These may be requested directly from the departments.

- Certificate and Professional Studies
  - The Centre for Continuing Education Calendar, which describes professional designations, certificate and correspondence programs, is available from the Centre for Continuing Education.

- Professional Development and Non-Credit Studies
  - Brochures about non-credit programs and special offerings are available from the Centre for Continuing Education.

Ombuds Office

Ombuds: Shelley Lancaster, Carolyn Brendon
McMaster University Student Centre, Room 210, L8S 4S4, ext. 24151; Fax: (905) 529-3206; Email: ombuds@mcmaster.ca

The Ombuds provides information and advice relating to problems, complaints and appeals involving members of the McMaster community. The Ombuds Office is a service provided by the MSU and the University.

For information and advice with respect to University regulations and services, and human rights procedures, see the Academic Facilities, Student Services and Organizations' section of the Calendar.
McMaster University

McMaster University, through its continued dedication to innovative education and ground-breaking research, has earned its reputation as one of the leading post-secondary institutions in Canada. McMaster is a medium-sized, full-service university offering educational programs through six Faculties. The extensive activity in research, supported by $218 million in grants and contracts, means there are first-class libraries and sophisticated facilities. Undergraduate teaching is conducted through the School of Business, the Faculties of Engineering, Health Sciences, Humanities, Science, and Social Sciences, and the distinctive Arts and Science Program. The Department of Kinesiology and the School of Social Work are part of the Faculty of Social Sciences.

DISCIPLINES AND DEGREES

The Arts and Science Program offers B. Arts Sc. and Honours B. Arts Sc. degrees. It is possible to combine the program leading to the Honours B. Arts Sc. degree with programs that fulfill the requirements for Honours degrees in a number of different disciplines.

The DeGroote School of Business offers the Honours B.Com. and B.Com. degrees, which include work in the following areas: accounting, business policy, finance, management science and information systems, marketing and international business, and human resources and management.

The Faculty of Engineering offers the Bachelor of Engineering program in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical and Biomedical Engineering, Electrical Engineering, Engineering Physics, Materials Engineering, Mechanical Engineering, Software Engineering, and Software Engineering and Game Design. Students may register in the Engineering program to take the five-level Engineering and Management program, which is offered jointly by the School of Business and Faculty of Engineering, the five-level Engineering and Society program.

The Faculty of Engineering offers a five-year program in Chemical Engineering and Bioengineering leading to a Bachelor of Engineering and Biosciences degree.

The Faculty of Engineering also offers a degree completion program in Manufacturing Engineering Technology leading to the Bachelor of Technology Degree. It is offered in conjunction with Mohawk College.

The Faculty of Health Sciences has gained an international reputation for its innovative educational programming, and offers, through the Michael G. DeGroote School of Medicine, the M.D. program, and through the School of Nursing, the B.Sc.N. degree program. A Bachelor of Health Sciences (B.H.Sc.) degree may be earned in Midwifery and a Bachelor of Health Sciences (Honours) (B.H.Sc. Hon.) program is also offered.

The Faculty of Humanities offers programs in Art, Art History, Classics (Ancient History and Archaeology, Classical Languages and Literature), Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English, French, History, Indigenous Studies, Japanese Studies, Linguistics, Modern Languages (German, Hispanic Studies, Italian), Modern Languages and Linguistics, Multimedia, Music, Peace Studies, Philosophy, Theatre & Film Studies, and Women's Studies leading to B.A. degrees, as well as a Bachelor of Music degree and a Diploma in Music Performance. Students pursuing Honours degrees may complete and receive credit for the third level of the program in study abroad at a university in a country approved by the Faculty.

Bachelor of Science programs are available in the Faculty of Science at the B.Sc. and B.Sc. Honours levels. Programs are offered in Biochemistry, Biology, Chemistry, Computer Science, Earth and Environmental Sciences, Geoscience, Kinesiology, Life Science, Mathematical Science, Mathematics and Statistics, Materials Science, Medical and Health Physics, Medical Radiation Sciences, Physics, Molecular Biology, Physical Science, Physics, Psychology and Science.

The Faculty of Social Sciences offers B.A. programs in Anthropology, Communication Studies, Economics, Geography, Geology and Environmental Studies, Gerontology, Health Studies, Indigenous Studies, Labour Studies, Political Science, Psychology, Religious Studies and Sociology. The School of Social Work offers the combined B.A./B.S.W. degree, and the Department of Kinesiology, the Hons. B.Kin. degree.

THE UNIVERSITY

Named after Senator William McMaster, who bequeathed funds to endow a Christian school of learning, the University grew out of educational work initiated by Baptists in central Canada as early as the 1830s. After its initial years in Toronto, from 1887 to 1930, the University was moved to Hamilton. It became non-denominational in 1957, although the historic Baptist connection continues through the separately incorporated McMaster Divinity College.

More than 20,000 full-time students attend McMaster University, 2,200 of whom are pursuing advanced degrees offered through the School of Graduate Studies. In addition, over 3,600 part-time students are registered in the Fall/Winter session, from September to April, and 4,700 in the Spring/Summer session, from May to August. The University also offers continuing education programs outside Hamilton, for which full credit is granted.

Most of the 1000 members of the University faculty hold doctoral degrees in their areas of specialization. Faculty members are expected to teach both graduate and undergraduate courses and may be involved in the academic counseling of students.

The University's diverse academic programs are supported by some fine, and even unique, facilities. The University Library is a member of the Association of Research Libraries and contains 1.9 million volumes and has 6,712 current print journal titles and 9,632 current electronic journal titles. The Library has an extensive special collections section which includes the Bertrand Russell Archives, 18th Century materials and major Canadian collections. The libraries also include modern language laboratories, music rehearsal rooms, art studios, a museum of art and seminar rooms. The work of the Faculties of Science and Engineering is supported by sophisticated facilities, which include a nuclear reactor. There are six undergraduate general purpose computing labs on campus which operate using MS Windows 2000 based PCs and a variety of applications software. As well there are numerous departmental computing clusters which operate a mixture of Windows, Linux or Solaris environments. Students in residence have convenient access to the McMaster network and the internet from their rooms.

The recreation, fitness and intramural programs offer more than 30 different sports in which over 6,000 students participate. The Interuniversity Athletic Program features 33 varsity sport opportunities. The department also offers a full range of recreational and outdoor education programs throughout the calendar year. The athletic facilities include a 50-metre swimming pool, an eight-lane, 400-metre, all-weather track, four hard surface all-weather tennis courts, seven North American squash courts and a state-of-the-art fitness and conditioning facility known as the Pulsa. A new $30 million addition will be open in Fall 2006.

McMaster's campus, which is restricted to pedestrian traffic, is adjacent to the Royal Botanical Gardens at the western end of Lake Ontario. On-campus co-educational and single-sex residences are available for approximately 3,400 students.

The University is minutes from downtown Hamilton, and the activities that a major city has to offer. Students can get there by car or by taking one of the buses from the region's public transit system, which make frequent stops on campus.
Sessional Dates

The academic year is divided into sessions, as shown on the chart below. Most undergraduate students register for the Fall/Winter Session, which runs from September to April. The Spring/Summer Session starts at the beginning of May and ends in early August.

The 2005-2006 Academic Year Divided by Session and Term

The numbers on the left and right of each block are the respective start and end dates for that term. Examination periods (where applicable) are included in this chart.

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<td>FALL/WINTER SESSION</td>
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<td>SPRING/SUMMER SESSION</td>
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Convocations

The exact time of the convocations will be determined four months prior to the specific convocation date.

Friday, July 22, 2005
- Last day to file a Graduation Information Card and declare a minor for Fall 2005 Convocations

Friday, November 18, 2005
- Fall 2005 Convocations (all Faculties)

Friday, February 3, 2006
- Last day to change Programs for Spring 2006 Convocations

Friday, May 19, 2006
- Health Sciences Convocation

Monday, June 5 to Friday, June 9, 2006
- Spring Convocations

Friday, July 21, 2006
- Last day to file a Graduation Information Card and declare a minor for Fall 2006 Convocations

Friday, November 17, 2006
- Fall 2006 Convocations (all Faculties)

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.

Course Enrolment Limits: Limited enrolment courses are identified in the calendar; these either require permission or are assigned on a first served basis. In addition, the University reserves the right to limit enrolment in any course which is oversubscribed, even if the course description and registration literature do not indicate an enrolment limit.

University Policies

Acceptance of the University's policies, 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://www.mcmaster.ca/intelprop).
# Sessional Dates for 2005-2006

The following schedule applies to both full- and part-time students.

## Fall/Winter Session 2005-2006

<table>
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<th></th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
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</thead>
<tbody>
<tr>
<td><strong>Registration (All Levels)</strong></td>
<td>Thursday, September 8</td>
<td>To Be Announced</td>
<td>Thursday, September 8</td>
</tr>
<tr>
<td><strong>Classes begin</strong></td>
<td>Monday, September 19</td>
<td>Tuesday, January 3</td>
<td>Monday, September 19</td>
</tr>
<tr>
<td><strong>Last day for registration and adding or dropping courses</strong></td>
<td>Monday, October 10</td>
<td>Thursday, January 12</td>
<td>Monday, October 10</td>
</tr>
<tr>
<td><strong>Thanksgiving Day: No classes</strong></td>
<td>Friday, November 4</td>
<td>—</td>
<td>Friday, March 3</td>
</tr>
<tr>
<td><strong>Last day for cancelling courses without failure by default</strong></td>
<td>—</td>
<td>Monday, February 20 to Saturday, February 25</td>
<td>—</td>
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<tr>
<td><strong>Mid-term recess</strong></td>
<td>—</td>
<td>Friday, March 3</td>
<td>—</td>
</tr>
<tr>
<td><strong>Good Friday: No classes</strong></td>
<td>—</td>
<td>Monday, February 20 to Saturday, February 25</td>
<td>Friday, April 14</td>
</tr>
<tr>
<td><strong>Test and Examination ban: No tests or examinations may be held</strong></td>
<td>Tuesday, November 29 to Tuesday, December 6</td>
<td>Thursday, March 30 to Thursday, April 6</td>
<td>Thursday, March 30 to Thursday, April 6</td>
</tr>
<tr>
<td><strong>Classes end</strong></td>
<td>Monday, December 5</td>
<td>Wednesday, April 5</td>
<td>Wednesday, April 5</td>
</tr>
<tr>
<td><strong>Mid-Session Tests (Level I)</strong></td>
<td>—</td>
<td>—</td>
<td>Wednesday, December 7 to Wednesday, December 21</td>
</tr>
<tr>
<td><strong>Final Examinations</strong></td>
<td>Wednesday, December 7 to Wednesday, December 21</td>
<td>Friday, April 7 to Wednesday, April 26</td>
<td>Friday, April 7 to Wednesday, April 26</td>
</tr>
<tr>
<td><strong>Deferred Examinations</strong></td>
<td>Friday, April 7 to Wednesday, April 26</td>
<td>Monday, June 26 to Thursday, June 29</td>
<td>Monday, June 26 to Thursday, June 29</td>
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</tbody>
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## Spring/Summer Session 2006

<table>
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<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
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</thead>
<tbody>
<tr>
<td><strong>Classes begin</strong></td>
<td>Monday, May 1</td>
<td>Monday, June 19</td>
<td>Monday, May 1</td>
</tr>
<tr>
<td><strong>Last day for registration and adding or dropping courses</strong></td>
<td>Friday, May 5</td>
<td>Friday, June 23</td>
<td>Friday, May 5</td>
</tr>
<tr>
<td><strong>Victoria Day: No classes</strong></td>
<td>Monday, May 22</td>
<td>Monday, May 22</td>
<td>—</td>
</tr>
<tr>
<td><strong>Last day for cancelling courses without failure by default</strong></td>
<td>Wednesday, May 31</td>
<td>Wednesday, July 19</td>
<td>Thursday, June 29</td>
</tr>
<tr>
<td><strong>Canada Day: No classes</strong></td>
<td>—</td>
<td>Monday, July 3</td>
<td>Monday, July 3</td>
</tr>
<tr>
<td><strong>Civic Holiday: No classes</strong></td>
<td>—</td>
<td>Monday, August 7</td>
<td>Monday, August 7</td>
</tr>
<tr>
<td><strong>Classes end</strong></td>
<td>Friday, June 16</td>
<td>Friday, August 4</td>
<td>Friday, August 4</td>
</tr>
<tr>
<td><strong>Examinations</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Deferred Examinations</strong></td>
<td>December 2006 Examination period</td>
<td>December 2006 Examination period</td>
<td>December 2006 Examination period</td>
</tr>
</tbody>
</table>

During class time, as arranged by instructor.
DEGREES, PROGRAMS AND COURSES

DEGREES AND PROGRAMS

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
(*With the exception of the Combined Honours degrees in Biology and Physics which require five years of study.)

SCHOOL OF BUSINESS
B.Com.                                          4
B.Com. (Honours)                               4

FACULTY OF ENGINEERING
B.Eng.                                          4
B.Eng. Mgt.                                      5
B.Eng. Society                                  5
B.Eng. Biosciences                              5
B.Tech. **                                       1

FACULTY OF HEALTH SCIENCES
B.H.Sc. (Midwifery)                            4
B.H.Sc. (Honours)                               4
B.Sc.N.                                         4
B.Sc.N. (Diploma RN Stream)                     **2
B.Sc.N. (Nurse Practitioner Stream)            **2
M.D. (Doctor of Medicine)                      **3

FACULTY OF HUMANITIES
B.A.                                             3
B.A. (Honours)                                  4
B.Mus.                                          4
B.A./B.S.W.                                     4

FACULTY OF SCIENCE
B.Sc.                                             3
B.Sc. (M.R.Sc.)                                  **4
B.Sc. (Honours)                                  4
B.Sc. (Honours) **                               5
(*These are Co-op programs.)

FACULTY OF SOCIAL SCIENCES
B.A.                                             3
B.A. (Honours)                                  4
B.Kin. (Honours)                                4
B.A./B.S.W.                                     4
B.S.W.                                           2
(*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). 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

The following is a list of courses available as electives to Level I students, provided that any requisites have been satisfied, and subject to enrolment limitations. A brief description of each course can be found under the appropriate Department within the Course Listings section in this Calendar.

ANTHROP ........................................ 1A03, 1B03, 1Z03
ART HIST ......................................... 1A03, 1AA3
ASTRON ........................................... 1F03
BIOLOGY ............................................ 1A03, 1AA3, 1K03
CAYUGA ........................................... 1Z03
CHEM ............................................... 1A03, 1AA3, 1F03
CLASSICS .......................................... 1A03, 1B03, 1B03, 1L03, 1L03
CMST ............................................... 1A03, 1B03
COMP LIT .......................................... 1A03, 1AA3
COMP SCI ........................................... 1FC3, 1MA3, 1MD3, 1SA3, 1TA3
CSCT ................................................ 1B03, 1BB3
ECON ............................................... 1B03*, 1BB3
ENGLISH ........................................... 1A03, 1AA3, 1B03, 1B33, 1C06
ENVIR SC .......................................... 1A03, 1B03, 1G03
FRENCH ............................................ 1A06, 1N06, 1Z06
GERM ............................................... 1BB3, 1B03, 1B03, 1Z06
GERONTOL ......................................... 1A03
GREEK ................................................ 1Z03, 1Z23
HTH SCI ............................................ 1G03
HEALTHST ......................................... 1A03
HISPANIC .......................................... 1A03, 1AA3, 1Z06
HISTORY ........................................... 1A03, 1AA3, 1B03, 1B03, 1L03, 1L03
INDIG ST ........................................... 1A03, 1AA3
INQUIRY ........................................... 1H03, 1SS3
INQUIRY ........................................... 1SC3
ITALIAN ............................................ 1A03, 1AA3, 1Z06, 1Z26
JAPANESE ......................................... 1Z06
KINESIOL .......................................... 1Y03, 1YY3
LABR ST ........................................... 1A03, 1Z03
LATIN ............................................. 1Z03, 1Z23
LINGUIST .......................................... 1A03, 1AA3
MATH ............................................... 1A03, 1AA3, 1B03, 1C03, 1K03, 1M03
MATS ............................................... 1M03
MMEDIA .............................................. 1A03, 1B03
MOHAWK ........................................... 1Z03
MUSIC ............................................... 1A03, 1AA3
MUSIC ............................................... 1C03
OJBWE .............................................. 1Z03
PEACE ST ........................................... 1A03, 1B03
PHILOS ............................................ 1A03, 1B03, 1C03, 1D03, 1E03
PHYSICS ........................................... 1B03, 1B03, 1B03, 1B03, 1P03
POLISH ............................................. 2A03, 2AA3
POL SCI ............................................ 1G06
PSYCH ............................................... 1A03, 1AA3
RELIG ST ........................................... 1B06, 1D06, 1E03, 1I03
SCIENCE ............................................ +1D03
SOC WORK ......................................... 1A06
SOCIOL ............................................ 1A06
STUD ............................................. +1A03, 1C03, 1I03
THTR&FLM ........................................ 1A03, 1B03
WOMEN ST ........................................... 1A06

* Not acceptable for the six-unit complementary studies elective required in Engineering I.
** Note: Engineering I students interested in entering the Engineering and Management program must take ECON 1B03 as one of their complementary studies electives.

May not be taken for credit by students in Science I.
COURSE AVAILABILITY

The following lists of upper-level courses are available to students subject to enrolment limitations and the prerequisites as specified for each list. (Engineering students should refer to the website at http://www.eng.mcmaster.ca/administration/electives.htm) A brief description of each course can be found under the appropriate Department within the Course Listings section in this Calendar.

UPPER-LEVEL COURSES AVAILABLE TO ALL STUDENTS

ANTHROP ........ 2B03, 2G03, 2H03, 2LP3, 2P03, 2U03, 2VV3, 2W03, 2X03, 3Y03
GEO ........ 2HC3, 2HD3, 2HU3, 2QQ3, 3HR3
HTH SCI ........ 2A03, 2G03, 2J03, 3G03, 3GG3, 3I03, 3Y03, 4I03, 4J03
POLISH ........ 2A06, 2B05, 2C03, 2D03, 2H03, 3I03, 2J03, 2K03, 2L06, 2X03
POL SCI ........ 2A06, 2B06, 2C03, 2D03, 2H03, 3I03, 2J03, 2K03, 2L06, 2X03
RELIG ST ........ 2B03, 2B03, 2DD3, 2EO3, 2EE3, 2F03, 2G03, 2H03, 2HH3, 2I03, 2I13, 2J03, 2KK3, 2L03, 2MM3, 2P05, 2Q03, 2QQ3, 2SS3, 2U03, 2V03, 2V03, 2W03, 2WY3, 3ZZ3, 3A03, 3AA3, 3BB3, 3C03, 3D03, 3DD3, 3EO3, 3JO3, 3KO3, 3KK3, 3LL3, 3M03, 3MM3, 3N03, 3NN3, 3P03, 3P03, 3R03, 3T03, 3U03, 3UU3, 3V03, 3W03, 3X03, 3ZZ3
SOC SCI ........ 2A03, 2P03, 2Q03, 2R03
SOCIOI ........ 3KK3

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

ANTHROP ........ 2I03, 2L03
ART HIST ........ 2A03, 2B03, 2D03, 2F03, 2H03, 2I03, 3AA3, 3DO3, 3I03, 3JO3, 3PP3, 3SO3
CLASSICS ........ 2B03, 2D03, 2EO3, 2HO3, 2K03, 2L03, 2L03, 2P05, 2X03
CMST ........ 2A03, 2EO3, 2HO3, 2I03, 2JO3, 2K03, 2L03, 2N03, 2Q03, 2R03, 2RR3, 2SO3, 2TO3, 2U03, 2V03, 2W03, 2X03, 2Y03, 3F03, 3I03, 3M03, 3P03, 3U03, 3WW3
COMPL LIT ........ 2BB3, 2CC3, 2GO3, 2H03, 2HH3, 2MO3, 3EE3, 3GO3, 3H03, 3KK3, 3MO3, 3MM3, 3N03, 3NN3, 3SS3, 3TT3, 4T03
CSCT ........ 2J03, 2S03, 3BB3, 3DO3, 3EE3, 3Y03, 3Y03
ECON ........ 2CC3, 2LO3
ENGLISH ........ 2C03, 2EO3, 2FO3, 2JO3, 2LO3, 2N03, 2NO3, 2S03, 3BB3, 3DO3, 3DD3, 3EO3, 3EE3, 3HO3, 3U03, 3W03, 3X03, 3Y03, 3Y03
EUROP ST ........ 2A03, 2B03

DEGREES, PROGRAMS AND COURSES

GEO ........ 2GG3, 2MM3, 2WW3
GERMAN ........ 3NN3
HEALTHST ........ 2C03, 2D03, 2H03, 3Y03
HTH SCI ........ 3Y03
HISTORY ........ 2A03, 2C06, 2E03, 2E03, 2F03, 2FF3, 2G03, 2I06, 2K03, 2L03, 2LL3, 2MO3, 2MM3, 2Q03, 2QQ3, 2R03, 2RR3, 2SO3, 2T03, 2TT3, 2U03, 2U03, 3AA3, 3BB3, 3DD3, 3F03, 3GO3, 3GG3, 3I03, 3I13, 3KK3, 3LO3, 3NN3, 3OO3, 3PP3, 3Q03, 3QQ3, 3RR3, 3SO3, 3S03, 3WW3, 3Y03, 3Z03, 3ZZ3
HUMAN ........ 2C03
ITALIAN ........ 2B03 (Taught in English)
JAPAN ST ........ 2A03, 2F03, 2P06, 3D03, 3EO3, 3H03, 3T03, 3UU3
LINGUIST ........ 2A03, 2E03
MMEDIA ........ 2I03
MUSIC ........ 2A03, 2F03, 2I03, 2I13, 3T03, 3UU3
PEACE ST ........ 2A03, 2AA3, 2G03, 2I03, 2S03, 3B03, 3F03, 3GO3, 3I03, 3I13, 3KK3, 3LO3, 3SO3, 3UU3
PHILOS ........ 2A06, 2B03, 2C06, 2D03, 2F03, 2G03, 2H03, 2NO3
RELIG ST ........ 2C03, 2EA3, 2EB3, 2D03, 2NO3, 2Z03
SOC SCI ........ 2I03
SOTA ........ 3B03, 3C03
THTRAFLM ........ 2E03, 2F03, 2G03, 2H03, 3G03, 3I03
WOMEN ST ........ 2C03, 2F03, 2F03, 2H03, 2H03, 2J03, 2L03, 3C03, 3DD3, 3EO3, 3GO3, 3GG3, 3NN3

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

ANTHROP ........ 3Z03, 3ZZ3
ART HIST ........ 3B03
CLASSICS ........ 3EE3
COMPL LIT ........ 4G03, 4J03
CMST ........ 3H03
GEO ........ 3CC3, 3DD3, 3HJ3, 3NN3
GERMAN ........ 4G03, 4J03 (Taught in English)
HEALTHST ........ 3D03, 3EO3, 3H03
HISTORY ........ 3DO3, 3F03, 3L03, 3M03, 3SS3, 3T03, 3Y03, 4J4, 4M03, 4U03
KINESIOI ........ 3D03, 3F03, 3L03, 3M03, 3SS3, 3T03, 3Y03, 4J4, 4M03, 4U03
POL SCI ........ 3A06, 3AA3, 3C03, 3CC3, 3DO3, 3EE3, 3F03, 3FF3, 3GO3, 3GG3, 3HH3, 3I03, 3JJ3, 3KK3, 3NN6, 3SO3, 3SO3, 3T03, 3UU3, 3SO3, 3WW3, 3Y03, 3YYY3, 3Z03, 3ZZ3
RELIG ST ........ 3L03, 3SO3
THTRAFLM ........ 4J03
WOMEN ST ........ 3I03
## DEGREES BY PROGRAM

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>BACHELOR'S DEGREE</th>
<th>HONOURS DEGREE</th>
<th>COMBINED HONOURS</th>
<th>PROFESSIONAL DEGREE</th>
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<tbody>
<tr>
<td>Electrical and Biomedical Engineering</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.Eng.</td>
</tr>
<tr>
<td>Earth &amp; Environmental Sciences</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.Eng.</td>
</tr>
<tr>
<td>German</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.A.*</td>
<td>B.Eng.</td>
</tr>
</tbody>
</table>

- The University also offers Thematic Areas of Study and a large number of Minor programs. Suggested lists of courses, which constitute non-degree Thematic Areas, have been assembled in the section Interdisciplinary Minors and Thematic Areas. Also in that section are two Interdisciplinary Minors. Other Minors are found in the program sections of most departments.
Glossary

**Academic Probation**, which may be assigned to students whose CA is at least 3.0 but less than 3.5, will allow a student to continue at the University for one reviewing period.

**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, subject to the applicant having met the minimum requirements prescribed by the University.

**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** are granted based upon demonstrated financial need, a minimum expectation of academic accomplishment and, in some cases, other forms of earned merit. They may vary in monetary value, based upon the level of financial need demonstrated.

**Continuing Student** is a university graduate who is not proceeding to an advanced degree, but wishes to take one or more undergraduate courses.

**Corequisite** is a course which must be taken together with another course.

**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 course within the Level; and the final digit(s) defines the number of units of credit associated with the course.

**Cross-listed Course** is a course which is listed under two or more subjects.

**Cumulative Average (CA)** is a weighted average based on the grades obtained in all courses taken.

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

**Department** is a subdivision of a Faculty, responsible for a particular subject or group of subjects (e.g. Department of Chemistry, Department of Modern Languages and Linguistics).

**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 Courses** are those courses designated at the time of registration as "Extra", which 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 Average. However, they will be included in the computation of the Sessional Average and the Full-load Average.

**Faculty** is a division 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** is the number of units specified in the Calendar for an individual level of a program (e.g. Commerce, Level II: 30 units). 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-load Average (FA)** is based on the successful completion of a full load of course units (see **Full Load** definition), and includes only courses taken in the Fall/Winter session. Overload units (those above Full Load) and Extra Courses taken during the Fall/Winter session are included in the FA.

**Full-time Student** for academic purposes is an undergraduate student who registers in at least 12 units in the Fall/Winter session, including Extra Courses. Full-time status for students in the Faculty of Science Co-op programs is granted to those students registered in at least 12 units in Term 1 or Term 2 of the Fall/Winter session.

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

**Loans** are monetary advances granted to students currently registered, based upon a demonstrated means and promise of repayment.

**Mature Student** is at least 21 years old prior to his/her first day of classes; has not attended secondary school for at least two years; and has not previously attended university.

**Minor** is an option available to students enrolled in four- or five-level programs. A Minor consists of at least 24 units — of which normally no more than six units may be from Level I — that meet the requirements set out in the program description of that Minor.

**Part-time Student** is an undergraduate student who is registered in fewer than 24 units in the Fall/Winter session, including Extra Courses.

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

**Program** is a specific combination of courses that fulfills the requirements for a degree.

**Program Probation** which may be assigned to students whose CA falls within the probationary band below the minimum CA required for a program of good standing, will allow a student to continue in his/her program for at least one reviewing period. (See the **General Academic Regulations** section in this Calendar.)

**Readmission** See **Readmission** in the **Admission Requirements** section in this Calendar.

**Registration** is the process whereby a student enrolls in a program of study and/or courses and pays, or makes acceptable arrangements to pay, all fees.

**Reinstatement**. See **Reinstatement** in the **Admission Requirements** section in this Calendar.

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

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

**Result of Session** is the statement of the academic standing of a student at the end of a reviewing period. **May continue in program, May not continue and Clear to graduate** are three examples.

**Review** is an assessment of a student's performance to determine eligibility to continue in a program or to graduate.

**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** is a period of study within the academic year. For example, the Fall/Winter session runs from September to April.

**Sessional Average (SA)** is a weighted average based on the grades attained in a session. Overload courses and Extra courses are included in the Sessional Average.

**Term** is a period of study within a session. The Fall/Winter session, for example, contains three terms, Term 1 runs from September to December; Term 2 runs from January to April; Term 3 runs from September to April.

**Transcript** is an official document summarizing the entire academic record of a particular educational institution.

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

**Undergraduate Student** is a student enrolled in a program of study leading to a bachelor's degree or to the degree Doctor of Medicine.

**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, or one session.

**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. (See example under **Grading System** in the **General Academic Regulations** section in this Calendar.)

**Withdrawal** is the formal process of discontinuing studies in a particular course or program.
10 ADMISSION REQUIREMENTS

ADMISSION REQUIREMENTS

1. ADMISSION FROM SECONDARY SCHOOLS

A. Ontario

General Requirements (For All Level I Programs)

To be considered for admission, you must satisfy the general requirements of the university and the specific subject requirements for the program to which you applied.

If you are an applicant from a non-Ontario secondary school you must meet the following three requirements:

1. An OSSD with acceptable standing;

2. An overall average in completed Grade 12 U and M courses which meets or exceeds the minimum set by the specific program to which you applied;

3. Satisfactory completion of six Grade 12 U and M courses including the subject requirements for your chosen program. McMaster continues to accept OAC courses as equivalent to Grade 12 U and M courses.

Music External (Conservatory) 4M or OAC Music is acceptable as a credit and the mark obtained can be included in the calculation of your admission average. Alternatively, marks supplied by an acceptable conservatory of music may be used to determine your average for admission. You may submit certificates from a recognized conservatory of music in Grade 9 practical and Grade 3 theory.

Early Conditional Admission

Early conditional admission is granted annually to qualified applicants, depending on your academic standing at that time. The criteria for and timing of early conditional offers is under review for 2006. For 2005, McMaster will begin making offers in March. Early conditional admission is based on:

1. six appropriate mid-term/interim Grade 12 U and M grades, OR

2. at least three final Grade 12 U and M grades PLUS enrolment in the appropriate additional three Grade 12 U and M courses.

If you do not receive an offer of admission in March, you will automatically be reassessed for admission after additional Grade 12 U and M grades are received from your secondary school.

Admission offers made in May will be based on updated Grade 12 U and M grades. Some Faculties may review information you may have provided on a supplementary application form. If you are granted a conditional offer of admission, you must meet the general requirements of the university. See General Requirements above.

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

1. If you do not meet the minimum final average prescribed for your chosen program;

2. If you do not receive an OSSD;

3. If you do not complete six Grade 12 U and M courses including all required subjects;

4. If you do not respond to the OUAC within the response period indicated on your offer letter.

Minimum Final Average

If you are a secondary school applicant who receives a conditional offer of admission based on interim grades, you will be required to achieve an overall average (on six (6) final grades including all required courses for your desired program) as indicated on your offer of conditional admission.

If your final average falls below this level (or its equivalent), your offer of admission will be rescinded and your registration will be cancelled.

The required minimum final average will vary from year to year and by program. This average will be stated clearly on the offer of conditional admission.

Supplementary Application Forms and Personal History

Certain Level I programs such as Arts & Science, Bachelor of Health Sciences, and Midwifery have mandatory supplementary application forms which must be completed by specific deadline dates. See Deadlines in the Application Procedures section of the Calendar for specific deadline dates.

Optional supplementary application forms are available online to applicants to other Level I programs. Applicants who do not receive an offer of admission and wish to have their supplementary information reviewed must submit the online form by the specified deadline date. Normally, supplementary information is reviewed by Faculty admission committees to aid in making decisions regarding applicants who are approximately 1-3% below the cutoffs in May. For further information refer to our web site at registrar.mcmaster.ca/external/arts-application.htm.

In some cases, letters of recommendation, personal history or other additional information may be requested by the university to aid in the admission process.

Final Admission

If you fulfill the requirements for your OSSD, including the subject requirements for your chosen program by the end of February, you may be granted an offer of Final Admission by the end of March. If you do not receive a conditional offer of admission by June 3, you may still be considered for final admission, once final marks are received, depending on availability of space in your chosen program.

Deferral of Admission

Applicants who receive both an offer of scholarship and an offer of admission and who have accepted the offer of admission through the OUAC, may apply to defer their entry for one year. Otherwise, McMaster does not normally grant a deferral of an admission offer unless special circumstances exist. Each case is evaluated on its own merits.

All requests for deferral of both admission and scholarship should be made in writing to the Office of the Registrar at McMaster by September 1, 2005 outlining the reasons for the request. Normally, decisions regarding deferral requests are not made until early August, after the receipt of all final grades.

If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period. Students will be required to re-apply through the OUAC on the 10SD application form to reactivate their application by no later than March 1 or the specific deadline date for the program, whichever is earlier.

Program Transfer After Admission

If you are admitted to one program and subsequently wish to transfer to another, you may be able to do so, provided space is available and you have met the average and subject requirements for the second program. Contact the Office of the Registrar to request a program transfer.

Subject Requirements for Specific Level I Programs

All Level I programs have enrolment limits and admission is by selection. Possession of the minimum admission requirements does not guarantee admission.


**ARTS AND SCIENCE**

You are required to complete a mandatory Supplementary Application Form which must be submitted electronically via the web at registrar.mcmaster.ca/admissions.html. The information provided enters into the selection process. Only applicants with high academic standing are selected. In recent years successful candidates had an admission average in the upper 80s or higher.

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

1. English U

2. Advanced Functions and Introductory Calculus U

3. Completion of additional U or M courses to total six credits
ADMISSION REQUIREMENTS

BUSINESS

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Advanced Functions and Introductory Calculus U
3. One of Geometry and Discrete Mathematics U or Mathematics of Data Management U
4. Completion of an additional Grade 12 U or M course to total six credits
   Principles of Financial Accounting M is recommended.
   In recent years, an average in the low 80s is expected to be required for an offer of admission.
   Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

ENGINEERING

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Advanced Functions and Introductory Calculus U
3. Geometry and Discrete Mathematics U
4. Chemistry U
5. Physics U
6. Completion of one additional Grade 12 U or M course to total six credits
   A minimum overall average in the low to mid-80s has been required for an offer of admission in recent years.
   Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

NOTE: The requirements for admission to Engineering I for 2006 are under review and changes to the requirements will be finalized by June 2005.

Subject to approval, the following are the minimum Grade 12 U and M requirements for 2006:
1. English U
2. Advanced Functions and Introductory Calculus U
3. Chemistry U
4. Physics U
5. One of Geometry and Discrete Mathematics U, Mathematics of Data Management U, Biology U or Earth and Space Science U
6. Completion of one additional Grade 12 U or M course to total six credits

Please check our web site at registrar.mcmaster.ca/phpforms/canad.php for the latest information.

HEALTH SCIENCES

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Biology U
3. Chemistry U
4. Advanced Functions and Introductory Calculus U
5. One Grade 12 U or M course from Social Sciences (Geography, History, Law, Psychology, Sociology or Humanities (Art, Drama, English, French, Music, other languages)
6. One additional U or M course in any subject area to total six courses

The selection method is by consideration of academic qualifications (minimum overall average of 88% is required for consideration) and a mandatory Supplementary Application. A review of the mandatory Supplementary Application is a very important component of the admission process. Applicants who do not complete the Supplementary Application are not considered for admission.

NOTE: Courses in technological education, science or mathematics are not acceptable as the Social Sciences or Humanities course requirement.

HUMANITIES

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 credits
   In recent years, an average in the mid-70s has been required for an offer of admission.
   The Faculty of Humanities strongly recommends that you select at least one Grade 12 U or M course from Humanities subjects (Art, Drama, English, French, Italian, other languages, History and Music) in addition to Requirement 1 above.

ART 1F03, 1F33: Entrance to any Honours Art Program requires the permission of the School of the Arts as these programs and courses have limited enrolments. Students who wish to enrol in ART 1F03 and 1F33 must first complete a portfolio interview. Portfolio interviews occur between January and April each year for entrance in September of the same calendar year. Only those students who call the Office of the School of the Arts (ext. 27571) before March 1st to book appointments for portfolio interviews will be guaranteed consideration for entrance into ART 1F03 and 1F33. (Late applicants will only be interviewed if space availability permits). Acceptance into ART 1F03 and 1F33 will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Acceptance from the University guarantee a space in the program as long as the student meets the minimum academic requirements as outlined under School of the Arts programs in the Faculty of Humanities section of the Calendar.

KINESIOLOGY

Students must apply for admission to Level I. Students considering entry into the B.Sc. stream in Kinesiology in Level II are strongly urged to carefully review the course requirements for entry to Science I.

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Biology U
3. One of Geometry and Discrete Mathematics U or Advanced Functions and Introductory Calculus U
4. Completion of additional U or M courses to total six credits
   In recent years, an average in the low to mid 80s has been required for an offer of admission.

NOTES:

I. Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

II. Students may take Level I Science courses for specific Ontario Secondary School prerequisites.

MATHEMATICS AND STATISTICS

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Advanced Functions and Introductory Calculus U
3. One of: Geometry and Discrete Mathematics U, or Mathematics of Data Management U
4. Completion of three additional U or M courses to total six credits
5. An average acceptable to the Faculty in the best six U or M credits (which must include the three U courses specified in points 1, 2 and 3 above)

It is strongly recommended that Geometry and Discrete Mathematics U be completed as the second math. Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

MEDICAL RADIATION SCIENCES

The following are the minimum Grade 12 U and M requirements:
1. English U
2. Biology U
3. Chemistry U
4. Advanced Functions and Introductory Calculus U
5. Completion of two additional U or M courses to total six credits
6. An average acceptable to the Faculty in the best six U or M credits (which must include the four U courses specified in points 1, 2, 3 and 4 above)

Physics 12 U is strongly recommended.

MIDWIFERY

As places in the Midwifery program are very limited, the admission process is competitive. Application forms are due by February 1. No exceptions will be made.
ADMISSION REQUIREMENTS

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

1. English U
2. One of Biology U or Chemistry U (both are recommended)
3. One U or M course in Social Science (History, Sociology, Psychology, Geography, Law)
4. Completion of additional U or M courses to total six credits
5. To be eligible students must obtain a minimum grade of 70% in each of the three required courses listed in points 1, 2, and 3 above AND an overall average of 70% on six Grade 12 U and M courses including the required courses.

In recent years, an average in the low mid 80's has been required for an offer of admission.

> MUSCI (0370)
   The academic requirements are the same as for Humanities. 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 honour level), including at least one from the 20th century
   3. Ear test appropriate to the Grade 8 performance level
   4. Written examination on rudiments of theory (Grade 2 level)
   5. Interview

Auditions take place between February and April. You must make arrangements with the School of the Arts for your audition.

> NURSING (6390)
   NURSING CONSORTIUM (Conestoga) (6385)
   NURSING CONSORTIUM (Mohawk) (6386)

Students interested in a McMaster (BSCN) Nursing degree have three location options: McMaster University, Mohawk College or Conestoga College. Each of the three sites offers the four-year program which uses the problem-based learning and small group tutorial educational model. For general information refer to the Collaborative B.Sc.N. (D) Stream references throughout the School of Nursing in the Faculty of Health Sciences section of the Calendar. For application instructions see the Application Procedures section of the Calendar.

Health requirements for admission: Before registration, you must file with the University, information pertaining to your state of health and immunization. Detailed instructions will be provided upon acceptance to the program.

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

1. English U
2. One of Advanced Functions and Introductory Calculus U, Geometry and Discrete Mathematics U or Mathematics of Data Management U
3. Two of Biology U, Chemistry U or Physics U
4. Two additional U or M courses to total six credits
   The admission average will be calculated on the best six Grade 12 U and M subjects, including the four required subjects. In recent years, an average in the low 80's has been required for an offer of admission at the McMaster site and at least 70% for the Conestoga and Mohawk sites.

> SCIENCE (0710)
   The following are the minimum Grade 12 U and M requirements:
   1. English U
   2. Advanced Functions and Introductory Calculus U
   3. Two of Geometry and Discrete Mathematics U, Biology U, Chemistry U or Physics U
   4. Completion of two additional U or M courses to total six credits
   5. An average acceptable to the Faculty in the best six credits (which must include the four U courses specified in points 1., 2. and 3. above).

In recent years, an average in the low 80's has been required for an offer of admission.

Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

NOTE: Mathematics of Data Management U is recommended for students interested in the Life Sciences. Geometry and Discrete Mathematics U is recommended for students proceeding to the Mathematical or Physical Sciences.

> SOCIAL SCIENCES (0720)
   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 credits
   In recent years, an average in the mid-high 70's has been required for an offer of admission.

Students interested in entering any of the Psychology or Economics degree programs should complete Advanced Functions and Introductory Calculus U.

B. Other Canadian Provinces and Territorics

McMaster welcomes applications from other provinces and territories. Applicants are required to meet the following minimum requirements and must also include the specified subject requirements for their chosen program:

Alberta, Northwest Territories, and Nunavut
   Grade 12 high school diploma with five acceptable courses numbered 30 or 31, including English 30 or 31.

British Columbia and Yukon
   Grade 12 high school diploma with four provincially examinable Grade 12 courses, including English 12. (Certain programs require Calculus in addition to the four provincially examinable courses).

Manitoba
   Grade 12 high school diploma with five courses numbered 40A or 40S, including two credits of English 40S or both English 40S and French 40S or Anglais 40S and Francais 40S.

New Brunswick
   Grade 12 high school diploma with five academic courses numbered 120, 121, or 122, including English 122.

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

Nova Scotia
   Grade 12 high school diploma with five acceptable Grade 12 courses (university preparatory Academic or Advanced), including English.

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

Quebec
   Grade 12 Diploma with six Grade 12 academic subjects numbered 60-65, including English OR Year I CEGEP with twelve appropriate academic courses, including English/anglais 603. Students with Year II or III CEGEP who have achieved the DEC will be considered for advanced credit in their chosen program.

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

Subject Requirements for Level I Programs

In addition to the minimum requirements above, satisfactory completion of the specified subject requirements for the program to which you applied is also required. Please refer to the Ontario Secondary School Course Equivalents Chart and the Subject Requirements For Level I Programs listed under Ontario in this section for more details.

The admission and residence averages are calculated based on the minimum provincial requirements above, including the prerequisite courses for the program to which you have applied. The average must meet or exceed the minimum average set by the specific program.

Early Conditional Admission

Applications are reviewed for conditional admission as soon as all required documents are received by the Admissions Office. All Canadian applicants should ensure that their schools forward Interim/ mid-year school grade reports showing marks for all courses taken during the Grade 12 year as soon as they are available. The terms and conditions of the offer of admission are stated clearly on the offer letter.
## Ontario Secondary School Course Equivalents for Students from Other Canadian Provinces

<table>
<thead>
<tr>
<th>Ontario Grade 12</th>
<th>B.C./Yukon</th>
<th>Alta./Nunavut</th>
<th>Sask.</th>
<th>Manitoba</th>
<th>+/-Que. (CEGEP)</th>
<th>Nova Scotia</th>
<th>New Brunswick</th>
<th>P.E.I.</th>
<th>N.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH U</td>
<td>English 12</td>
<td>English 30 or 40</td>
<td>English A30 and 60</td>
<td>English 40S (Two Credits or may be French 40S)</td>
<td>English 40S</td>
<td>English 12</td>
<td>English 122</td>
<td>English 61</td>
<td>English 3201</td>
</tr>
<tr>
<td>ADVANCED FUNCTIONS AND INTRCALCULUS U</td>
<td>Calculus 12</td>
<td>AP Calculus if available</td>
<td>Calculus 30. if available</td>
<td>Pre-Calculus Math 40S or AP Calculus</td>
<td>Calculus 1 and 2</td>
<td>Pre-Calculus Math 12</td>
<td>Advanced Math with Intro to Calculus 123</td>
<td>Math 61</td>
<td>Math 3207</td>
</tr>
<tr>
<td>GEOMETRY AND DISCRETE MATHEMATICS U</td>
<td>Principles of Math 12</td>
<td>Pure Math 30</td>
<td>Math 610 and C30</td>
<td>Applied Math 40S</td>
<td>Linear Algebra 1</td>
<td>Advanced Math 12</td>
<td>Trigonometry and 3-D Space 121/122</td>
<td>Math 61</td>
<td>Math 3204 or 3205</td>
</tr>
<tr>
<td>MATHEMATICS OF DATA MANAGEMENT U</td>
<td>Principles of Math 12</td>
<td>Not available*</td>
<td>Not available*</td>
<td>Applied Math 40S</td>
<td>Not available*</td>
<td>Advanced Math 12</td>
<td>Not available*</td>
<td>Not available*</td>
<td>Not available*</td>
</tr>
<tr>
<td>CHEMISTRY U</td>
<td>Chemistry 12</td>
<td>Chemistry 30</td>
<td>Chemistry 30</td>
<td>Chemistry 40S</td>
<td>Chemistry 1 and 2 coded NAWYS</td>
<td>Chemistry 12</td>
<td>Chemistry 121 or 122</td>
<td>Chemistry 621</td>
<td>Chemistry 520</td>
</tr>
<tr>
<td>PHYSICS U</td>
<td>Physics 12</td>
<td>Physics 30</td>
<td>Physics 30</td>
<td>Physics 40S</td>
<td>Physics 1 and 2 coded NAWYS</td>
<td>Physics 12</td>
<td>Physics 121 or 122</td>
<td>Physics 621</td>
<td>Physics 3204</td>
</tr>
<tr>
<td>BIOLOGY U</td>
<td>Biology 12</td>
<td>Biology 30</td>
<td>Biology 30</td>
<td>Biology 40S</td>
<td>Biology 1 and 2 coded NAWYS</td>
<td>Biology 12</td>
<td>Biology 121 or 122</td>
<td>Biology 621</td>
<td>Biology 3201</td>
</tr>
</tbody>
</table>

* Topics related to Mathematics of Data Management are found in several Math courses.
+ Applicants to Engineering I or Science I without Calculus at the time of application will be considered conditionally, providing an appropriate Calculus course is completed prior to September registration.
**AP Mathematics, AP Calculus or International Baccalaureate Calculus is also acceptable.
++Six Grade 12 credits numbered 60-65 may be substituted

### C. International Baccalaureate Diploma

Applicants who have completed 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. An overall minimum score of 28 must be achieved in order to be eligible for admission. Diploma points will be included in the overall score. Some programs require a higher score than the minimum for admission.

At the discretion of the Faculty, advanced credit of up to 18 units may be granted for completed Higher Level courses with a minimum final score of 6.

### D. Advanced Placement (A.P.) Courses/Examinations

Applicants who have completed Advanced Placement Courses will be considered for admission to a Level I program. Applicants who have completed Advanced Placement Examinations in acceptable courses with a minimum grade of 4 may be recommended for up to 18 units of advanced credit, subject to the discretion of the Faculty. An official copy of the final Advanced Placement Examination Results Report from ETS is required as part of the evaluation process.

### E. Other International Secondary School Qualifications

McMaster welcomes applications from international students. See the admission requirements for applicants from educational systems below. Refer to Application Procedures for instructions on how to apply for admission.

Applicants must arrange for official matriculation certificates to be sent well in advance of the session to which they are applying. The equivalent of first-class standing may be required for some limited enrolment programs. Clear notarized photocopies of documents in a language other than English should be accompanied by notarized English translations. Clear photocopies of English language certificates must be notarized.

You are considered for admission on an individual basis. You are strongly advised not to come to the University until you have been informed of your acceptance and have fulfilled all conditions of admission.
ADMISSION REQUIREMENTS

American High School Curriculum

Applicants from the United States of America or international schools offering the American high school curriculum must satisfactorily complete a secondary school diploma with a minimum overall average of at least 80% in the Grade 12 academic program of an accredited American high school and must present all prerequisite courses for their chosen program. Refer to Subject Requirements for Specific Level I Programs listed under Ontario in this section.

Applicants must also present results from the S.A.T. I with a minimum combined score of 1200 (minimum 580 verbal, 520 mathematics) or from ACT with a minimum composite score of 27.

General Certificate of Education (G.C.E.)

Applicants from the General Certificate of Education system require:
1. Five GCE subjects, at least two of which must be at the Advanced Level with a balance of subjects at the Ordinary Level;
2. Advanced Level subjects appropriate for your chosen program, (refer to Subject Requirements for Specific Level I Programs listed under Ontario in this section). For Science and Engineering programs, Mathematics and one of Physics or Chemistry must be offered at the Advanced Level.
3. Grades of at least C must be presented in each of the Ordinary and Advanced Level subjects. Some programs will require higher grades.

Possession of the minimum grades does not guarantee admission.
Applicants with a minimum grade of C in Advanced Level subjects may be eligible for up to 12 units of Advanced Credit which will be determined on a case by case basis, at the discretion of the Faculty.

Advanced Placement (A.P.) Courses/Examinations

See the heading Advanced Placement (A.P.) Courses/Examinations in this section of the Calendar.

International Baccalaureate Diploma

See the heading International Baccalaureate Diploma in this section of the Calendar.

Other Countries or Educational Systems

For admission requirements from other education systems, please visit the Office of International Affairs web site at www.mcmaster.ca/oa/adoREQ.htm to view our Country Specific Admissions Requirements.

F. Home Schooled Applicants

Home schooled applicants who in addition to their home schooling experience have completed six Grade 12 U and M courses of equivalent from another recognized academic jurisdiction may be considered for admission. For their program of choice providing they present the appropriate prerequisite courses from accredited schools and meet the required admission average.

All other home schooled applicants may apply for admission to Humanities I or Social Sciences I only and must present the following for consideration:
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, we will expect to see evidence of appropriate intellectual maturity.
3. Results of standardized tests such as SAT, ACT. For SAT I, we normally recommend a minimum requirement of 1200 combined score. For ACT, we normally recommend a requirement of a minimum composite score of 27.

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

2. ADMISSION/TRANSFER FROM POST-SECONDARY INSTITUTIONS

A. From Universities

Applicants presenting a strong academic record may be considered for an early conditional offer of admission.

When you transfer to McMaster University, you will normally receive credit for courses in which you have obtained at least a C (third-class honors) standing. Assessment of courses for transfer credit is subject to the guidelines of the individual Faculties.

As a transfer student, you 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 Cumulative 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. However, you must present 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.

B. From Colleges of Applied Arts and Technology

McMaster welcomes applications from students who have attended a College of Applied Arts and Technology. See the minimum admission requirements for Level I programs as listed below. You are considered for admission on an individual basis.

All Level I programs have enrollment limits and admission is by selection. Possession of the minimum admission requirements does not guarantee admission.

> ARTS AND SCIENCE
1. Completion of a three-year diploma.
2. Admission is by selection upon review of college and high school transcripts to determine eligibility.

> BUSINESS
1. Completion of a two or three-year diploma.
2. A GPA of 3.2 or better.
3. Successful completion of a Grade 12 Advanced Mathematics course or equivalent.

> ENGINEERING
1. Completion of a three-year technology diploma program.
2. A GPA of 3.2 or better.

Technician programs are not recognized for credit toward admission in Engineering I.

> BACHELOR OF HEALTH SCIENCES (HONOURS)
1. Completion of a three-year diploma.
2. Admission is by selection upon review of college and high school transcripts to determine eligibility.

> HUMANITIES
1. Completion of at least one year of work in a diploma program.
2. A GPA of 3.2 or better (You may be admitted with a lower GPA if you have completed two or more years of a diploma program).

> KINESIOLOGY
1. Completion of a three-year diploma.
2. Admission is by selection upon review of college and high school transcripts to determine eligibility.

> MIDWIFERY

For admission requirements see the heading B.H.Sc. Midwifery Program in the Faculty of Health Sciences section of the Calendar.

> MUSIC
1. Completion of a three-year diploma program in Music from Mohawk College.
2. A GPA of 3.0 or better. (Audition will be waived and, depending on grades received, applicants may receive up to 48 units of advanced credit).

> NURSING
1. Completion of an Ontario diploma in Nursing or the equivalent.
2. A GPA of 2.7 or better.
3. Selection will be based on academic qualification and a rating obtained on a questionnaire completed by the applicant. An interview may also be required.

> SCIENCE
1. Completion of a three-year technology diploma program.
2. A GPA of 3.2 or better.

Technician programs are not recognized for credit toward admission in Science I.
ADMISSION REQUIREMENTS

1. Completion of at least one year of work in a diploma program.
2. A GPA of 3.2 or better (You may be admitted with a lower GPA if you have completed two or more years of a diploma program).

BACHELOR OF TECHNOLOGY
Satisfactory completion of a three-year Mechanical Engineering Technology program.

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

Admission is by selection. If you have a first degree, you may apply to take an Honours second degree in the same subject area or a second degree in another discipline. Please note two exceptions: B.Com. and B.Com. (Honours) cannot be done as second degree programs. 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 the additional regulations for such a program in the Faculty of Science section, Second Bachelor's Degree Programs. If you are a McMaster graduate or potential graduate, you may be allowed to use the McMaster University Returning Student application. (See Application Procedures section of this Calendar.)

D. Continuing Students

To be eligible to take courses as a Continuing Student you will be expected to have at least a C (third-class standing) average, with no failures, in your final year's work (or the 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 (Studies) of the appropriate Faculty.

McMaster Graduates

If you are a graduate of a McMaster degree program and wish to become a continuing student, you do not need to apply for admissions. You may submit a registration.

Graduates from Other Universities

As a continuing student with a non-McMaster degree, you need only apply formally through for admission in the first instance. In subsequent sessions, you will only be required to register.

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

E. From Six Nations Polytechnic

McMaster University, along with four other universities, has entered into a partnership 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.

3. OTHER CATEGORIES OF ADMISSION

A. Mature Students (Part-time Admission)

If you do not qualify for consideration under one of the above categories, McMaster will assess your eligibility as a mature student. You may be considered for limited admission to part-time study, provided all of the following conditions are satisfied:
1. You are at least 21 years old, or will be, prior to the first day of classes for the session to which you apply.
2. You have not attended secondary school for at least two years.
3. You have never attended university.

The Faculty of Engineering, the Arts and Science program, Bachelor of Health Sciences program, and Kinesthetics program do not admit under the category of mature students. Admission to Level I programs in the Faculty of Science requires satisfactory standing in the Grade 12 U (or OAC) Mathematics and Science requirements, as described in the Subject Requirements For Specific Level I Programs in this section of the Calendar. The Faculty of Business requires Grade 11 U Mathematics or its equivalent.

If admitted, you may register as a mature student to take Level I courses, one course at a time. If after the first six units, you have achieved a grade of B- or better, you may petition your Faculty to be allowed to take two courses at a time.

After taking at least 12 units, your performance will be reviewed as follows:

i. If you have a Cumulative Average (CA) of at least 3.5 with no failures, you will be allowed to register for full-time study.
ii. If you have a CA of at least 3.0 with no more than six units of failure, you will be allowed to register in another six units of study and will be reviewed again after completion of these six units (see Second Review below).
iii. If you have failed more than six units, you may not continue at the University.
iv. If your CA is less than 3.0, you may not continue at the University.

Second Review:

a) If you have a CA of at least 3.5, you will be allowed to register for full-time study.
b) If you have a CA of less than 3.5, you may not continue at the University.

B. Nursing Occasional Category

If you are applying to McMaster University to take degree course work in order to become academically eligible to apply to the B.Sc.N. program, you may apply to enrol in a maximum of 12 units of academic work per calendar year. You may take courses in any Faculty, subject to prerequisites and enrolment limits. Normally, applicants to the Nursing Occasional Category must meet the same eligibility criteria as Mature Student applicants. For details see the heading Mature Students (Part-Time Admission) in this section of the Calendar.

You must have completed certificate/ diploma programs from McMaster, B.A. (Honours) or B.A., B.Sc. or B.H.Sc. with a minimum of 3.5, no more than six fails in your final year (or the equivalent in the case of academic programs taken through part-time studies), and academic records which are satisfactory to the Department and the Office of the Associate Dean (Studies) of the appropriate Faculty.

If you are a McMaster graduate, or a person with professional qualifications who wishes to take one or more graduate courses but not proceed to an advanced degree, you may apply to McMaster as a post-degree student. To enrol as a post-degree student, you must apply to the appropriate departments 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.

G. Listeners
If you are still uncertain about degree courses, you may register as a listener in a degree course at a reduced rate, but not for credit. You attend all classes, but do not complete any of the essays, tests and other formal requirements. You do not receive a grade for courses that you attend. 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.

For more information, please contact by mail: McMaster University Centre for Continuing Education, 50 Main St. E, 2nd Floor, Hamilton, Ontario, L8S 4L8 or visit the Centre. Telephone: (905) 525-9140, ext. 24321. 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.

H. Enrichment Program for Secondary School Students
If you are an outstanding secondary school student and wish to enrol in a university-level course while completing Grade 12 U and M courses in your final year of study, you may apply for the Enrichment Program. For more information contact the Office of the Registrar.

I. Former McMaster Degree Students (Returning Students)
Readmission
If you are a former McMaster student who voluntarily withdrew from an undergraduate program more than five years ago and you wish to return to your studies, you must apply for Readmission through the Office of the Registrar. Students from the School of Nursing must apply for Readmission regardless of time elapsed following voluntary withdrawal.

If you were registered within the last five years and you left the university in good academic standing, it is not necessary for you to apply for Readmission. Normally, you will be permitted to register in your previous program or another program for which you qualify.

Reinstatement
See the General Academic Regulations section in this Calendar.

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

Continuing Studies
See the heading Continuing Students in this section of the Calendar.

J. Deferral of Admission
Students whose country of residence is Canada and who received an offer of admission and accepted the offer prior to the specified deadline may apply to defer their entry to McMaster for one year. Each case is evaluated on its own merits. If a deferral is granted, it is conditional upon the student not attending a secondary or post-secondary institution during the deferral period.

All requests for deferral of admission should be made in writing to the Office of the Registrar at McMaster by September 1, 2005 outlining the reasons for the request.

Normally, decisions regarding deferral requests are made until August or September, after the receipt of all final grades.

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.

B. From Colleges of Applied Arts and Technology
Normally, if you are a well-qualified graduate of a three-year program and the college work is appropriate to your chosen university program, you could receive up to 30 units of advanced credit if you have completed a two-year program and performed well, you could receive at least six units.

Credit beyond this may be given on an individual basis where the college and university programs are in similar areas, and where your academic record warrants special consideration.

Please note that for all programs, a diploma must be completed to be eligible to receive advanced credit.

In the granting of credit, attention will be given to:

1. your 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. your secondary school record.

Each case will be considered individually on its own merits for the program desired.

Applicants presenting a strong academic record may be considered for an early conditional offer of admission.

C. Advanced Credit
Subject to the discretion of the Faculty, advanced credit may be granted if you have completed the International Baccalaureate (I.B.) Diploma, the Advanced Placement (A.P.) Program, or the General Certificate of Education (G.C.E.), and you have met the minimum requirements prescribed. Advanced credit may shorten your degree program at McMaster.

D. Credit in Courses by Special Assessment (Challenge Examinations)
If you have acquired knowledge at different type of institution or in a manner that makes assessment of your qualifications difficult, you may be 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. 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

If your first language is not English, you must demonstrate English language proficiency by achieving a score of at least 237 on the computerized test (or 580 on the written test) on TOEFL, or the equivalent on other recognized tests.

You may be exempted from this requirement if you meet one of the following requirements:

1. Attended, in full-time academic studies, an accredited Secondary School (High School) or Post-Secondary College in an English-speaking country for at least three years, OR

2. Attended, in full-time academic studies, an accredited English medium Secondary School (High School) or Post-Secondary College for at least three years, OR

3. Attended, in full-time academic studies, an accredited English medium University for at least one year, OR

4. Resided in an English speaking country for at least four years immediately prior to application to McMaster.

It is your responsibility to make all arrangements regarding the writing of the TOEFL test or other recognized tests and to have the official score report forwarded to the Office of the Registrar in a timely manner.
APPLICATION PROCEDURES

1. CATEGORIES OF ADMISSION

A. Current Ontario High School Students
If you are currently registered as a full-time day school student in an Ontario secondary school and wish to begin university studies in September:
➢ Use the Compass101 on-line application at www.ouac.on.ca/101/issola. Please consult with your secondary school guidance office regarding this application process.

B. All Other Canadian High School Students
If you are currently attending secondary school outside of Ontario or have recently completed a secondary school diploma in any Canadian province or territory:
➢ Use the OUAC 105D on-line application at compass.ouac.on.ca.

C. High School Students with International Qualifications
If you are currently attending or have recently completed a secondary school program outside of Canada:
➢ Use the OUAC 105F on-line application at compass.ouac.on.ca.

D. University/College Transfer Students
If you are currently registered in or have completed an undergraduate degree program at another university and wish to attend McMaster OR
If you are currently registered in or have completed a college diploma program and wish to attend McMaster:
➢ Use the OUAC 105 on-line application at compass.ouac.on.ca. Applicants residing in Canada (Canadian citizens, permanent residents or applicants studying in Canada on a student permit or other visa) should use the 105D form. Applicants currently residing outside of Canada who are not Canadian citizens should use the 105F form.

E. Students Applying to Nursing Consortium Programs
If you are interested in applying to McMaster's Nursing (B.Sc.N) program at the McMath College or Conestoga College sites:
➢ Apply on-line through the Ontario College Application Services (OCAS) at www.ocas.on.ca.

F. Previous McMaster Degree Students (Returning Students)
1. Readmission: If you are a former McMaster student 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 student, you must apply for readmission regardless of the amount of time that has elapsed.

2. McMaster Second Degree: If you are a McMaster graduate or potential graduate 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 registrar.mcmaster.ca/external/appli/retur.htm.

3. Reinstatement: If you are a former McMaster student who was previously ineligible to continue studies at McMaster (providing you have not attended another university nor received a college diploma since last registered at McMaster):
➢ Obtain the Reinstatement Request Form from the Office of the Registrar, Gilmour Hall, Room 108, McMaster University, Hamilton, Ontario, L8S 4L8.

4. Continuing Student: If you are a McMaster graduate and wish to become a Continuing student
➢ You do not need to apply for admission. Simply submit a Registration.

G. Visiting Students (Letter of Permission - For Credit at Another University)
If you are currently registered at another university and wish to attend McMaster to take courses on a Letter of Permission for credit at that university:
➢ Use the OUAC 105 on-line application at compass.ouac.on.ca to apply for full-time studies.
➢ Use the Part-Time Degree Studies application to apply on-line (to McMaster only) at registrar.mcmaster.ca/external/chs-partt.htm to apply for part-time studies.

H. Students Seeking Part-Time Degree Studies at McMaster Only
If you wish to begin undergraduate studies in September, January, May or June or if you wish to take undergraduate courses on a part-time basis (registered in 18 units or less):
➢ Use the Part-Time Degree Studies application to apply on-line (to McMaster only) at registrar.mcmaster.ca/external/chs-partt.htm. (If you wish to apply to other Ontario universities as well, use the OUAC 105 application to apply on-line at compass.ouac.on.ca.)

I. Students Seeking Post-Degree Studies
If you wish to register as a post-degree student (taking graduate courses but not proceeding to an advanced degree):
➢ Download the Post-Degree Studies Application from www.mcmaster.ca/graduate/deptforms.html or contact the Graduate Studies Office, Gilmour Hall, Room 212, McMaster University, Hamilton, Ontario, L8S 4L8. Use the form to apply to the appropriate academic department(s).

J. Students Applying to the 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

A complete application includes: an application form, relevant transcripts, and all other documentation stipulated in the Admission Requirements and specific Faculty sections of this Calendar, in letters from the appropriate Faculty and/or in letters from the Office of the Registrar.

You must provide McMaster with official transcripts of marks and/or certificates from all secondary and post-secondary institutions you have attended.

If you are currently attending secondary school, please see your guidance counsellor to obtain a transcript. If you have previously attended secondary school in another province, you may need to obtain the transcript of secondary school marks from the Ministry or Department of Education in that province.

Since the language of instruction at McMaster is English, we would prefer all documentation to be in the English Language. However, documentation in Canada's other official languages, French, will be accepted. Clear notarized photocopies of documents in a language other than English should be accompanied by notarized English translations. Clear photocopies of English language certificates must be notarized.

The University may rescind an admission and cancel a registration if it finds that an applicant for admission has, in the process, provided false or incomplete information.

B. Retention of Documents

All documentation submitted in support of your application for admission becomes the property of the University and is not returnable.

If you are not accepted, or you fail to enroll following acceptance, your documentation will be destroyed at the end of the admissions cycle. If you reapply, you must submit any new academic information in addition to the documentation submitted previously.

3. DEADLINES

All Level 1 programs have enrolment limits and may become full prior to published deadlines. The University reserves the right not to accept applications submitted after a program is filled. You are advised to submit your application well in advance of the deadlines given below.

A. FALL/WINTER SESSION (SEPTEMBER 2005 ENTRY)

Undergraduate programs which are not specified below: July 15

- International Applications ........................................... April 1
- International Documentation ..................................... April 1
- Domestic Applications .............................................. July 15
- Domestic Documentation .......................................... July 15
- Optional Supplementary Applications for Level 1 Programs ........................................... April 30
- Supplementary Applications ........................................ February 25
- Supplementary Applications (Level III Science Cooperative programs) ....................... February 25
- Gerontology Applications ............................................ May 15
- Health Sciences (Honours) Applications ........................................... February 25
- Supplementary Applications (Level 1) ................................ February 25
- Supplementary Applications (Above Level 1) ................................ April 29
- Health Studies ......................................................... May 15
- Kinesiology ............................................................. May 15
- Labour Studies .......................................................... May 15
- Medicine ................................................................. October 3
- Midwifery Applications .............................................. February 1
- Official Transcripts ................................................... February 1
- Midwifery Application Forms* ....................................... February 1

- Nursing (Ontario Secondary School) ..................................... May 1
- Transfers from other university Nursing Programs
  McMaster Site .......................................................... June 30
  Mohawk and Conestoga Site ........................................ May 15
- All Other Nursing applicants .......................................... February 15
- Supplementary Applications* ........................................ February 15
- Social Work
  McMaster Applicants ................................................... March 1
- All Others ............................................................... December 1
- Supplementary Applications** ...................................... March 1
- Women's Studies ....................................................... April 15

* Nursing I applicants, with the exception of current secondary school students, need to complete the mandatory supplementary application. The form is available online at www.fhs.mcmaster.ca/nursing/med/documents/undergraduate nursingsupplementaryapplication.pdf

** The Midwifery application form and application instructions are available at www.fhs.mcmaster.ca/midwifery/admissions/application.pdf

*** Please contact the School of Social Work for supplementary applications.

B. FALL/WINTER SESSION (JANUARY ENTRY)

- All Eligible Programs .............................................. November 15
- Documentation Deadline ............................................. December 1

C. SPRING/SUMMER SESSION (MAY OR JUNE ENTRY)

- May Entry (Term 1 or 3) ............................................. April 1
- Documentation Deadline ............................................. April 1
- June Entry (Term 2) .................................................... May 15
- Documentation Deadline ............................................. May 15

D. Reinstatement or Readmission Deadlines

- September Entry (all programs, except Nursing)**
  Reinstatement Deadline ............................................. June 30
  Readmission Deadline .............................................. July 15
  **Nursing Deadline .................................................. February 15

Application deadlines for January, May or June entry are as indicated under the corresponding headings above.

E. Academic Counselling for Admitted Students

If you are offered admission to a program at McMaster, you will be asked to confirm that you have accepted the offer of admission and will attend the University. Your admission package will include information regarding registration procedures.

If you are admitted to Level I, your Faculty may also arrange a visit to the University so you may meet with a Faculty advisor to set up your program. Although attendance at the summer counselling and registration sessions is not compulsory, you are strongly advised to participate. If you cannot attend one of these sessions, counselling will be provided in September.

If you are offered admission above Level I, you may arrange for academic counselling with the Office of the Associate Dean of the Faculty offering the program, or the Office of the Director of the program.

F. Enquiries

Please direct your enquiries about Application Procedures to:

OFFICE OF THE REGISTRAR
Gilmour Hall, Room 108
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-4600
www.maciQ.ca
www.macADMIT.ca
GENERAL ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

In its commitment to helping students achieve their academic goals, McMaster University makes available numerous tools and resources, including the Undergraduate Calendar, degree audits and academic advisors. However, students must assume certain responsibilities. They include:

- meeting admission requirements for a program
- applying to that program by the stated deadline
- selecting courses that meet the program requirements
- completing courses in an order that meets pre-requisite requirements
- becoming familiar with and respecting Sessional Dates (see Sessional Dates section of this Calendar), the general academic regulations (see General Academic Regulations section of this Calendar) and the Faculty/program/school specific regulations as found in the appropriate section of this Calendar

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

In addition, students are expected to:

- become familiar with and respect the Senate Policy Statements (see Senate Policy Statements section of this Calendar)
- pay, within the prescribed deadline, undergraduate fees
- be aware that changes to course load and program may affect eligibility for government financial aid (e.g. OSAP and out of province loan programs), University financial aid (e.g. bursaries and work programs) and scholarships
- consult with the Centre for Student Development in a timely manner to make the necessary accommodations for special needs.

ACADEMIC REGULATIONS

The regulations which follow are the general regulations of the University. You should read both these general regulations and your Faculty regulations which may be more specific. They appear in the Faculty sections of this Calendar.

Since the Academic Regulations are continually reviewed, we reserve the right to change the regulations in this section of the Calendar. This University also reserves the right to cancel the academic privileges of a student at anytime should the student’s scholastic record or conduct warrant so doing.

In the event there is a conflict between the program regulations and the general regulations in this chapter, the program regulations take precedence.

Faculty is 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 Office of the Associate Dean.

The Academic Regulations listed below are effective as of September 1993. These regulations apply to all undergraduate students admitted or readmitted to the University from September 1993 onward.

1. UNIVERSITY REGULATIONS

Residence Requirements

While most students will complete all their undergraduate work at McMaster University, the minimum requirements set out below apply to students who take part of their work at other institutions.

In order to obtain any four- or five-level, first undergraduate degree, you must complete at least two of the levels (approximately 60 units of work) beyond Level I, including the final level, at McMaster.

To obtain a three-level, first undergraduate degree, you may satisfy the residence requirements either:

1. by completing the final level and at least one other level (a minimum of approximately 60 units of work) at McMaster University;

2. by completing the final level (approximately 30 units of work) at McMaster University, including at least 18 units of program-specific courses.

The work used to satisfy the residence requirements must be completed at McMaster University; work taken at another university on a Letter of Permission will not count toward the minimum residence requirements.

All the work for a second bachelor’s degree must be completed at McMaster University.

Registration

The purpose of registration is to officially record your program and courses. Information on how to register will be sent to eligible students. You are responsible for ensuring that your registration information is complete, and that your course selections meet the requirements of your degree. Counseling is available to assist you in course selections.

Admission to Programs: Admission to and transfer between programs must be approved by the Office of the Associate Dean of your Faculty.

Selection of Courses: Before you select the courses you wish to take, please read the requirements for your program in the appropriate Faculty sections of this Calendar. You are responsible for ensuring that your course selection meets the requirements of your degree. If you fail to meet the program requirements, you will not be eligible to graduate.

Select the courses required for your program, then select your electives. Ensure that you have completed the courses which are listed as prerequisites, have completed or chosen courses that are listed as corequisites and that permissions have been obtained, if required. If you do not have the course requisites, you will not be able to take the course selected.

Changes to Registration: The last day for adding or dropping courses is approximately one week after classes begin for each term. (Please see the tables in the Sessional Dates section for the relevant dates for each term of the academic year.) After the above-mentioned period, you may cancel courses until the last day to withdraw without failure by default. Cancelled courses will be shown on your transcript with the notation CAN (Cancelled). After this date, you will remain registered in courses whether or not you attend classes. Your transcript will show a grade of F for any course not successfully completed.

You are responsible for ensuring that your course selection meets the requirements of your degree. You should review your personal degree audit on the working day following each time you drop or add courses, and contact a student advisor in the Office of the Associate Dean of your Faculty if you have questions. Changes to your course load may also affect your fees and your eligibility for scholarships and financial aid such as OSAP.

Limit on Level I Courses: In most Faculties, you may only obtain credit in more than 42 units of Level I courses in a three-level program, or more than 48 units in a four-level program.

Eligibility for Awards: (See Section 6 in this section and Undergraduate Academic Awards section for more information.)

Overload Work: If you wish to take more than the normal number of units prescribed for a Level, you may do so only with the permission of the Office of the Associate Dean of your Faculty. Normally, a Sessional 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. (See Financial Information section.)

Load in Spring/Summer Session: If you wish to take more than 12 units in the Spring/Summer Session, or more than six units in either term of that Session, you may do so only with the permission of the Office of the Associate Dean of your Faculty.
Students must recognize and accept the fact that, in many countries, the world, especially the newly-emerging nations, change may be the only constant. There are no guarantees that certain courses will be offered or that housing will be as one might expect. Spending time on an exchange program or an independent study abroad program offers an opportunity to develop one’s academic program and maturity in the face of new situations. McMaster University cannot be held accountable for unforeseen changes in the host country.

For information about programs and universities, please contact the Student Exchanges Officer, Gilmour Hall, Room 104.

2. ACADEMIC STANDING AND PROGRAM REQUIREMENTS

Academic Standing

Academic standing is reviewed in May and August each year for students who
1. have attempted at least 18 units of work since the last review; or
2. may be eligible to graduate at the next Convocation; or
3. were admitted under the part-time mature student provision and have attempted the first 12 units of work.

In the review of academic standing, three sets of decisions are made:
1. whether a student may graduate;
2. whether a student may continue at the University; and
3. whether a student may continue in a program.

Minimum Requirements to Continue at the University

All students must maintain a CA of at least 3.5 at each review to continue at the University. Under certain circumstances, as described below, students may be allowed to continue on academic probation for one reviewing period with a CA of 3.0 to 3.4. If your CA is less than 3.0, you may not continue at the University.

Level I Registration and Academic Standing Requirements

When you are admitted to McMaster University for a first degree, you will register in one of the following Level I programs: Arts and Science I, Business I, Engineering I, Health Sciences I, Humanities I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Science I, Midwifery I, Music I, Social Sciences I. If you enter the University without Advanced Standing being granted, you must normally attempt a full load of Level I 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 I. Decisions will be made on an individual basis, according to the special circumstances that apply in the particular case.

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

At the review when you complete the Level I work, if you attain a CA 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 registered in your original Faculty, and will be classified as a Level I regular 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 CA 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 I

Admission to the programs beyond Level I is based on performance in Level I. 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 CA of at least 6.0 to continue in the program. If your CA 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 CA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as an irregular student but cannot take Arts & Science Program courses. At the end of that period you may apply for readmission to the Arts & Science Program.

If your CA is 3.0 to 3.4, you will be placed on academic probation. You may continue in the program for one reviewing period as an irregular student but cannot take Arts & Science Program courses.

You may be on academic probation only once. (Potential graduates may not continue at the University.)

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

> SCHOOL OF BUSINESS

**Business I:** For specific admission requirements to Commerce II see Program Notes under the heading Programs in the School of Business section of this Calendar.

If you are not admitted to Commerce II at the end of Business I, you have the following options available to you.

If your CA is 3.5 or greater, although you may not continue into a Commerce program either now or in the future, 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 an irregular 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 the office for more details.

If you are not admitted to another Faculty you may register in the School of Business as an irregular student for one reviewing period. During that period you may be enrolled in Commerce Program courses, but you will not be eligible for consideration for admittance to Commerce II or readmittance to Business I. The purpose of your registration as an irregular student is to make yourself eligible for admission to a program outside the School of Business.

If you have a CA of 3.0 to 3.4, you will be on academic probation and may continue at the University for one reviewing period as an irregular student in the School of Business but will not be permitted to take any Commerce courses. At the end of your probation period you will not be eligible for consideration for Commerce II or readmittance to Business I. The purpose of the probation period is to make yourself eligible for a program outside the School of Business.

If you have a CA 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.

**Commerce II:** Upon satisfactory completion of Commerce II, qualified students may continue in one of the following programs:

**Honours B.Com. Program:** You must have a CA of at least 6.0 to enter the Honours B.Com. program in Level III or IV or to continue in the Honours B.Com. program. If your CA is 5.5 to 5.9, 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 (as specified in the Glossary section of this Calendar). If your CA is 3.5 to 5.4, you may transfer to the B.Com. program. If your CA is less than 3.5, you may not continue at the University. Regardless of your CA, if you receive more than six units of failure (in required or elective course work) after entry to Level II Commerce, you will not be permitted to continue in a program in the School of Business.

**B.Com. Program:** You must have a CA of at least 4.0 to continue in the B.Com. program. If your CA is 3.5 to 3.9, you are permitted to continue in the B.Com. program on program probation for one reviewing period (as specified in the Glossary section of this Calendar). If your CA is less than 3.5, you may not continue at the University. Regardless of your CA, if you receive more than six units of failure (in required or elective course work) after entry to Level II Commerce, you will not be permitted to continue in a program in the School of Business.

**FACULTY OF ENGINEERING**

**B.Eng. Programs:** To be admitted to a Level II Engineering program, you must have completed all Engineering I program requirements and have obtained a minimum CA of 4.0.

If your CA is 4.0 to 4.9, you may remain in the program, but will be placed on program probation for one reviewing period. At the end of that period you may apply for readmission to the Arts & Science Program.

If your CA is 5.5 to 5.9, you may remain in the program, but will be placed on academic probation for one reviewing period. At the end of that period you may apply for readmission to the Arts & Science Program.

**Sciences Programs:** You must have a CA of at least 3.5 to continue in a Program Beyond Level I. If your CA is 3.0 to 3.4, you may remain in the program, but will be placed on program probation only once. (Potential graduates may not continue at the University.)

**Honours B.Kin. Program:** To be admitted to a Level II Honours Kinesiology program, you must have completed all Kinesiology I program requirements with a Cumulative Average of at least 5.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03. If you fail to meet these admission requirements but your C.A. is at least 3.5, you may register in the Level II Kinesiology (General) program. During this time, you will be given the opportunity to complete Kinesiology courses in an attempt to qualify for Honours Kinesiology at your next review. Upon registration in the Honours Kinesiology program, you must have a C.A. of at least 6.0 to continue. If your C.A. is 5.5 to 5.9, you may remain in the Honours program, but will be placed on program probation for one reviewing period. You may be on probation only one time. If your CA is 3.0 to 5.4, you must transfer to another program for which you qualify. If your CA is less than 3.0, you may not continue at the University.

**B.Kin. Major Program:** The B.Kin.Major Program is being phased out. Currently registered students must have a CA of at least 4.0 to continue in the B.Kin.Major program. If your CA is 3.5 to 3.9, 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 CA is 3.0 to 3.4, you must transfer to another program for which you qualify, and be placed on academic probation. If your CA is less than 3.0, you may not continue at the University.

**B.A. Program:** You must have a CA of at least 3.5 to continue in, or graduate from, a three-level B.A. program. If your CA 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 CA is less than 3.0, you may not continue at the University.

**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. Program; B.A./B.S.W. and B.S.W. Programs:** You must have a CA of at least 6.0 to continue in an Honours program. If your CA is 5.5 to 5.9, 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 CA is 3.0 to 3.4, you must transfer to another program for which you qualify. If your CA is less than 3.0, you may not continue at the University.
> FACULTY OF SCIENCE

**Honours B.Sc. Programs:** You must have a CA of at least 6.0 to continue in an Honours B.Sc. program. If your CA is 5.5 to 5.9, you may remain in the Honours B.Sc. program, but will be placed on program probation. You may be on program probation for only one reviewing period. If your CA is 3.0 to 5.4, you must transfer to another program for which you qualify. If your CA falls below 3.0, you may not continue at the University.

**B.Sc. Programs:** You must have a CA of at least 3.5 to continue in a three-level B.Sc. program. If your CA is 3.0 to 3.4, you may continue on academic probation for one reviewing period. You may be on academic probation only once. If your CA is less than 3.0, you may not continue at the University.

**M.R.Sc. Program:** You must have a CA of at least 5.0 or permission of the Committee of Instruction (Chair Medical Imaging, Coordinator Radiography Specialization, Coordinator Ultrasound Specialization, Coordinator Medical Radiation Sciences)

### Reinstatement

If you are ineligible to continue at the university (i.e. the result of your last report was May Not Continue at University) and you wish to apply for Reinstatement, please contact the Office of the Registrar. You will be required to submit the following information along with your application:

1. A summary of the relevant circumstances surrounding your academic situation during the last session attended.
2. Reasons for reinstatement at this time.
3. Reasons for selection of courses/program indicated.
4. Activities since last registered at the University, including all academic work.

Some Faculties may require a supplementary application form or letters of reference. Consult the appropriate Faculty section in this Calendar. Reinstatement is not guaranteed.

If at any review after reinstatement your Cumulative Average falls below 3.5, you will be required to withdraw from the University for a period of at least 12 months.

### Transfer Between Programs

If you wish to transfer from one program to another, you should discuss the possibility with the appropriate Office of the Associate Dean to which you wish to transfer. It is possible that full credit may not be given at the time of transfer between Faculties and additional courses may need to be taken.

### Minors

If you are enrolled in a four- or five-level program (with the exception of the Midwifery Education and the Medical Radiation Sciences programs which are three-level programs offered over a four-year period), you are eligible to obtain a Minor in another subject area, provided that the subject area is not integral to the requirements of your degree program. You should check the calendar requirements statement for your program in the case of Science programs, or check with your Faculty in the case of other programs, for subject areas that are excluded from consideration as a Minor in your program.

If you wish to receive a Minor, you should check the information under the heading Minor in the appropriate department’s listing. McMaster also offers Interdisciplinary Minors in Archaeology and Jewish Studies. (See Interdisciplinary Minors and Thematic Areas section.) You will be responsible for ensuring that you register in the required Minor courses. Normally, you must complete a minimum of 24 units in the Minor subject. No more than six of these units can be at Level 1, unless otherwise stated in the specific requirements of the minor. At least 18 units must be completed at McMaster.

In the final year of your program, when you file your Graduation Information Card, you must indicate your desire to receive a Minor in the chosen subject. The Faculty Reviewing Committee will verify that the requirements have been met. If you are successful, your transcript will contain a designation for Minor in that area. See Sessional Dates section for deadlines. Minors cannot be revoked once approved. (See Note 4 under Second Bachelor’s Degree Programs.)

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**Second Bachelor’s Degree Programs**

For admission to a second undergraduate degree program you must hold a first undergraduate degree whether it be a three-level, four-level, five-level degree. The minimum admission requirements and program of study for the second degree depend on the subject areas of the two degrees.

**Honours Degree following a Three-Level Degree in the Same Subject:** For entry, a Cumulative Average of at least 6.0 in the first degree program is required. If admitted, you must take at least 30 units beyond the first degree, including all Honours requirements specified for the program. In some Faculties, this includes a minimum number of units of work in the discipline.

**B.A. or B.Sc. in Another Subject:** For entry, you must meet the admission requirements for the program. If admitted, you must complete at least 30 units beyond the first degree, including all program requirements. In some Faculties, this includes a minimum number of units of work in the discipline.

**B.Mus/Honours B.A. or B.Sc. in Another Subject:** For entry, you must meet the admission requirements for the program and have a Cumulative Average of at least 6.0. If admitted, you must complete at least 60 units beyond the first degree, including all Honours requirements specified for the program.

**B.Eng:** For entry, you must meet the admission requirements for the program. If admitted, you must complete at least 60 units beyond the first degree including all program requirements. (Admission to a second B.Eng. degree is not possible if your first degree is in Engineering.)

**B.H.Sc. (Honours):** A Cumulative Average of at least 7.0 (minimum overall average of B-) will be required for admission. Previous university undergraduate studies must involve a significant component of work in subject areas unrelated to the B.H.Sc. (Honours) Program. Certain subject combinations may not be permitted. If admitted, you must complete at least 60 units beyond the first degree including all Honours requirements specified for the program.

**B.Kin. Major:** The B.Kin. Major Program is being phased out. Currently registered second degree students must complete at least 60 units beyond the first degree including all program requirements. Eligibility to transfer to the Honours B.Kin. program or the Honours Kinesiology (B.Sc.) program as a Second Degree is determined upon completion of 30 units of work.

### NOTES

1. All work for the second degree must be completed at McMaster University.
2. Some additional regulations are applied by the Faculty of Science involving cognate disciplines, e.g., Mathematics and Statistics. These are described in the Faculty of Science section of this Calendar.
3. A second degree is not available in all subject areas. See individual Faculty regulations for further information.
4. Minors will not be revoked to permit later registration in a three-level second degree in the same subject. Students may return for a second degree in a subject in which they have obtained a Minor, but only at the Honours level. (See Minors above.)
5. Extra courses taken while you are registered 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.
6. You must meet the same standards for continuation and graduation as are applied to students registered in a first degree program.
7. Credit from the first two degrees cannot be applied to a third undergraduate degree. To obtain a third undergraduate degree you must take the complete program, i.e., approximately 90 units for a three-level degree and approximately 120 units for a four-level degree.
Deans' Honour List

Each year outstanding students with a minimum average of 9.5 on at least 30 units (usually their Sessional Average) are named to the Deans' Honour List. Students will be assessed at the reviewing period (either after the Fall/Winter or Summer session) when a minimum of 30 units has been completed since the previous Deans' Honour List review. At each review the assessment will be based on all units completed since the previous Deans' Honour List review.

Provost's Honour Roll

Each year outstanding students with a 12.0 average on at least 30 units (usually their Sessional Average) are named to the Provost's Honour Roll. Students will always be assessed at the same time and using the same average calculation as applied to the Deans' Honour List assessment. (See Deans' Honour List section above.)

3. PETITIONS FOR RELIEF FOR MISSED TERM WORK AND FOR DEFERRED EXAMINATIONS

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 petition the office of the Associate Dean of their Faculty (Faculty office) for special consideration when there are compelling medical, personal or family reasons to justify an exception to University regulations. Supporting documentation will be required but will not ensure approval of the petition. The authority to grant petitions lies with the Faculty 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.

Procedure 1: Petitions for Relief for Missed Term Work

1. A student may submit a Petition for Special Consideration through the Faculty office for relief from the academic consequences of missed term work based on compelling medical, personal or family reasons before or immediately after the work is missed, normally within five working days.
2. 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 work and the doctor must verify the duration of the illness. Relief will not be available for minor illnesses.
3. 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, factors such as the following may be taken into account: 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.
5. After the third Petition for Special Consideration a student will be asked to meet with the Associate Dean (or delegate).
6. The University reserves the right to require students to obtain medical documentation from the Campus Health Centre.
7. It is the student's responsibility to check with the Faculty office for a decision on the petition.
   If the petition is granted, the Faculty office will notify the instructor(s) recommending relief.
8. The student must contact the instructor promptly to discuss the appropriate relief.
9. It is the prerogative of the instructor of the course to determine the appropriate relief for missed term work in his/her course.

Procedure 2: Petitions for Deferred Examinations

1. Once a student has completed an examination, no special consideration will be granted. A student who misses an examination or is unable to complete an examination may submit a Petition for Special Consideration requesting a deferral of the examination to the Faculty office, normally within five working days of the missed examination. The petition must be based on compelling medical, personal or family reasons.
2. See steps 1. - 6. in Petitions for Relief for Missed Term Work above.
3. It is the student's responsibility to check with the Faculty office for a decision on the petition for a deferred examination.
4. 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 (available on MUGSI) and on the student's grade report.
5. Deferred examinations are written during the next official University examination period. Default of the deferred examination will result in a failure for that examination except in case of exceptional circumstances (see Petitions for Missed Deferred Examinations below).

Procedure 3: Petitions for Missed Deferred Examinations

1. A student who cannot write a deferred examination on the scheduled date may submit a Petition for Special Consideration to the Faculty office. The petition must be based on compelling medical, personal or family reasons.
2. A committee of Associate Deans or delegates will consider petitions from students registered in any undergraduate program. The steps in this procedure will be consistent with those used to consider a student's eligibility for a deferred examination.

Appeals of Petitions for Special Consideration (Procedures 1-3 above)

In accordance with the Student Appeal Procedures, decisions made on Petitions for Special Consideration are final and cannot be appealed except if a student feels his/her human rights have been violated, in which case there is an appeal to the Senate Board for Student Appeals.

4. EXAMINATIONS

The Office of the Registrar schedules and conducts most final examinations and December mid-year examinations for full-year Level I courses. See the Sessional Dates section in this Calendar. Examinations organized by the Office of the Registrar during these dates may be scheduled in the morning, afternoon, or evening, Monday through Saturday.

Other instructor-scheduled tests and examinations may be held throughout each session but may not be scheduled during the last five days of the terms of the Fall/Winter session, or between the last day of classes for the term and the first day of the examination schedule, except as approved by the Undergraduate Council. Assignments worth more than ten percent of a final course grade cannot be assigned during this ban period, and take-home examinations worth more than ten percent of a final course grade cannot be due during the ban period. Tests that are exempt from the ban must:
   a) be a part of a process of continuous or periodic assessment through the term; and
   b) be held in the normally scheduled class or lab slot; and
   c) be worth no more than ten percent of the final course grade.
See the Sessional Dates section of this Calendar.
Examinations Conducted by the Office of the Registrar

- McMaster student photo identification cards are required at all examinations. If you arrive at an examination without a proper I.D. card you will be required to have a substitute card made before being seated. There is a fee for this service. No additional time is given to compensate for examination time missed.
- You may only use books, papers or instruments during an examination if they are specifically prescribed on the examination paper.
- You may leave an examination only after the first 45 minutes have elapsed.
- If you become ill during an examination, you may be excused by a presider.
- If you miss or leave an examination for medical reasons you must submit a Petition for Special Consideration form with supporting documentation of illness, personal or family reasons, to the Office of the Associate Dean of your Faculty normally within five working days of the missed examination.
- If you are late for an examination, report immediately to the presider in your examination location or to the Examinations Section of the Office of the Registrar.
- If you miss or leave an examination for any other reason, report immediately to the Office of the Associate Dean of your Faculty. You will be advised whether you can write your examination before the end of the examination schedule, or whether you must apply for special consideration by submitting documentation to the Office of the Associate Dean of your Faculty.
- Special examination arrangements may be made upon application to the Examinations Section of the Office of the Registrar in some circumstances, such as:
  - a conflict with religious obligations
  - a conflict between two Registrar-scheduled examinations
  - a schedule with three examinations in one calendar day or three consecutive examinations

Application must be made at least 10 working days before the scheduled examination date and acceptable documentation must be supplied. Failure to meet the stated deadline may result in the denial of special arrangements.

- Students with disabilities are required to inform the Centre for Student Development of accommodation needs for examinations on or before the last date for withdrawal from a course without failure by default. (See the Sessional Dates section of this Calendar.) This allows sufficient time to verify and arrange appropriate accommodation. Failure to meet the stated deadline may result in the denial of special accommodation. See Academic Facilities, Student Services and Organizations—Centre for Student Development section of this Calendar.
- Examinations are not rescheduled for purposes of travel. You must arrange to be available for the entire range of examination dates as listed in the Sessional Dates section.

Deferred Examinations

The decision to grant you a deferred examination will be reported on your grade report.

In the case of examinations 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 Examinations Section of the Office of the Registrar.

Examination and confirmation deadline dates appear in the Sessional Dates section of this Calendar.

For further information, please see Petitions for Deferred Examinations in this section of the Calendar or refer to the website at: http://registrar.mcmaster.ca/internal/examt/deferexam.htm

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5. GRADING SYSTEM

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

- Before submitting a failing grade, your instructor reassesses whatever examples of your work are available.
- To satisfy prerequisite requirements, a grade of at least D- is required, unless otherwise stated.
- You retain credit for all courses with grades of D- or better, except in those programs for which a higher grade is specified in the program regulations.

Since September 1982, the grading scale has been:

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

Example of a Weighted Average Calculation, using the grade points and units for courses completed:

<table>
<thead>
<tr>
<th>Course Grade</th>
<th>Grade Points</th>
<th>Course Units</th>
<th>Weighted Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-</td>
<td>10</td>
<td>x 6</td>
<td>= 60</td>
</tr>
<tr>
<td>C+</td>
<td>6</td>
<td>x 3</td>
<td>= 18</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>x 6</td>
<td>= 48</td>
</tr>
<tr>
<td>B+</td>
<td>9</td>
<td>x 3</td>
<td>= 27</td>
</tr>
</tbody>
</table>

Total: 18 x 153 = 18 = 8.5

6. UNDERGRADUATE ACADEMIC AWARDS

To qualify for In-Course Awards, you must be registered as a full-time student during the Fall/Winter session. A Sessional Average will be computed to determine your eligibility for these awards. Terms and conditions of awards for full-time and part-time studies are defined in the Undergraduate Academic Awards section.
7. GRADUATION

Graduation With Distinction standing may be awarded if a minimum CA of 9.5 is achieved in a degree program. The following Cumulative Averages are required to graduate:

- B.A. — 3.5
- B.A. (Honours) — 5.0
- B.A. / B.S.W. and B.S.W. — 6.0
- B.Arts Sc. and B.Arts Sc. (Honours) — 5.0
- B.Com. — 4.0
- B.Com. (Honours) — 5.0
- B.H.Sc. (Honours) — 5.0
- B.Kin. (Honours) — 5.0
- B.Kin. Major — 4.0
- B.Mus. (Honours) — 5.0
- B.Sc. — 3.5
- B.Sc. (Honours) — 5.0
- B.Tech. — 3.5

Please see the graduation regulations for individual Health Sciences programs in the Faculty of Health Sciences section. If, at the time of graduation, you fail to meet the requirements for an Honours degree, you may seek to transfer to another program.

If you are registered in Level III of an Honours program and wish to transfer to a three-level degree program to be eligible for graduation at the next Convocation, you must apply to the appropriate Office no later than 30 days prior to the Graduation Information Card due date.

If permission is granted, you must go to the Office of the Registrar and complete a Graduation Information Card.

During the session in which you expect to complete your graduation requirements, you must file a Graduation Information Card in the Office of the Registrar by mid-February for Spring Convocation and by mid-July for Fall Convocation. Deadline dates appear in the Sessional Dates section of this Calendar.

If you wish to apply to receive a Minor in addition to your major program of studies, you must indicate this on your Graduation Information Card.

You must take the degree at the Convocation immediately following the completion of the appropriate degree work.

8. RECORDS POLICY

Transcripts

Transcripts, which summarize your academic career at McMaster University, are available from the Office of the Registrar.

Transcripts
Office of the Registrar
Room 108, Gilmour Hall
McMaster University L8S 4L8
Phone: (905) 525-4600
FAX: (905) 527-1105

NOTE: Academic sessions do not appear on transcripts until a registration has been academically and financially approved and the first day of classes in the session has passed.

Requests for transcripts may be made in person, by mail, or by fax. To protect the confidentiality of student records, all requests must be signed by the student whose transcript is being requested.

There is no charge for transcripts. However, charges to have transcripts faxed or couriered from McMaster will be applied. Fees for faxed and couriered services can be found on our web site at http://registrar.mcmaster.ca/internal/services/transrequest.htm. Fees are due at the time that transcripts are ordered. All mail or fax requests must include either a cheque, money order, or credit card number with the expiry date, name and signature of card owner (Visa and MasterCard, only).

Requests are filled promptly on receipt of payment. Official transcripts are usually delivered to other Ontario universities by courier and elsewhere by Canada Post. To avoid disappointment, please allow at least five business days for processing plus delivery time. Transcripts will not be issued if you have outstanding accounts at the University.

Retention Policy

When you apply for admission to McMaster University and register in programs at the University, you accept the University's right to collect pertinent personal information. The information is needed to assess your qualifications for entry, establish records of performance in programs and courses, provide the basis for awards and governmental funding, and to assist the University in the academic and financial administration of its affairs.

All documentation that you submit to the University in support of applications for admission, residence accommodation or financial awards, or any appeals or petitions, becomes the property of the University. You are notified of your academic performance in courses by grade reports provided by the Office of the Registrar. All information needed to produce official transcripts is maintained permanently.

If you are not accepted, or if you fail to enrol following acceptance, your documentation is normally destroyed at the end of each admissions cycle. If you reapply, you must resubmit any previous documentation and any additional academic information.

Supporting documentation relevant to your admission to, and performance at, the University will normally be eliminated seven years after the end of your enrolment at the University (regardless of whether you graduate).

Notification of Disclosure of Personal Information to Statistics Canada

Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education. In order to carry out such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number), student demographic characteristics, enrollment information, previous education and labour force activity.

The Federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used only for statistical purposes, and the confidentiality provisions of the Statistics Act prevent the information being released in any way that would identify a student.

Students who do not wish to have their information used are able to ask Statistics Canada to remove their identification and contact information from the national database. For further information, please see Statistics Canada's web site at: http://www.statcan.ca or write to the Postsecondary Section, Centre for Education Statistics, 17th Floor, R.H. Coats Building, Tunney's Pasture, Ottawa, K1A OT6.
SENATE POLICY STATEMENTS

The University has defined its expectations of students in both the academic and non-academic life of the University community, and developed procedures to ensure that all members of the community receive equitable treatment. An electronic version of the following policies is available at the following address: http://www.mcmaster.caipolicy.

The policies consist of:
- Academic Integrity Policy
- Student Appeal Procedures
- Student Code of Conduct
- Alcohol Policy and Residence Community Alcohol Policy
- Sexual Harassment Policy
- Anti-Discrimination Policy
- Rights and Responsibilities of Undergraduate Students During Work Stoppages That Substantially Disrupt Academic Activities
- Welcome Week Regulations
- General Regulations for McMaster University Libraries
- Policy for Academic Accommodation of Undergraduate Students with Disabilities
- Senate Resolution on Course Outlines
- Policy on Undergraduate Student Access to Final Examinations
- Guidelines on Access to Information and Protection of Privacy (including Security of Student Data)
- Petition for Relief for Missed Term Work and for Deferred Examinations (See also Section 3 in the General Academic Regulations section of this Calendar.)

The following provides a summary of the major policies which pertain to students. Complete versions of the policies may be obtained from the University Secretariat, Room 210, Gilmour Hall.

Academic Integrity and Academic Dishonesty

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. Scholars at McMaster demonstrate integrity in many ways, including the following:
- They do not take credit that is not earned.
- They do not put at a disadvantage in their pursuit of knowledge. They do not withhold material that should rightly be available to all.

The University states unequivocally that it demands scholarly integrity from all of 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 not qualitatively different from other types of dishonesty. It consists of misrepresentation by deception or by other fraudulent means. 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.

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.

Student Appeal Procedures

The University has a responsibility to provide fair and equitable procedures for the lodging and hearing of student complaints arising from University regulations, policies and actions that affect them directly. The following procedures are intended to provide a mechanism to remedy injustices and may culminate in a hearing before the Senate Board for Student Appeals.

However, students are strongly encouraged to pursue any complaint or grievance through informal channels, before following the formal procedures. Experience has shown that many complaints can be resolved satisfactorily through informal communication.

Students should seek remedies for their grievances as promptly as possible, and must do so within six months of the end of the academic year in which the grievance has occurred. The end of the academic year is August 31.

Decisions on admission or readmission to the University may not be appealed, except under the conditions described in the next paragraph. However, applications for review of a decision on admission or readmission or on the granting of transfer credits. To initiate such a review, the applicant must write to the Registrar within one week of receiving the original decision and state the grounds for seeking the review.

Applicants who have been refused readmission to a degree program may appeal the decision, using the procedures described in the Student Appeal Procedures, if the following two conditions have been met:
1. the applicant withdrew voluntarily from the University, and
2. the applicant alleges error or injustice on grounds other than academic judgment.

Student Code of Conduct

McMaster University is a community dedicated to furthering learning, intellectual inquiry, and personal and professional development. Membership in the community implies acceptance of the principle of mutual respect for the rights of others and a readiness to support actively an environment conducive to intellectual growth, both for individuals and for the whole University.

The Student Code of Conduct contains regulations which outline the limits of conduct considered to be consonant with the goals and the well-being of the University community, and defines the procedures to be followed in cases of violation of the accepted standards.

Alcohol Policy and Residence Community Alcohol Policy

The intention of the University Alcohol Policy is to promote attitudes towards alcohol use that are consistent with an atmosphere of civility and to discourage alcohol-related behaviour on campus which is abusive to oneself or to others. Students are accountable for their own decisions regarding alcohol use; they are also responsible for knowing, understanding, and complying with applicable University policies and provincial laws related to alcohol.

The University Policy describes general and minimal requirements for the use of alcoholic beverages on campus. More specific guidelines concerning alcohol use are available from other offices on campus such as the Housing Office (for residence hall events), and the Vice-President (Administration) for other events including faculty/staff events.
Statement on Human Rights

McMaster University wishes to ensure the full and fair implementation of the principles of the Ontario Human Rights Code which state:

Every person has the right to equal treatment with respect to services, goods and facilities, without discrimination because of race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, age, marital status, family status or handicap.

The University Senate has approved Policies on Sexual Harassment and on Anti-Discrimination which outline the procedure to be followed in the event that a student has a complaint regarding an alleged violation of human rights.

Sexual Harassment Policy

The University recognizes its legal and moral responsibility to protect all of its members from sexual harassment and to take action if such harassment does occur. To these ends it has developed a policy on, and procedures for, dealing with complaints of sexual harassment, including a range of disciplinary measures up to and including dismissal. Copies of the Policy and Procedures on Sexual Harassment may be obtained from the University Secretariat, Gilmour Hall, Room 210.

Anti-Discrimination Policy

McMaster University affirms the right of every member of its constituencies to live, study and work in an environment that is free from discrimination and harassment. Discrimination and harassment are incompatible with standards of professional ethics and with behaviour appropriate to an institution of higher learning.

The intention of this policy and its procedures is to prevent discrimination and harassment from taking place, and where necessary, to act upon complaints of such behaviour promptly, fairly, judiciously and with due regard to confidentiality for all parties concerned. Copies of the Anti-Discrimination Policy may be obtained from the University Secretariat, Gilmour Hall, Room 210.

Policy on Rights and Responsibilities of Undergraduate Students During Work Stoppages That Substantially Disrupt Academic Activities

The University recognizes that a work stoppage at the University that substantially disrupts academic activities may have a significant impact on the ability of students to carry out their studies. To this end, it has developed a policy that recognizes the need to treat students fairly and equitably and, at the same time, to protect the academic integrity of the University's courses and programs.

Guidelines for Student Evaluation

Instructors for all courses except supervised study, thesis and independent research/study courses are required to return graded material equal to a minimum of 10% of the session's total mark prior to the final date by which a student must withdraw from a course without academic penalty.

Student Records

The University has developed operating procedures which are designed to protect the confidentiality of undergraduate student records.

The following have been defined as public information: student name, sex, degrees earned and when, undergraduate awards earned and when, and whether a student is full-time or part-time. Additional information may be used by the various offices and officials of the University where a need to know has been established.

Information about applicants for admission who do not gain admission will be kept for a limited period only. A separate admission file is maintained for those admitted to the MD, Midwifery and Nursing programs.

While a student may have access to his or her file, documents received from a third party in confidence are not normally placed in the student's file. But, in those cases where they have been, they will not be disclosed.

The operating procedures also define the circumstances under which information may be disclosed to: judicial and law enforcement agencies, the Ontario Universities' Application Centre, Statistics Canada, agencies charged with the recovery of funds provided under OSAP or CSL, and secondary schools.

Transcripts are issued only with the consent of the student. Addresses will not be released except under provisions noted above.
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 or approval of your registration. Academic requirements have to be fulfilled before your registration is completed.

If you are a new student, you may not forward academic fees to Financial Services until you have received your Letter of Acceptance.

You should not send residence fees unless you have received notification of acceptance.

You are responsible for the fees for each academic session. No fee credits can be transferred from one academic session to another.

It is the policy of the University not to accept registrations 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 in effect at the time of publication of this Calendar. The University reserves the right to amend the fees and regulations at any time.

UNDERGRADUATE FEES

If you are a full-time student, fees cover your portion of the tuition cost, registration, library, diplomas, 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.


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

Base Per Unit Tuition Per Faculty

<table>
<thead>
<tr>
<th>Faculty/Program</th>
<th>Canadian/Permanent Resident Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>137.77 per unit 415.00 per unit</td>
</tr>
<tr>
<td>Business and</td>
<td>150.86 415.00</td>
</tr>
<tr>
<td>Commerce</td>
<td>162.76 489.44</td>
</tr>
<tr>
<td>Engineering</td>
<td>164.85 534.52</td>
</tr>
<tr>
<td>Eng. Mgt. III, V</td>
<td>162.76 489.44</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>137.77 415.00</td>
</tr>
<tr>
<td>(Honours)</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>137.77 365.00</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>137.77 365.00</td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
</tr>
<tr>
<td>Medical Radiation Sciences</td>
<td>137.77 415.00</td>
</tr>
<tr>
<td>Nursing</td>
<td>137.77 415.00</td>
</tr>
<tr>
<td>Science</td>
<td>137.77 415.00</td>
</tr>
</tbody>
</table>

Supplementary Fees

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

- Athletics & Recreation Activity Fee $4.20
- Administrative Services Fee $0.98
- McMaster Association of Part-Time Students Fees: Organization Fee $5.00
- Total Charge per unit $10.18
- Nursing Students Add: Immunization Fee $20.00
- Learning Resource Fee $7.65

STUDENTS TAKING 18 UNITS OR MORE PAY:

Students registered in 18 or more units at ANY time during the session will be responsible for the following fees.

- Athletics & Recreation Activity Fee $94.50
- Student Health Service $48.35
- Ontario Public Interest Research Group (OPIRG) $6.38

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 $100.58
- Health Plan Premium* $45.00
- H.S.R. Bus Pass $65.00
- WUSC Student Refugee Fee $1.25
- Ancillary Fee for CFMU-FM $14.76
- Ancillary Fee for MARMOR Yearbook $7.68
- Incite Publication $0.80
- Sub Total $384.30

*NOTE: Students who can prove comparable coverage may opt out of the McMaster Student Union Health Plan by filling out a form at the McMaster Students Union Information Centre (The Compass, Main Floor, McMaster University Student Centre) before the end of September.

Plus:

- McMaster Student Union’s University Student Centre Building fee ($2.71 per unit), to a maximum of $81.30
- Student Services Fee ($3.69 per unit), to a maximum of $110.70.
- Administrative Services Fee ($0.98 per unit), to a maximum of $29.40.
- Athletics and Recreation Building Fee ($2.05 per unit), to a maximum of $61.50.

And Faculty Specific Society/Support Fees as follows:

- Arts & Science 28.00
- Bachelor of Health Sciences (Honours) 26.00
- Engineering 184.00
- Humanities 15.00
- Nursing 188.34
- Science 35.00
- Social Sciences/Kinesiology 50.00

Canadian Citizens and Landed Immigrant Students (Examples of fees for full academic load.)

<table>
<thead>
<tr>
<th>Faculty/Program</th>
<th>Tuition Fee*</th>
<th>Fees</th>
<th>Total Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>4,133.10</td>
<td>695.20</td>
<td>4,828.30</td>
</tr>
<tr>
<td>Business and</td>
<td>4,526.40</td>
<td>851.20</td>
<td>5,377.60</td>
</tr>
<tr>
<td>Engineering</td>
<td>5,371.08</td>
<td>799.20</td>
<td>6,170.28</td>
</tr>
<tr>
<td>Eng. Mgt. III, V</td>
<td>4,945.50</td>
<td>799.20</td>
<td>5,744.70</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>4,133.10</td>
<td>693.20</td>
<td>4,826.30</td>
</tr>
<tr>
<td>(Honours)</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Humanities</td>
<td>4,133.10</td>
<td>692.20</td>
<td>4,815.30</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>4,133.10</td>
<td>717.20</td>
<td>4,850.30</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>4,133.10</td>
<td>717.20</td>
<td>4,850.30</td>
</tr>
<tr>
<td>Medical Radiation</td>
<td>4,133.10</td>
<td>712.20</td>
<td>4,845.30</td>
</tr>
</tbody>
</table>

* You will be assessed extra fees for units taken over your program maximum load.
### Health Sciences

Visa students

(Examples of fees for full academic load)

<table>
<thead>
<tr>
<th>Tuition Fee*</th>
<th>Fees</th>
<th>Total Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>12,450.00</td>
<td>695.20</td>
</tr>
<tr>
<td>Business and Commerce</td>
<td>12,450.00</td>
<td>851.20</td>
</tr>
<tr>
<td>Engineering and Eng. Mgt. III, V</td>
<td>16,151.52</td>
<td>799.20</td>
</tr>
<tr>
<td>Eng. &amp; Mgt. II, IV</td>
<td>16,035.60</td>
<td>799.20</td>
</tr>
<tr>
<td>Health Sciences (Honours)</td>
<td>12,450.00</td>
<td>693.20</td>
</tr>
<tr>
<td>Humanities</td>
<td>10,950.00</td>
<td>692.20</td>
</tr>
<tr>
<td>Kinesiology and Social Sciences</td>
<td>10,950.00</td>
<td>717.20</td>
</tr>
<tr>
<td>Medical Radiation Sciences</td>
<td>12,450.00</td>
<td>782.20</td>
</tr>
<tr>
<td>Nursing</td>
<td>12,450.00</td>
<td>855.54</td>
</tr>
<tr>
<td>Science</td>
<td>12,450.00</td>
<td>702.20</td>
</tr>
</tbody>
</table>

* You will be assessed extra fees for units taken over your program maximum load.

### Student Health Services Fees

The supplementary student health services fee of $48.95 supports the on-campus clinic facilities, which provide the services of doctors and nurses. The McMaster Students Union Health Plan Premium fee of $45.00 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. These expenses may include X-ray, ambulance, dental treatment, prescribed drugs, wheelchairs or similar appliances. Reimbursement is not made for accident expenses to dental plates, crowns, fillings, glass frames, lenses or similar items. Accidents should be reported to Campus Health Centre within 10 days.

Prescribed drugs, excluding contraceptives, may be claimed through this plan. For details concerning dollar amounts allowable, contact the McMaster Students Union Office.

**NOTE:** Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan by filling out a form at the McMaster Students Union Information Centre (The Compass, Main Floor, McMaster University Student Centre) before the end of September.

### Co-op Fees

Co-op students attending the full academic term (September-April) should add an $1,000.00 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 $500.00 Co-op Fee.

### Listeners

You may register as a Listener in some degree and certificate/diploma courses. A Listener simply audits the course and does not receive a grade. Listener status is not available in limited enrolment classes. The Listener fee is one-half of the standard tuition fee. For any degree course, written permission to attend must be obtained from the course instructor before registration is finalized by the Centre for Continuing Education. 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 General Academic Regulations 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 registering, you may register 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 2004-2005.

<table>
<thead>
<tr>
<th>RESIDENCES</th>
<th>Full Payment</th>
<th>Minimum Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Residences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>4,000.00</td>
<td>2,300.00</td>
</tr>
<tr>
<td>Double/Triple</td>
<td>3,750.00</td>
<td>2,175.00</td>
</tr>
<tr>
<td>Quad</td>
<td>3,625.00</td>
<td>2,113.00</td>
</tr>
<tr>
<td>Bunk and Loft Apartment</td>
<td>3,150.00</td>
<td>1,875.00</td>
</tr>
<tr>
<td>Bates Apartment Room Suite</td>
<td>4,405.00</td>
<td>2,503.00</td>
</tr>
<tr>
<td>Mary E. Keyes Suite Room</td>
<td>4,585.00</td>
<td>2,593.00</td>
</tr>
</tbody>
</table>

#### 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 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 2004-2005.

<table>
<thead>
<tr>
<th>Group A Full Meal Plan (Available to all residence students)</th>
<th>Full Payment</th>
<th>Minimum Payment</th>
<th>Basic Account</th>
<th>Flex Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Light</td>
<td>2,250.00</td>
<td>1,125.00</td>
<td>2,250.00</td>
<td>225.00</td>
</tr>
<tr>
<td>• Small</td>
<td>2,475.00</td>
<td>1,238.00</td>
<td>2,250.00</td>
<td>225.00</td>
</tr>
<tr>
<td>• Regular</td>
<td>2,675.00</td>
<td>1,338.00</td>
<td>2,250.00</td>
<td>425.00</td>
</tr>
<tr>
<td>• Large</td>
<td>2,875.00</td>
<td>1,438.00</td>
<td>2,250.00</td>
<td>625.00</td>
</tr>
<tr>
<td>• X-Large</td>
<td>3,075.00</td>
<td>1,538.00</td>
<td>2,250.00</td>
<td>825.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B Reduced Meal Plan (Available to Bates and Mary E. Keyes residence students only)</th>
<th>Full Payment</th>
<th>Minimum Payment</th>
<th>Basic Account</th>
<th>Flex Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Light</td>
<td>1,600.00</td>
<td>850.00</td>
<td>1,600.00</td>
<td>225.00</td>
</tr>
<tr>
<td>• Small</td>
<td>1,825.00</td>
<td>913.00</td>
<td>1,600.00</td>
<td>425.00</td>
</tr>
<tr>
<td>• Regular</td>
<td>2,025.00</td>
<td>1,013.00</td>
<td>1,600.00</td>
<td>625.00</td>
</tr>
<tr>
<td>• Large</td>
<td>2,225.00</td>
<td>1,113.00</td>
<td>1,600.00</td>
<td>825.00</td>
</tr>
</tbody>
</table>

For more information on meal plans visit our web page at [http://hospitality.mcmaster.ca](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](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) 526-9140, ext. 24781.
PAYMENT OF FEES

Tuition fees and residence/meal plan fees are payable in full during the registration period in August/September. McMaster University is committed to providing maximum flexibility to meet the financial needs of as many students as possible. McMaster University offers a wide variety of:

- Funding Options
- Payment Plans
- Payment Methods

Our web site at http://www.mcmaster.ca/bms/finance/student contains valuable information about your fees and the various payment options. We also include step-by-step instructions for setting up your payment arrangements and getting financial approval.

Students selecting a payment option that does not cover full fees, will be charged interest at the current rate of 1.2% compounded, 1.62% annually at the end of each month on the outstanding balance.

Cheques can be made payable to McMaster University. Any cheque not accepted and returned by the bank will be subject to an additional administrative charge of $32.00 for the first occurrence and an additional $10.00 for each subsequent occurrence.

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 and 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.

You are not considered to be registered at McMaster University unless all fees are paid or acceptable arrangements have been made with the Financial Services Office by November 1 of each year. The names of students who are not registered by that date will be removed from all official class lists.

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

Note: Graduands who have outstanding accounts with the University may be admitted to 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 notices of withdrawal in writing are received at the Office of the Dean of the appropriate Faculty. A full refund will be given for courses dropped until the end of the drop and add period.

MISCELLANEOUS FEES

The following fees were in effect for the 2004-2005 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 ........................................ 50.00
- Applications to Part-Time Studies .................................. 50.00
- Certification of Enrolment Fee ......................................... No fee
- Contribution to Psycho-Educational Assessment ............ 200.00
- Deferred Examination on campus* .................................. No fee
- Examination Reread (Refunded if grade is changed) ....... 50.00
- Letter of Permission .................................................. No fee
- Notarizing Fee for Academic Documents ......................... No fee
- Photocopying of Examination Script ............................... 10.00
- Replacement of Diploma ............................................. 30.00
- Replacement of Student I.D. Card .................................. 30.00
- Replacement of Student I.D. Card/computer proximity chip ........................................ 40.00
- Transcript (per copy) .................................................. No fee
- Transcript Evaluation .................................................. 60.00
- 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 ........................................ No fee
- Income Tax Receipt/Registration Credit Certificate ........ No fee
- Certification of Fee Payment ........................................ No fee
- Meal Plan Withdrawal Fee ........................................... 50.00
- Fine for Meal Card Misuse ........................................... 25.00
- Returned Check Charge (NSF, Stopped Payment) ......... 32.00
- First Occurrence ...................................................... 32.00
- Each Subsequent Occurrence (Additional) ................... 10.00
- Late Payment Agreement Fee ...................................... 50.00
- Late Payment Fee .................................................... 32.00
- Deferral Fee ............................................................. 32.00
- Default Fee Monthly Payment Plan ............................... 32.00
- Reinstatement Fee .................................................... 100.00
- Locker Rentals ......................................................... 16.00
- Library Charges ........................................................
  - Overdue Rescued Books (per day) ............................... 2.00
  - Overdue Reserve Material (per hour) ......................... 2.00
  - Replacement Cost, plus Fine: up to ......................... 100.00
  - Returned Books After Billing .................................... 10.00

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 $100.00. Level 1 Nursing students are also required to purchase a stethoscope at approximately $100.00.

Registration Examinations

Graduates of the B.Sc.N. program can expect to pay fees (approximately $375.50 in 2005) 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.

For information on student awards and financial aid, please refer to Undergraduate Academic Awards and Student Financial Aid sections of this Calendar.
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 CA 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 60 students.

INQUIRY SEMINAR REQUIREMENTS

Inquiry seminars are comprised of ARTS&SCI 1C06 and a set of upper-level inquiry seminars on a variety of topics that change from time to time. The upper-level inquiry seminars are designated as 3C at the beginning of the course code (3CA6, 3CB6, etc.) and are described in the program listing as upper-level Inquiry. See the course listing for topic designations. ARTS&SCI 1C06 must be completed in Level I. One upper-level inquiry seminar is required and is normally taken in Level II or III.

COMBINED HONOURS

Students in the Arts & Science Program may undertake Combined Honours programs in many disciplines within the Faculties of Humanities, Science and Social Sciences. The combined programs with Biology and Physics need five years for completion. Combined programs that are already established are listed below. Students should consult the Director of the Arts & Science Program for consideration of other possible combinations.

Application for Admission to Level II (March) is required for all Combined Honours Programs.

Individual Study/Thesis: Students in the B.Arts Sc. (Honours) Program are required to complete either Individual Study or Thesis (ARTS&SCI 4A06, or 4C06). For students in some Combined Honours programs, this requirement must be met by a Departmental course.

For further information, please see Academic Standing and Program Requirements in the General Academic Regulations section in this Calendar.

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 CA 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.

The International Students' Advisor (Gilmour Hall, Room 104) has information on formal exchange programs as well as independent study abroad. For further information please see International Study in the General Academic Regulations section in this Calendar. Information concerning the Canadian Scholars Exchange Program (CANEX) can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.
Notes
1. Six units of upper-level Inquiry beyond Level I are required.
2. An additional six units of upper-level Inquiry may be included as an Elective with permission of the Director.

REQUIREMENTS
LEVEL I: 30 UNITS
24 units ARTS & SCI 1A06, 1B06, 1C06, 1D06
6 units BIOLOGY 1A03, 1AA3 (BIOLOGY requirement must be completed by the end of Level II)
1 course SCIENCE 1A00

LEVEL II: 30 UNITS
18 units ARTS & SCI 2A06, 2D06, 2R06
6 units Electives or Upper-level Inquiry (Inquiry may be taken in Level III)
6 units Electives or BIOLOGY 1A03, 1AA3 (if not completed in Level I)

LEVEL III: 30 UNITS
6 units ARTS & SCI 3B03, 3BB3
6 units from ARTS & SCI 3A06, 3L03, 3S03
6 units Electives, or Upper-level Inquiry (if not already completed)
12 units Electives

LEVEL IV: 30 UNITS
6 units from ARTS & SCI 3A06, 3L03, 3S03 (whichever not completed in Level III)
6-12 units from ARTS & SCI 4A06, 4A12, 4C06, 4C12, 4EE6
12-18 units Electives

Established Combined Honours programs are listed below. Students are encouraged to consult the Director of the Arts & Science Program by September of Level II for consideration of other possible combinations. Application for Admission to Level II (mid-March) is required for all Combined Honours Programs. Combined Honours Program descriptions are available on the web (http://www.mcmaster.ca/artsci) or from the Program Office.

Combined Honours Programs, Arts & Science and:

- Anthropology [2027010]
- Art History [2027029]
- Biochemistry [2027040]
- Biology [2027050]
- Chemistry [2027070]
- Classics [2027130]
- Comparative Literature [2027142]
- Computer Science [2027145]
- Economics-Option A [2027151]
- Economics-Option B [2027152]
- English [2027200]
- Environmental Science [2027211]
- French - Program A [2027230]
- French - Program B [2027231]
- Geography [2027240]
- Health Studies [2027273]
- History [2027290]
- Mathematics [2027320]
- Multimedia [2027294]
- Peace Studies [2027417]
- Philosophy [2027420]
- Physics [2027440]
- Political Science [2027450]
- Psychology [2027460]
- Religious Studies [2027475]
- Sociology [2027520]
- Theatre & Film Studies [2027551]
- Women's Studies [2027642]
INTERNATIONAL/CROSS-CULTURAL/LANGUAGE MENU

In its revised programs, the School of Business is stressing the importance of breadth of knowledge. Students 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 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 the Business School; however, when a later Calendar expands the menu options, students may choose from those additional courses as well. The menu for 2005-2006 is as follows:

All Anthropology courses except ANTHROP 1A03 if completed as part of the Business I requirements.

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 POL SCI 1G06, 3F03, 3F05, 3J03, 3S03, 4006 All Religious Studies courses.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 2C03</td>
<td>Asian-Pacific Economies</td>
</tr>
<tr>
<td>ECON 2E03</td>
<td>The Political Economy of Development</td>
</tr>
<tr>
<td>ECON 2L03</td>
<td>Peace, Human Security and Economic Development</td>
</tr>
<tr>
<td>ECON 3H03</td>
<td>International Monetary Economics</td>
</tr>
<tr>
<td>ECON 3H13</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 3I03</td>
<td>Economic History of the United States</td>
</tr>
<tr>
<td>ECON 3L13</td>
<td>History of Economic Theory</td>
</tr>
<tr>
<td>ECON 3T03</td>
<td>Topics in Economic Development</td>
</tr>
<tr>
<td>ENGLISH 1B03</td>
<td>Cultural Studies and Visual Culture</td>
</tr>
<tr>
<td>ENGLISH 1B13</td>
<td>Cultural Studies and Consumer Culture</td>
</tr>
<tr>
<td>ENGLISH 2C03</td>
<td>Contemporary Canadian Fiction</td>
</tr>
<tr>
<td>ENGLISH 2F03</td>
<td>Studies in American Literature</td>
</tr>
<tr>
<td>ENGLISH 2J03</td>
<td>Contemporary Popular Culture</td>
</tr>
<tr>
<td>ENGLISH 3B03</td>
<td>The Cyborg in Fiction and Critical Theory</td>
</tr>
<tr>
<td>ENGLISH 3D03</td>
<td>Science Fiction</td>
</tr>
<tr>
<td>ENGLISH 3E03</td>
<td>Women Poets of the Twentieth Century</td>
</tr>
<tr>
<td>ENGLISH 3E63</td>
<td>African American Fiction</td>
</tr>
<tr>
<td>ENGLISH 3Y03</td>
<td>Children's Literature</td>
</tr>
<tr>
<td>ENGLISH 3Z03</td>
<td>The Early British Novel</td>
</tr>
<tr>
<td>GEO 1H53</td>
<td>Geography of the Human Environment (If not completed as part of the Business I requirements)</td>
</tr>
<tr>
<td>GEO 1H03</td>
<td>Urban Economic Geography</td>
</tr>
<tr>
<td>GEO 3H03</td>
<td>Geographical Science of Japan</td>
</tr>
<tr>
<td>GEO 3H33</td>
<td>Geography of a Selected World Region</td>
</tr>
<tr>
<td>GEO 3H23</td>
<td>Urban Social Geography</td>
</tr>
<tr>
<td>KINESIOL 3S53</td>
<td>Body, Mind, Spirit</td>
</tr>
<tr>
<td>SOCIOI 2F06</td>
<td>Racism and Ethnic Group Relations</td>
</tr>
<tr>
<td>SOCIOI 3Z03</td>
<td>Ethnic Relations</td>
</tr>
</tbody>
</table>

All courses included under the Peace Studies minor (see Minor in Peace Studies in the Faculty of Humanities section of this Calendar).

FULL-TIME/PART-TIME STUDIES

Students can take Business I and the Commerce programs on a full-time or part-time basis. Progression to the next level is at the end of the successful completion of the 30 units of work that pertain to the lower level. It should be noted that only a few Commerce courses are offered in the evenings or in the summer sessions.

CONTINUING STUDENTS

Graduates of McMaster's Commerce programs or one of the Engineering and Management programs may, as part-time students, Level Ill and IV Commerce courses (not previously taken, to a maximum of 18 units), excluding COMMERC 4AG3*, 4AH3*, 4A13*. (See Continuing Students in the Admission Requirements section of the Calendar).
A student enrolled in either of the Commerce programs, in addition to meeting the General Academic Regulations of the University, shall be subject to the following School of Business Regulations.

QUALIFYING FOR HONOURS COMMERCE

To be considered for entry to Level III of the Honours Commerce program, students must have attempted at least 24 units of course work for Level II Commerce (as described in the School of Business Programs section of the Calendar) with a C.A. of at least 6.0 and no more than six units of failures (in required and/or elective course work) after entry to Level II Commerce. If a student did not qualify for the Honours Commerce program upon entry to Level III, there is one final opportunity for consideration. To be considered for Level IV of the Honours Commerce program, students must have attempted at least 24 units of course work for Level III Commerce (as described in the School of Business Programs section of the Calendar) with a C.A. of at least 6.0 and no more than six units of failures (in required and/or elective course work) after entry to Level II Commerce.
REINSTATEMENT

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, and have not been registered in another McMaster Program or at another University during that time, or

2. Applicants from other Faculties.

Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar. The completed form and the $50 fee must be submitted to the Office of the Registrar by June 30 for entry in September. The form must clearly demonstrate extraordinary circumstances which caused inadequate performance and indicate whether the circumstances surrounding the student's academic situation have been resolved. The applicant should also 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 grade. 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 Cumulative Average for a student is reset to 0.0 on zero units. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

FORMER COMMERCE STUDENTS

If a student was previously registered in a McMaster Commerce Program and was in good standing but did not attend in the preceding year, the student must write to the Academic Programs Office to seek readmission. The letter should describe the student's activities (academic and otherwise) since he/she was last registered.

If five years have passed since the student was last registered at McMaster, he/she should consult the heading Re-readmission section in this Calendar.

Graduates of McMaster's Commerce or Engineering and Management Programs should refer to Continuing Students above.

INQUIRIES RE: ACADEMIC REGULATIONS

A student seeking relief from the School of Business regulations must apply in writing to the Undergraduate Admissions Policy and Reviewing Committee with appropriate documentation attached. Guidelines for such requests may be obtained from the Academic Programs Office, in the M.G. DeGroote Building, Room 104.

COMMERCEx INTERNSHIP PROGRAM

This is a Program designed to provide students with an opportunity to participate in career oriented work terms. Positions begin after the successful completion of Level III and may continue for periods of eight, twelve or sixteen months. Students compete for opportunities with participating companies through an application and interview process. Upon completion of the internship, students return to campus to complete their degree Program. Students seeking positions will be required to register in COMMERCEx 3N0, Commerce Internship Program, successfully complete a minimum of an eight-month Internship, obtain a satisfactory employer evaluation, and submit a work term report upon return to campus. Meeting these requirements will result in a transcript notation indicating the successful completion of COMMERCEx 3N0, the name of the Internship employer and dates of employment. Students are also required to attend a series of six preparatory career development sessions prior to competing for Internship opportunities. For more information, please contact the Manager, Commerce Career Centre, M.G. DeGroote Building, Room 112.

EXCHANGE PROGRAMS

There are a number of official exchange Programs offered to undergraduate students registered in the School of Business. The countries involved are: Australia, Denmark, England, France, Japan, Norway, Mexico and Singapore. 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 Average of at least 6.0 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. Information is available from Prof. M. Malik, Director, International Exchange Programs, in the M.G. DeGroote Building, Room 228.

Additional information may be found under International Study in the General Academic Regulations section of this Calendar. Information concerning the Canadian Scholars Exchange Program (CANEX) can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges. Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

STUDENT EXCHANGES

GILMOUR HALL, ROOM 104

TELEPHONE: (905) 525-9140, EXTENSION 24748

PROGRAMS

PROGRAM NOTES

1. Students in Business I are not eligible to take upper Level Commerce course work.

2. Students have only one opportunity to be reviewed for entry to Commerce II. Other options may be pursued through the Academic Programs Office.

3. To be considered for entry into Commerce II a Business I student must have met all of the following:
   a) achieved a CA of at least 5.0 on the 30 units of course work for Business I (on first attempts only);
   b) successfully completed on first attempts only all Business I required courses (ECON 1A06 or both ECON 1B03 and 1B33; COMMERCEx 1E03 or 1F03; COMP SCI 1B03; MATH 1A03 or 1M03; and one of ANT-HOP 1A03, GEO 1H03, PSYCH 1A03 or SOCIO 1A06). For students without Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or whose credit in same is older than five years, MATH 1K03 must be taken before MATH 1A03 or 1M03; students without Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics) or whose credit in same is older than five years must take STAT'S 1L03;
   c) have no more than six units of failure in the elective component of Business I courses;
   d) have successfully completed ECON 2X03 if registered in this course in Business I. (ECON 2X03 is not required for admission to Commerce II. Students who elect to register in ECON 2X03 in Business I and who do not successfully complete the course, will not be permitted to enter Commerce II)

4. 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.

5. 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.

6. Transfer students may be admitted to Commerce II from other universities or from other Faculties within McMaster University. Transfer students will be expected to complete COMMERCEx 1E03 or 1S03, and one of ANT-HOP 1A03, GEO 1H03, PSYCH 1A03 or SOCIO 1A06 as part of the degree requirements. Academic requirements for admission of transfer students will be more demanding than those for Business I students. Students who wish to apply for a transfer to the Faculty of Business must apply by April 30.

7. Admission to either of the Commerce Programs beyond Commerce Level II is not possible.
Business I  

REQUIREMENTS

LEVEL I: 30 UNITS

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

- 3 units
  COMMERCE 1E03
- 3-6 units
  from ANTHROP 1A03, GEO 1HS3, PSYCH 1A03, SOCIOL 1A06
- 3 units
  COMP SCI 1B3A
- 6 units
  from ECON 1A06, 1B03, 1B83
- 3 units
  from MATH 1A03, 1M03 (See Note 5 above.)

0-3 units
MATH 1K03 (for those without Grade 12 Advanced Functions and Introductory Calculus or OAC Calculus or whose credit in same is older than five years)

0-3 units
STATS 1L03 (for those without Grade 12 Mathematics of Data Management or OAC Finite Mathematics or whose credit in same is older than five years)

3-12 units
Electives to total 30 units. See also the International/ Cross-Cultural/Language Menu in this section of the Calendar.

Commerce II

REQUIREMENTS

LEVEL II: 30 UNITS

24 units
COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 2S03

3 units
ECON 2X03

3 units
from COMMERCE 2SB3, electives from non-Commerce courses. See also the International/Cross-Cultural/ Language Menu in this section of the Calendar.

Honours Commerce (Honours B.Com.)  

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

REQUIREMENTS

LEVEL III: 30 UNITS

15 units
COMMERCE 3BC3, 3FA3, 3MC3, 3QA3, 3QC3

6 units
Level III or IV Commerce

9 units
from COMMERCE 2SB3, electives from non-Commerce courses. See also the International/Cross-Cultural/ Language Menu in this section of the Calendar.

LEVEL IV: 30 UNITS

6 units
COMMERCE 4PA3, 4SA3

15 units
Electives from non-Commerce courses, COMMERCE 2S3, or Level III or IV Commerce courses

9 units
from COMMERCE 2S3, electives from non-Commerce courses. See also the International/Cross-Cultural/ Language Menu in this section of the Calendar.

Commercial (B.Com.)

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

REQUIREMENTS

LEVEL III: 30 UNITS

15 units
COMMERCE 3BC3, 3FA3, 3MC3, 3QA3, 3QC3

15 units
from COMMERCE 2SB3, electives from non-Commerce courses. See also the International/Cross-Cultural/ Language Menu in this section of the Calendar.

LEVEL IV: 30 UNITS

6 units
COMMERCE 4PA3, 4SA3

6 units
from COMMERCE 2SB3, electives from non-Commerce courses or Level III or IV Commerce courses

18 units
from COMMERCE 2S3, electives from non-Commerce courses. See also the International/Cross-Cultural/ Language Menu in this section of the Calendar.

Minor in Business

NOTES

1. The minor is not open to students registered in any Commerce or Engineering and Management Program.

2. Enrollment in each of the Commerce courses comprising the Business minor, (excluding students registered in Engineering and Management, Commerce and Labour Studies students enrolled in COMMERCE 2BA3 and 3BC3 and students admitted to the minor in Finance and the minor in Accounting and Financial Management Services) is limited to 40 students who are registered in a four- or five-level McMaster degree Program. Places in these courses will be allocated on a first-come, first-served basis.

3. Effective September 1999, COMMERCE 2AA3, 2FA3 and 2MA3 will also require completion of ECON 1A06 or 1B03 with a minimum grade of B- as a prerequisite.

4. For purposes of the Business Minor, KINESIOL 3L03 will be accepted as a substitute for COMMERCE 2BA3, ECON 2B03, STATS 1CC3 will be accepted as a substitute for COMMERCE 2QA3.

REQUIREMENTS

24 units total

- 6 units
  ECON 1A06 or 1B03 and 1B83

- 18 units
  COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3

Minor in Finance

The School of Business will admit a maximum of 10 students to the minor each year.

NOTES

1. Application for admission (forms available from the Academic Programs Office) must be submitted to the Academic Programs Office by April 30.

2. Students seeking the minor must have completed ECON 1A06 with a minimum grade of B or an average of at least 7.0 in ECON 1B03 and 1B83.

3. The minor is not open to students registered in any Commerce or Engineering and Management Program.

4. Students seeking to obtain the minor must complete either ECON 2G03 or 2X03, and both ECON 2B03 and 2H03 before undertaking any Level III or Level IV Finance courses.

REQUIREMENTS

33 units total

- 6 units
  from ECON 1A06, 1B03, 1B83

- 3 units
  from ECON 2G03 (See Note 4 above.)

- 6 units
  ECON 2B03, 2H03 (See Note 4 above.)

- 9 units
  COMMERCE 2AA3, 2FA3, 3FA3

- 9 units
  from COMMERCE 3FB3, 3FC3, 4FA3, 4FD3, 4FE3, 4FF3, 4FG3, 4FH3, 4FJ3, 4FK3, 4FX3

Minor in Accounting and Financial Management Services

The School of Business will admit a maximum of 10 students to the minor each year.

NOTES

1. Application for admission (forms available from the Academic Programs Office) must be submitted to the Academic Programs Office by April 30.

2. Students seeking the minor must have completed ECON 1A06 with a minimum grade of B or an average of at least 7.0 in ECON 1B03 and 1B83.

3. The minor is not open to students registered in any Commerce or Engineering and Management Program.

4. Students seeking to obtain the minor must complete either ECON 2B03 or 2H03, and both ECON 2B03 and 2H03 before undertaking any Level III or Level IV Accounting courses.

REQUIREMENTS

33 units total

- 6 units
  from ECON 1A06, 1B03, 1B83

- 3 units
  from ECON 2G03, 2X03 (See Note 4 above.)

- 6 units
  ECON 2B03, 2H03 (See Note 4 above.)

- 12 units
  COMMERCE 2AA3, 2AB3, 3AB3, 3AC3

- 6 units
  from COMMERCE 4AA3, 4AC3, 4AD3
FACULTY OF ENGINEERING

WEB ADDRESS: http://www.eng.mcmaster.ca

Dean of Engineering
M. Elbestawi/B.Sc., M.Eng., Ph.D., P.Eng.

Associate Dean of Engineering

Director of Engineering
Appointment Pending

Academic Assistant to the Associate Dean
J. Zywina

Undergraduate Student Advisors
S.D. Verhage, (Manufacturing Engineering Technology)
M. White/B.Sc.

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 potential 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.

For information concerning the Bachelor of Technology program, please see the Program for B.Tech. Degree section of this Calendar.

Four-year programs are offered leading to the Bachelor of Engineering Degree in the following fields of specialization:
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Electrical and Biomedical Engineering
- Engineering Physics
- Materials Engineering
- Mechanical Engineering
- Software Engineering
- Software Engineering and Game Design

A five-year program, leading to the Bachelor of Engineering and Society Degree, is 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
- 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 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
- Software Engineering and Management

A five-year program leading to the Bachelor of Engineering and Biosciences is offered in:
- Chemical Engineering and Bioengineering

All programs have limitations on enrolment. Students are admitted to the program following successful completion of Level I. Admission procedures and criteria can be obtained from the Office of the Associate Dean of Engineering.

McMaster baccalaureate degree programs in Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers, except the Chemical Engineering and Bioengineering, Electrical and Biomedical Engineering, Software Engineering and Game Design programs which will be examined for the first time at the next accreditation. Provincial Engineering Associations accept the accreditation as a prerequisite for admission to the qualification Professional Engineer. The B.Eng., B.Eng. Biocomputing, B.Eng.Mgt. and B.Eng. Society programs are honours degree programs.

At McMaster, Engineering students take a common Level I program comprising Mathematics, Materials, Physics, Chemistry, Electrical Engineering Design, Introduction to Professional Engineering; Computation and complementary studies electives. The specialized programs are entered at Level II. Students interested in the specialized programs must take ECON 1B03 as one of their 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.

Programs offered by the Faculty of Engineering include four types of elective courses, which are governed by regulations, as follows:
- Core Courses - Students Electives:
- Electives in a subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences.

In addition to ENGINEER 4A03, or equivalent, and 4B03, complementary studies electives are required in all B.Eng. programs. Of these, three units must be selected from courses that are designated as being above Level I (http://www.eng.mcmaster.ca/electives/electvs.htm).

The Associate Dean of Engineering must authorize each student's complementary studies elective courses. An approved list is published each spring and is available from the Associate Dean's office (http://www.eng.mcmaster.ca/electives/electvs.htm). 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/ electives/level1.htm).

Technical Electives are Engineering or Applied Science courses in subjects relevant to the particular B.Eng. 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.

ENGINEERING CO-OP PROGRAM

Undergraduate students in the Faculty of Engineering can enrol in a Co-op or in a non-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 three four-month experience terms, including UROP - Undergraduate Research Opportunities Program and the Co-op Summer Experience as well as through a Co-op Internship Experience. Students may enter the Co-op version of their program at any time up to the beginning 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 the following courses prior to graduation:
- ENGINEER 1E00, 2E00, 3E00 and 4E00, or
- ENGINEER 1E00, 2E00, 4E00, and 4E00, or
- ENGINEER 1E00 and 4E00

Engineering Co-op Fees

It is anticipated that an annual Engineering Co-op fee will be charged for students registered in an Engineering Co-op Program. Each work term: ENGINEER 2E00, 3E00, 4E00, 4E00, 4E00 and 4E00 will also be assigned a corresponding Co-op fee.
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. For information on the Canadian Scholars Exchange Program (CANEX), please refer to the Academic Facilities: Student Services and Organizations section of this Calendar under the heading Student Exchanges.

ACADEMIC REGULATIONS
FOR B.ENG. PROGRAMS

STUDENT ACADEMIC RESPONSIBILITY
You are responsible for adhering to the statement on student academic responsibility found in the General Academic Regulations section of this Calendar.

Students enrolled in Engineering programs, in addition to meeting the General Academic Regulations of the University, shall be subject to the following Faculty Regulations.

ENGINEERING
To be eligible for Level II a student must successfully complete all non-elective Level I courses with an overall Cumulative Average (CA) of 4.0 or greater. To help students who may have had academic difficulty during the year, the Faculty of Engineering has a remedial studies plan (called the M-Opportunity) that provides the opportunity to repeat failed courses in second term and/or in the summer. The results of these M-Opportunity courses are used to calculate a new CA (failed courses are still counted in the CA).

A student in Engineering I whose Cumulative Average (CA) is less than 4.0 can no longer continue in Engineering.

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.

FALL/WINTER SESSION WORKLOAD
The Faculty of Engineering has set a minimum Fall/Winter session workload of 37 units for Engineering I students. The workload for other students must be approved by the appropriate Department Chair and the Associate Dean of Engineering. In order to qualify for most scholarships students must register in the full load of work prescribed by program and level. No more than 21 units in one term will be approved.

REINSTATEMENT TO ENGINEERING
A student who is ineligible to continue in the Faculty of Engineering 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 $50 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. Two letters of reference are also required. 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 program probation, and calculation of their cumulative average will begin anew. If at any review after reinstatement the student’s Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

PROGRAM CHANGES
All program changes must be made through the Office of the Associate Dean of Engineering.

LEVEL I PROGRAM

WEB ADDRESS: http://www.eng.mcmaster.ca/engineering/1

ENGINEERING I: 37 UNITS
3 units CHEM 1E03
10 units ENGINEER 1A00, 1C03, 1D04, 1P03
3 units MATLS 1M03
9 units MATH 1H03, 1N03, 1NN3
6 units PHYSICS 1D03, 1E03
6 units approved complementary studies electives.(See Elective Courses Available to Level I Students in the Degrees, Programs and Courses sections of this Calendar.)

PROGRAMS FOR THE B.ENG., B.ENG.BIOSCIENCES, B.ENG.MGT., AND B.ENG. SOCIETY DEGREES

Admission to Level II Engineering Programs
Admission to Level II Engineering programs requires completion of all non-elective Engineering I courses with a minimum Cumulative Average (CA) of 4.0. All programs have limited enrollment; should there be more applicants than the limiting number in any program, admission to that program will be based on a points system, computed as the product of the Sessional Average (SA) and the number of units taken in the session (a minimum of 31 units will be used in the calculation). 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.

In addition, a student to a B.Eng.Mgt. program requires the completion of EC.ON 1B03 with a minimum grade of 5.0; an interview may also be required.

Students admitted to a B.Eng. Society program are required to submit a statement indicating the educational objectives for the focus electives.

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 either of these two programs.

Chemical Engineering (B.Eng.)

Chemical Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students may choose to follow a stream of recommended technical elective courses.

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:
- Required Courses: CHEM ENG 4C03, 4E03, 4G03, 4L02 (PSE laboratories completed), 4WP4 (with an approved PSE project). Other courses may be substituted with permission of the Department Chair.

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:
- Required Courses: CHEM ENG 3Q03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4WP4 (with approved PMM project), 4X03. Other courses may be substituted with permission of the Department Chair.
FACULTY OF ENGINEERING

2. As well as completing the academic requirements as specified in this Calendar, Students in a Co-op program must complete the following courses prior to graduation:
   • ENGINEER 1E00, 2E00, 3E00 and 4E00, or
   • ENGINEER 1E00, 2E00 and 4E0A, or
   • ENGINEER 1E00 and 4E0B

LEVEL II: 36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
6 units CHEM 1AA3, 2A03
6 units MATH 2M06
3 units STATS 3N03
6 units approved complementary studies electives

LEVEL III: 38 UNITS
29 units CHEM ENG 3D03, 3E04, 3G04, 3K04, 3L02, 3M04, 3O04, 3P04
9 units 3-6 units from CHEM 2E03; or both CHEM 2A03 and 2B03
9 units 3-6 units from BIOCHEM 2EE3, CHEM ENG 3O03, CHEM 3I03

LEVEL IV: 37-38 UNITS
10 units CHEM ENG 4L02, 4N04, 4W04
3 units from ENGINEER 4A03, 4H03
12 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
3 units approved complementary studies electives (above Level I)
9-10 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

Chemical Engineering and Management (B.Eng.Mgt.)

Chemical Engineering and Management Co-op (B.Eng.Mgt.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students may choose to follow a stream of recommended technical elective courses.

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:
   • Required Courses: CHEM ENG 4C03, 4E03, 4G03, 4L02 (PSE laboratories completed), 4W04 (with an approved PSE project). Other courses may be substituted with permission of the Department Chair.

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:
   • Required Courses: CHEM ENG 3O03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), 4X03, ENGINEER 2003 (or MATLS 1M03). 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 the following courses prior to graduation:
   • ENGINEER 1E00, 2E00, 3E00 and 4E00, or
   • ENGINEER 1E00, 2E00 and 4E0A, or
   • ENGINEER 1E00 and 4E0B

LEVEL II: 36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
3 units COMMERCE 2A03
6 units ECON 1B03, 2X03
6 units MATH 2M06
3 units STATS 3N03 or 3Y03

LEVEL III: 38 UNITS
25 units CHEM ENG 3D03, 3E04, 3G04, 3K04, 3L02, 3M04, 3O04
3 units approved complementary studies electives (above Level I)
9 units COMMERCE 2AB3, 2FA3, 2MA3
1 unit ENGN.GMT 3A01

LEVEL IV: 35-39 UNITS
4 units CHEM ENG 3P04
3 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
12 units COMMERCE 2BA3, 3FA3, 3MC3, 3Q0C3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN.GMT 4A01
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 20A3 and 2OB3
3 units from BIOCHEM 2EE3, CHEM ENG 3O03, CHEM 3I03, MATLS 1M03 (or ENGINEER 2003)
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 37-38 UNITS
10 units CHEM ENG 4L02, 4N04, 4W04
6 units COMMERCE 3B03, 4PA3
3 units ENGN.GMT 5B03
9 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
6 units Commerce electives selected from Level III or IV Commerce or COMMERCE 2QB3
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

Chemical Engineering and Society (B.Eng.Society)

Chemical Engineering and Society Co-op (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students may choose to follow a stream of recommended technical elective courses.

PROCESS SYSTEMS ENGINEERING (PSE) STREAM:
   • Required Courses: CHEM ENG 4C03, 4E03, 4G03, 4L02 (PSE laboratories completed), 4W04 (with an approved PSE project). Other courses may be substituted with permission of the Department Chair.

POLYMER MATERIALS AND MANUFACTURING (PMM) STREAM:
   • Required Courses: CHEM ENG 3O03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), 4X03, ENGINEER 2003 (or MATLS 1M03). 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 the following courses prior to graduation:
   • ENGINEER 1E00, 2E00, 3E00 and 4E00, or
   • ENGINEER 1E00, 2E00 and 4E0A, or
   • ENGINEER 1E00 and 4E0B

LEVEL II: 33-36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
6 units ENGSOCY 2X03, 2Y03
6 units MATH 2M06
3-6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS
17 units CHEM ENG 3D03, 3K04, 3L02, 3M04, 3O04
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 20A3 and 2OB3
3 units ENGSOCY 3Y03
3 units STATS 3N03 or 3Y03
3-6 units Engineering and Society focus electives

LEVEL IV: 36-40 UNITS
12 units CHEM ENG 3E04, 3G04, 3P04
6 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units ENGSOCY 3Z03
6 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03, MATLS 1M03 (or ENGINEER 2003)
3-6 units Engineering and Society focus electives
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering
LEVEL V: 34-35 UNITS
10 units CHEM ENG 4L02, 4N04, 4W04
9 units from CHEM ENG 4B03, 4E03, 4G03, 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
6 units ENGSOC'TY 4X03, 4Z03
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering
6 units Engineering and Society focus electives

Chemical Engineering and Bioengineering (B.Eng.Biosci.)

Chemical Engineering and Bioengineering Co-op (B.Eng.Biosci.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1EE0, 2E00, 3EE0 and 4EE0, or
• ENGINEER 1EE0, 2E00 and 4EA0, or
• ENGINEER 1EE0 and 4E00

LEVEL II: 36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1A03
3 units BIOLOGY 1A03
6 units HTH SCI 2L03, 2LL3
6 units MATH 2M06
3 units STATS 3N03

LEVEL III: 37-40 UNITS
25 units CHEM ENG 3BC4, 3D03, 3G04, 3K04, 3L02, 3M04, 3O04
3 units CHEM 2A03
3 units CHEM 2E03, or both CHEM 2A03 and 2O03
3 units BIOCHEM 2E03
3 units approved complementary studies electives (above Level II)

LEVEL IV: 37-38 UNITS
19 units CHEM ENG 3BK3, 3BM3, 3E04, 3P04, 4L02, 4LL3
3 units BIOCHEM 3G03
3 units from ENGINEER 4A03, 4H03
6 units from CHEM 3L03, CHEM ENG 3C03, MATLS 1M03 (or ENGINEER 2G03)
3 units approved complementary studies electives (above Level II)
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 38-39 UNITS
11 units CHEM ENG 4N04, 4T03, 4W04
12 units from CHEM ENG 4B03, 4C03, 4E03, 4G03, 4K03, 4M03, 4X03, 4Z03
3 units ENGINEER 4U03
6 units approved technical electives from biosciences or bioengineering
3 units approved complementary studies electives (above Level II)
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

Civil Engineering (B.Eng.)

Structural/Geotechnical Engineering Stream

Water/Environmental Engineering Stream

Civil Engineering Co-op (B.Eng.)

Structural/Geotechnical Engineering Stream

Water/Environmental Engineering Stream

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students entering Level II can choose between a Structural/Geotechnical Engineering Stream (S/G Stream) and a Water/Environmental Engineering Stream (W/E Stream).

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation.
• ENGINEER 1EE0, 2E00, 3EE0 and 4EE0, or
• ENGINEER 1EE0, 2E00 and 4EA0, or
• ENGINEER 1EE0 and 4E00

3. Level IV Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level III, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level IV Registration.

4. To meet the capstone project requirement, all students in their final level must take or complete one of the following project courses: CIV ENG 4C04 or 4R04.

LEVEL II: 37 UNITS
24 units CIV ENG 2A02, 2C04, 2E03, 2L03, 2J04, 2O04, 2Q04
4 units ENGINEER 2P04
6 units MATH 2M06
3 units S/G Stream: ENGINEER 2C03

W/E Stream: CHEM ENG 2B03

LEVEL III: 38 UNITS
25 units CIV ENG 3A03, 3B03, 3C03, 3G03, 3J04, 3K03, 3M03, 3P03
4 units STATS 3J04
3 units approved complementary studies electives
6 units S/G Stream: CIV ENG 3R03, 3S03

W/E Stream: CIV ENG 3L03, 3J03

LEVEL IV: 34-36 UNITS
3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives (above Level II)
4 units from CIV ENG 4C04, 4R04
21-23 units S/G Stream: from approved list of Level IV Civil Engineering technical electives

W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

Civil Engineering and Management (B.Eng.Mgt.)

Level V Only

Structural/Geotechnical Engineering Stream

Water/Environmental Engineering Stream

Civil Engineering and Management Co-op (B.Eng.Mgt.)

Structural/Geotechnical Engineering Stream

Water/Environmental Engineering Stream

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students entering Level II must complete (above Level II)

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation.
• ENGINEER 1EE0, 2E00, 3EE0 and 4EE0, or
• ENGINEER 1EE0, 2E00 and 4EA0, or
• ENGINEER 1EE0 and 4E00

3. Level IV Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level III, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level IV Registration.

4. To meet the capstone project requirement, all students in their final level must take or complete one of the following project courses: CIV ENG 4C04 or 4R04.
LEVEL II: 39 UNITS
17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2K04
6 units COMMERCE 2A03, 2M03
3 units ECON 2X03
4 units ENGINEER 2P04
6 units MATH 2M06
3 units S/G Stream: ENGINEER 2C03
W/E Stream: CHEM ENG 2B03

LEVEL III: 39 UNITS
13 units CIV ENG 2E03, 2Q04, 3G03, 3M03
9 units COMMERCE 2A03, 2B03, 2F03
3 units ECON 1B03
4 units STATS 3J04
3 units approved complementary studies electives (above Level I)
1 unit ENGN MGT 3A01
6 units S/G Stream: CIV ENG 3R03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

LEVEL IV: 35 UNITS
19 units CIV ENG 3A03, 3B03, 3C03, 3J04, 3K03, 3P03
12 units COMMERCE 3B03, 3F03, 3M03, 3G03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
1 unit ENGN MGT 4A01

LEVEL V: 37-38 UNITS (2005-2006 ONLY)
3 units COMMERCE 4P03
4 units ENGN MGT 4A01, 5B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3 units from ENGINEER 4A03, 4H03
4 units from CIV ENG 4C04, 4R04
20-21 units from Level IV Civil Engineering technical electives or ENGINEER 4U03

LEVEL V: 36-37 UNITS (EFFECTIVE 2006-2007)
3 units COMMERCE 4P03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3 units ENGN MGT 5B03
3 units from ENGINEER 4A03, 4H03
4 units from CIV ENG 4C04, 4R04
20-21 units S/G Stream: from approved list of Level IV Civil Engineering technical electives
W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

Civil Engineering and Society (B.Eng.Society)
Level V Only {4120535}

Structural/Geotechnical Engineering Stream {4110535}
Water/Environmental Engineering Stream {4130535}

Civil Engineering and Society Co-op (B.Eng.Society)
Structural/Geotechnical Engineering Stream
Water/Environmental Engineering Stream

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Students entering Level II can choose between a Structural/Geotechnical Engineering Stream (S/G Stream) and a Water/Environmental Engineering Stream (W/E Stream).
2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
   • ENGINEER 1E00, 2E00 and 4E00, or
   • ENGINEER 1E00, 2E00, 3E00 and 4E00, or
   • ENGINEER 1E00 and 4E00
3. Level V Civil Engineering courses must be selected in accordance with regulations which require a minimum content of 10 units of engineering design and synthesis. Before the end of Level IV, students must complete a Civil Engineering electives form, and ensure that it has been approved by the Department before completing Level V Registration.
4. To meet the capstone project requirement, all students in their final level must take or complete one of the following projects courses: CIV ENG 4C04 or 4R04.
5. A minimum of 16 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I)

LEVEL II: 39 UNITS
17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2K04
4 units ENGINEER 2P04
6 units MATH 2M06
6 units ENGSOCTY 2X03, 2Y03
3 units Engineering and Society focus electives
3 units S/G Stream: ENGINEER 2C03
W/E Stream: CHEM ENG 2B03

LEVEL III: 32-35 UNITS
13 units CIV ENG 2E03, 2Q04, 3G03, 3M03
4 units STATS 3J04
3 units ENGSOCTY 3Y03
6-9 units Engineering and Society focus electives
6 units S/G Stream: CIV ENG 3R03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

LEVEL IV: 31-34 UNITS
19 units CIV ENG 3A03, 3B03, 3C03, 3J04, 3K03, 3P03
3 units ENGSOCTY 3Z03
3 units from ENGSOCTY 3X03, LABR ST 3W03
6-9 units Engineering and Society focus electives

LEVEL V: 38-37 UNITS (2005-2006 ONLY)
3 units ENGINEER 4B03
6 units ENGSOCTY 4X03, 4Z03
3 units Engineering and Society focus electives
4 units from CIV ENG 4C04, 4R04
20-21 units from Level IV Civil Engineering technical electives or ENGINEER 4U03

LEVEL V: 36-37 UNITS (EFFECTIVE 2006-2007)
3 units ENGINEER 4B03
6 units ENGSOCTY 4X03, 4Z03
3 units Engineering and Society focus electives
4 units from CIV ENG 4C04, 4R04
20-21 units S/G Stream: from approved list of Level IV Civil Engineering technical electives
W/E Stream: from approved list of Level III and IV Civil Engineering technical electives

Computer Engineering (B.Eng.) {4144}

Computer Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E00, 2E00 and 4E00, or
• ENGINEER 1E00, 2E00, 3E00 and 4E00, or
• ENGINEER 1E00 and 4E00

LEVEL II: 37 UNITS
12 units COMP ENG 2D14, 2S14, 2S14
14 units ELEC ENG 2C45, 2C4, 2E16
8 units MATH 2P04, 2004
3 units approved complementary studies electives (above Level I)

LEVEL III: 37 UNITS
7 units COMP ENG 3D14, 3S13
20 units ELEC ENG 3E14, 3F14, 3T14, 3Q14, 3T14
3 units MATH 3K03
4 units SFWR ENG 3K04
3 units COMP SCI 3S13

LEVEL IV: 36-38 UNITS (2005-2006 ONLY)
4 units ELEC ENG 4H13, 4J14
20 units COMP ENG 4D14, 4L14, 4M14, 4N14, 4O14
3-4 units technical electives from Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved Level III or IV technical electives
3 units ENGINEER 2H03
3 units from ENGINEER 4A03, 4H03
LEVEL IV: 35-38 UNITS (2006-2007 ONLY)
20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 40I4
3 units ELEC ENG 4HI3
3 units technical electives from Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved Level III or IV technical electives of the Faculty of Engineering

LEVEL IV: 35-37 UNITS (EFFECTIVE 2007-2008)
20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 40I4
3 units ELEC ENG 4HI3
3 units from ENGINEER 4A03, 4H03
3 units ENGINEER 4B03
3-4 units technical electives from Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved Level III or IV technical electives of the Faculty of Engineering

Computer Engineering and Management (B.Eng.Mgt.)

Computer Engineering and Management Co-op (B.Eng.Mgt.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:

- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0 and 4EB0

LEVEL II: 40 UNITS
3 units COMMERCE 2A03
8 units COMP ENG 2SH4, 2SI4
4 units from COMP ENG 2SH4, ELEC ENG 2DI4
6 units ECON 1BB3, 2X03
9 units ELEC ENG 2C15, 2CJ4
2 units ENGN MGT 2A02
8 units MATH 2P04, 2Q04

LEVEL II: 37 UNITS (2005-2006 ONLY)
12 units COMMERCE 2A03, 2BA3, 2FA3, 2MA3
8 units COMP ENG 2D04, 2DI4
13 units ELEC ENG 2E15, 3FI4, 3TP4
1 unit ENGN MGT 3A01
3 units MATH 3K03
4 units SFWR ENG 3K04

LEVEL III: 35-38 UNITS (EFFECTIVE 2006-2007)
12 units COMMERCE 2B03, 2BA3, 2FA3, 2MA3
13 units ELEC ENG 2E15, 3FI4, 3TP4
1 unit ENGN MGT 3A01
3 units MATH 3K03
4 units SFWR ENG 3K04
3 units approved complementary studies electives (above Level II)

LEVEL IV: 38 UNITS (2005-2006 ONLY)
13 units ELEC ENG 3EJ4, 3TQ4, 3TR4, 4HJ1
4 units COMP ENG 3DJ4
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units COMP SCI 3SH3
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3 units from ENGINEER 4A03, 4H03

LEVEL IV: 34 UNITS (2006-2007 ONLY)
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units COMP ENG 3SK3
3 units COMP SCI 3SH3
12 units ELEC ENG 3EJ4, 3TQ4, 3TR4
1 unit ENGN MGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

LEVEL IV: 35 UNITS (EFFECTIVE 2007-2008)
9 units COMMERCE 3BG3, 3FA3, 3MC3
4 units COMP ENG 3DJ4
3 units COMP SCI 3SH3
12 units ELEC ENG 3EJ4, 3TQ4, 3TR4
1 unit ENGN MGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

LEVEL V: 36 UNITS (2005-2007 ONLY)
6 units COMMERCE 3QC3, 4PA3
23 units COMP ENG 3SK3, 4DK4, 4DL4, 4DM4, 4DN4, 40I4
4 units ENGN MGT 4A01, 4B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

6 units COMMERCE 3QC3, 4PA3
20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 40I4
3 units from ENGINEER 4A03, 4H03
3 units ENGN MGT 5B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3
3-4 units approved technical electives (from Level III and IV of the Faculty of Engineering)

LEVEL V: 36 UNITS (EFFECTIVE 2008-2009)
6 units COMMERCE 3QC3, 4PA3
23 units COMP ENG 3SK3, 4DK4, 4DL4, 4DM4, 4DN4, 40I4
4 units ENGN MGT 4A01, 4B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

Computer Engineering and Society (B.Eng.Society)

Computer Engineering and Society Co-op (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering 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 the following courses prior to graduation:
- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EA0, or
- ENGINEER 1EE0 and 4EB0

LEVEL II: 38 UNITS
12 units COMP ENG 2DI4, 2SH4, 2SI4
9 units ELEC ENG 2C15, 2CJ4
6 units ENGSOCY 2X03, 2Y03
6 units MATH 2P04, 2Q04
3 units Engineering and Society focus electives

LEVEL III: 32 UNITS (2005-2006 ONLY)
3 units COMP ENG 3SK3
13 units ELEC ENG 2E15, 3FI4, 3TP4
3 units ENGSOCY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3K04
6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS (EFFECTIVE 2006-2007)
3 units COMP ENG 3SK3
13 units ELEC ENG 2E15, 3FI4, 3TP4
3 units ENGSOCY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3K04
3-6 units Engineering and Society focus electives

13 units ELEC ENG 2E15, 3FI4, 3TP4
3 units ENGINEER 4B03
3 units ENGSOCY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3K04
3-6 units Engineering and Society focus electives

13 units ELEC ENG 2E15, 3FI4, 3TP4
3 units ENGINEER 4B03
3 units ENGSOCY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3K04
3-6 units Engineering and Society focus electives
LEVEL IV: 34 UNITS (2006-2007 ONLY)
4 units COMP ENG 3D4J
12 units ELEC ENG 3EJ4, 3TQ4, 3TR4
3 units ENGINEER 4B03
3 units ENSGCTY 3Z03
3 units from ENSGCTY 3X03, LABR ST 3W03
6 units Engineering and Society focus electives
3 units COMP SCI 3SH3

LEVEL IV: 31-37 UNITS (EFFECTIVE 2007-2008)
4 units COMP ENG 3D4J
12 units ELEC ENG 3EJ4, 3TQ4, 3TR4
3 units ENGINEER 2H03
3 units ENSGCTY 3Z03
3 units from ENSGCTY 3X03, LABR ST 3W03
3-9 units Engineering and Society focus electives
3 units COMP SCI 3SH3

20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 4O14
6 units ENSGCTY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H13)

LEVEL V: 35-40 UNITS (EFFECTIVE 2007-2008)
20 units COMP ENG 4DK4, 4DL4, 4DM4, 4DN4, 4O14
6 units ENSGCTY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H13)
3-4 units approved technical electives (from Level III and IV of the Faculty of Engineering)

Electrical Engineering (B.Eng.)

Electrical Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E0, 2E0, and 4E0, or
• ENGINEER 1E0, 2E0, 3E0, and 4E0
• ENGINEER 1E0 and 4E0

LEVEL II: 37 UNITS
22 units ELEC ENG 2C15, 2CJ4, 2D14, 2E15, 2S14
4 units COMP ENG 2SH4
8 units MATH 2P04, 2C04
3 units approved complementary studies electives (above Level I)

LEVEL III: 38 UNITS
7 units COMP ENG 3D4J, 3SK3
24 units ELEC ENG 3EJ4, 3F14, 3P14, 3T4P, 3TQ4, 3TR4
3 units MATH 3K03
4 units SFWR ENG 3MO4

LEVEL IV: 36-38 UNITS (2005-2006 ONLY)
8 units ELEC ENG 4H13, 4H1J, 4O14
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4C14, 4F14, 4PK4, 4P14, 4TK4
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV
3 units ENGINEER 2H03
3-4 units technical electives (from Level III and IV of the Faculty of Engineering)
3 units from ENGINEER 4A03, 4H03

LEVEL IV: 35-38 UNITS (2005-2007 ONLY)
7 units ELEC ENG 4H13, 4O14
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4C14, 4F14, 4PK4, 4P14, 4TK4
6-8 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV
3-4 units approved technical electives (from Level III and IV of the Faculty of Engineering)
3 units from ENGINEER 4A03, 4H03

LEVEL IV: 35-37 UNITS (EFFECTIVE 2007-2008)
7 units ELEC ENG 4H13, 4O14
3 units ENGINEER 4B03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4C14, 4F14, 4PK4, 4P14, 4TK4
3-4 units approved technical electives (from Level III and IV of the Faculty of Engineering)
3 units from ENGINEER 4A03, 4H03

Electrical and Biomedical Engineering (B.Eng.)

Electrical and Biomedical Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E0, 2E0 and 4E0, or
• ENGINEER 1E0, 2E0, 3E0 and 4E0, or
• ENGINEER 1E0 and 4E0

LEVEL II: 39 UNITS
16 units ELEC ENG 2C15, 2CJ4, 2E15, 2S14
4 units COMP ENG 2SH4
8 units MATH 2P04, 2C04
3 units BIOLOGY 1A03
3 units CHEM 1A03
3 units approved complementary studies electives (above Level I)

LEVEL III: 40 UNITS (2005-2006 ONLY)
18 units ELEC ENG 3B3A3, 3BB3, 3EJ4, 3F14, 3TP4
4 units from COMP ENG 2D14, ELEC ENG 2D14
3 units from ENGINEER 4A03, 4H03
6 units MATH 3K03
6 units CHEM 2A03, 2B03
6 units HTH SCI 2L03, 2L13

LEVEL III: 40 UNITS (EFFECTIVE 2006-2007)
18 units ELEC ENG 3B3A3, 3BB3, 3EJ4, 3F14, 3TP4
4 units from COMP ENG 2D14, ELEC ENG 2D14
3 units ENGINEER 4B03
3 units MATH 3K03
6 units CHEM 2A03, 2B03
6 units HTH SCI 2L03, 2L13

LEVEL IV: 40-41 UNITS (2005-2007 ONLY)
8 units COMP ENG 3D4J, 4TL4
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV
29 units ELEC ENG 3TQ4, 3TR4, 4BC3, 4BD4, 4BE4, 4BF3, 4B14, 4H13

LEVEL IV: 40 UNITS (EFFECTIVE 2007-2008)
8 units COMP ENG 3D4J, 4TL4
3 units from ENGINEER 4A03, 4H03
29 units ELEC ENG 3TQ4, 3TR4, 4BC3, 4BD4, 4BE4, 4BF3, 4B14, 4H13

Electrical Engineering and Management (B.Eng.Mgt.)

Electrical Engineering and Management Co-op (B.Eng.Mgt.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E0, 2E0 and 4E0, or
• ENGINEER 1E0, 2E0, 3E0 and 4E0, or
• ENGINEER 1E0 and 4E0
LEVEL II: 40 UNITS
3 units COMMERCE 2A03
6 units ECON 1BB3, 2X03
4 units COMP ENG 2SH4
17 units ELEC ENG 2C15, 2CJ4, 2DI4, 2F14
1 units ENG MGT 2AA2
8 units MATH 2P04, 2Q04

LEVEL III: 37 UNITS (2005-2006 ONLY)
12 units COMMERCE 2B03, 2B04, 2FA3, 2MA3
4 units COMP ENG 3D04
13 units ELEC ENG 2E15, 2E14, 2TP4
1 unit ENGG MGT 3A01
3 units MATH 3K03
4 units SFWR ENG 3M04

LEVEL III: 36 UNITS (EFFECTIVE 2006-2007)
12 units COMMERCE 2B03, 2B04, 2FA3, 2MA3
3 units COMMERCE 3SK3
10 units ELEC ENG 2E15, 2E14, 2TP4
1 unit ENGG MGT 3A03
3 units MATH 3K03
4 units SFWR ENG 3M04

LEVEL IV: 39 UNITS (2005-2006 ONLY)
17 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4, 4HJ1
4 units COMP ENG 3D04
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
4 units from ENGINEER 4A03, 4H03

LEVEL IV: 35 UNITS (2006-2007 ONLY)
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units COMMERCE 3SK3
16 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4
1 unit ENGG MGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
4 units from ENGINEER 4A03, 4H03

LEVEL IV: 38 UNITS (EFFECTIVE 2007-2008)
9 units COMMERCE 3BC3, 3FA3, 3MC3
4 units COMP ENG 3D04
16 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4
3 units from ENGINEER 4A03, 4H03
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
4 units from ENGINEER 4A03, 4H03

LEVEL V: 36 UNITS (2005-2007 ONLY)
6 units COMMERCE 3QC3, 4P03
4 units ELEC ENG 4014
4 units ENGG MGT 4A01, 5B03
3 units COMMERCE 3SK3
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC 4CL4, 4FL4, 4PK4, 4PL4, 4TK4

LEVEL V: 36 UNITS (2007-2008 ONLY)
6 units COMMERCE 3QC3, 4P03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC 4CL4, 4FL4, 4PK4, 4PL4, 4TK4
4 units ELEC ENG 4014
3 units ENGG MGT 5B03
3 units from ENGINEER 4A03, 4H03
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
3-4 units technical electives (from Level III and IV of the Faculty of Engineering)

LEVEL V: 36 UNITS (EFFECTIVE 2008-2009)
6 units COMMERCE 3QC3, 4PA3
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC 4CL4, 4FL4, 4PK4, 4PL4, 4TK4
4 units ELEC ENG 4014
4 units ENGG MGT 4A01, 5B03
3 units approved complementary studies electives (above Level I)
3 units Commerce electives selected from Level III and IV
3 units Commerce or COMMERCE 2Q03
3-4 units technical electives (from Level III and IV of the Faculty of Engineering)

Electrical Engineering and Society (B.Eng.Society)

Electrical Engineering and Society Co-op (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. A minimum of 16 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 the following courses prior to graduation:
   • ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   • ENGINEER 1EE0, 2EE0 and 4EE0, or
   • ENGINEER 1EE0 and 4EB0

LEVEL II: 38 UNITS
4 units COMP ENG 2SH4
4 units from COMP ENG 2DI4, ELEC ENG 2D14
16 units ELEC ENG 2E15, 2E14, 2F14
6 units ENGSOCIETY 2X03, 2Y03
3 units MATH 2P04, 2Q04
3 units Engineering and Society focus electives

LEVEL III: 32 UNITS (2005-2006 ONLY)
3 units COMP ENG 3SK3
13 units ELEC ENG 2E15, 3F14, 3TP4
3 units ENGSOCIETY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3M04
6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS (EFFECTIVE 2006-2007)
3 units COMP ENG 3SK3
13 units ELEC ENG 2E15, 3F14, 3TP4
3 units ENGSOCIETY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3M04
6 units Engineering and Society focus electives

LEVEL IV: 36-39 UNITS (2005-2006 ONLY)
17 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4, 4HJ1
4 units COMP ENG 3D04
3 units ENGSOCIETY 3Z03
3 units from ENGSOCIETY 3X03, LABR ST 3W03
6-9 units Engineering and Society focus electives
3 units ENGINEER 2H03

LEVEL IV: 35-38 UNITS (2006-2007 ONLY)
4 units COMP ENG 3D04
16 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4
3 units ENGSOCIETY 3Z03
3 units from ENGSOCIETY 3X03, LABR ST 3W03
3 units ENGINEER 4B03
6-9 units Engineering and Society focus electives
3 units ENGINEER 2H03

LEVEL IV: 32-35 UNITS (EFFECTIVE 2007-2008)
4 units COMP ENG 3D04
16 units ELEC ENG 3E14, 3F14, 3TQ4, 3TR4
3 units ENGSOCIETY 3Z03
3 units from ENGSOCIETY 3X03, LABR ST 3W03
6-9 units Engineering and Society focus electives
3 units ENGINEER 4B03

4 units ELEC ENG 4014
6 units ENGSOCIETY 4X03, 4Z03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC 4CL4, 4FL4, 4PK4, 4PL4, 4TK4
6-9 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H13).

LEVEL V: 35-40 UNITS (2007-2008 ONLY)
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC 4CL4, 4FL4, 4PK4, 4PL4, 4TK4
4 units ENGINEER 4014
6 units ENGSOCIETY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H15)

3-4 units technical electives (from Level III and IV of the Faculty of Engineering)

LEVEL V: 35-36 UNITS (EFFECTIVE 2008-2009)
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4CL4, 4FJ4, 4PK4, 4PL4, 4TK4
4 units ELEC ENG 4O4
6 units ENGSOC1X 4X03, 4Z03
6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Electrical Engineering or Computer Engineering Level III or IV (not ELEC ENG 4H15)

Engineering Physics (B.Eng.)
Interdisciplinary Engineering Stream

Interdisciplinary Engineering and Nuclear Energy Systems Stream
Nano- and Micro-Devices Stream
Photonics Engineering Stream

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. The Department of Engineering Physics offers a common core with four streams of study:
   • Interdisciplinary Engineering (I Stream)
   • Nano- and Micro-Devices (M Stream)
   • Nuclear Engineering and Engineering Systems (N Stream)
   • Photonics Engineering (P Stream)

   Level II is common to all streams. All students entering Level II will be enrolled in the Interdisciplinary Engineering Stream.

   Students entering Level III choose one of the four streams offered in Engineering Physics. All students in Level IV in 2005-2006 will be registered in the Interdisciplinary Engineering Stream, except for those students who were registered in Level III Photonics Engineering in 2004-2005.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
   • ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   • ENGINEER 1EE0, 2EE0 and 4EA0, or
   • ENGINEER 1EE0 and 4EB0

LEVEL II: 39 UNITS
4 units ENGINEER 2P04
18 units ENG PHYS 2A04, 2E04, 2H04, 2S03, 2QM3
8 units MATH 2P04, 2004
3 units PHYSICS 2D03
6 units approved complementary studies electives. (Three units must be above Level I.)

LEVEL III: 37 UNITS (2005-2006 ONLY)
10 units ENG PHYS 3S03, 3F03, 3W04
9 units MATH 3C03, 3D03, 4Q03
9 units PHYSICS 3B06, 3M03
9 units Stream specific:
   I Stream ENG PHYS 3D03, 3E03; 3 units from ENG PHYS 3A03, 3ES03, 3MD03
   M Stream ENG PHYS 3E03, 3MD3; 3 units approved technical electives
   N Stream ENG PHYS 3D03, 3ES03, 3O03
   P Stream ENG PHYS 3A03, 3ES03, 3G03

LEVEL III: 38-40 UNITS (EFFECTIVE 2006-2007)
6 units ENG PHYS 3F04, 3W04
9 units MATH 3C03, 3D03, 4Q03
6 units PHYSICS 3B06
3 units approved complementary studies electives (above Level I)
12-14 units Stream specific:
   I Stream ENG PHYS 3D03, 3E03, 3PN3; 3 units from ENG PHYS 3A03, 3E03, 3MD03
   M Stream ENG PHYS 3E03, 3MD3, 3PN3; 3 units approved technical electives
   N Stream CHEM ENG 2A04, 3D04, ENG PHYS 3D03, 3ES03
   P Stream ENG PHYS 3A03, 3ES03, 3G03, 3PN3

LEVEL IV: 35-38 UNITS (2005-2006 ONLY)
6 units from ENGINEER 4A03 or 4H03; and 4B03
8 units ENG PHYS 4A04, 4U04
22-24 units approved Level III or IV technical electives, of which 10 units must be selected from the following courses: ENG PHYS 3C03, 4D03, 4E03, 4F03, 4L03, 4S04, PHYSICS 4D06

10 units ENG PHYS 4A06, 4U04
3 units approved complementary studies elective (above Level I)
22-28 units Stream specific:
   I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives
   M Stream ENG PHYS 4E03, 4F03, 4MD4, 4Z03; 11-13 units of approved Level III or IV technical electives
   N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 9-11 units of approved Level III or IV technical electives
   P Stream ELEC ENG 3TR4; ENG PHYS 4K03, 4S04; PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

LEVEL IV: 35-39 UNITS (EFFECTIVE 2007-2008)
3 units ENGINEER 4B03
10 units ENG PHYS 4A06, 4U04
22-26 units Stream specific:
   I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives
   M Stream ENG PHYS 4E03, 4F03, 4MD4, 4Z03; 14-16 units of approved Level III or IV technical electives
   N Stream ENG PHYS 4D03, 4ES3, 4L04, 4NE3; 9-11 units of approved Level III or IV technical electives
   P Stream ELEC ENG 3TR4; ENG PHYS 4K03, 4S04; PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

Engineering Physics and Management (B.Eng.Mgt.)
Interdisciplinary Engineering Stream

Interdisciplinary Engineering and Energy Systems Stream
Photonics Engineering Stream

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
1. The Department of Engineering Physics offers a common core with four streams of study:
   • Interdisciplinary Engineering (I Stream)
   • Nano- and Micro-Devices (M Stream)
   • Nuclear Engineering and Energy Systems (N Stream)
   • Photonics Engineering (P Stream)
Level II and III are common to all streams in a five-level program. All students entering Level II will be enrolled in the Interdisciplinary Engineering Stream. Students entering Level IV choose one of the four streams offered in Engineering Physics. All students in Level IV and V in 2005-2006 and all students in Level V in 2006-2007 will be registered in the Interdisciplinary Engineering Stream.

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
   • ENGINEER 1EE0, 2EE0 and 4EA0, or
   • ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   • ENGINEER 1EE0 and 4EB0

**LEVEL II: 39 UNITS**
- 6 units COMMERC 2AA3, 2MA3
- 3 units ENGN MGT 2AA2, 3AA1
- 4 units ENGINEER 2P04
- 15 units ENG PHYS 2A04, 2E04, 2H04, 2QM3
- 8 units MATH 2P04, 2004
- 3 units PHYSICS 2D03

**LEVEL III: 40 UNITS (2005-2006 ONLY)**
- 9 units COMMERC 2AB3, 2BA3, 2FA3
- 6 units ECON 1B93, 2X03
- 10 units ENG PHYS 2S03, 3F03, 3W04
- 6 units MATH 3C03, 3D03
- 9 units PHYSICS 3E03, 3P03

**LEVEL III: 38 UNITS (EFFECTIVE 2006-2007)**
- 9 units COMMERC 2AB3, 2BA3, 2FA3
- 6 units ECON 1B93, 2X03
- 11 units ENG PHYS 2S03, 3F03, 3W04
- 6 units MATH 3C03, 3D03
- 5 units PHYSICS 3B06

- 12 units COMMERC 3BC3, 3FA3, 3MC3, 3G3C
- 1 unit ENGN MGT 4A01
- 10 units ENG PHYS 3D03, 3D03, 4U04
- 3 units from ENGINEER 4A03, 4H03, ENG PHYS 2S03
- 3 units MATH 4Q03
- 3 units from MATLS 1M03 (or ENGINEER 2003), PHYSICS 2D03 or 3M03 (whichever has not been taken)
- 3 units approved complementary studies electives (above Level II)
- 3-4 units approved Level III or IV technical electives

**LEVEL IV: 38-40 UNITS (EFFECTIVE 2006-2007)**
- 12 units COMMERC 3BC3, 3FA3, 3MC3, 3G3C
- 1 unit ENGN MGT 4A01
- 4 units ENG PHYS 3U04
- 3 units MATH 4Q03
- 3 units approved Level III or IV complementary studies electives (above Level II)
- 3 units Commerce elective selected from Level III and IV Commerce or COMMERCE 2QB3

12-14 units Stream specific:
   - I Stream ENG PHYS 3D03, 3E03, 3PN3; 3 units from ENGN PHYS 3A03, 3ES3, 3MD3
   - M Stream ENG PHYS 3E03, 3MD3, 3PN3; 3 units approved Level III or IV technical electives
   - N Stream CHEM ENG 2A09, 3D04, ENG PHYS 3D03, 3E03
   - P Stream ENG PHYS 3A03, 3E03, 3G03, 3PN3

**LEVEL V: 35-36 UNITS (2005-2006 ONLY)**
- 3 units COMMERC 4PA3
- 3 units ENGN MGT 5B03
- 4 units ENG PHYS 4A04
- 15 units approved Level III or IV technical electives, of which 10 units must be selected from the following courses: ENG PHYS 3G03, 4D03, 4E03, 4F03, 4L03, 4S04, PHYSICS 4D06
- 6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

- 3 units COMMERC 4PA3
- 3 units ENGN MGT 5B03
- 6 units ENG PHYS 4A06

19-20 units approved Level III or IV technical electives, of which 10 units must be selected from the following courses:
- ENG PHYS 3G03, 4D03, 4E03, 4F03, 4L04, 4S04, PHYSICS 4D06
- 6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

**LEVEL V: 37-41 UNITS (EFFECTIVE 2007-2008)**
- 3 units COMMERCE 4PA3
- 3 units ENGN MGT 5B03
- 6 units ENG PHYS 4A06
- 3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

22-26 units Stream specific:
   - I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units of approved Level III or IV technical electives
   - M Stream ENG PHYS 4F03, 4MD4, 4Z03; 14-16 units of approved Level III or IV technical electives
   - N Stream ENG PHYS 4D03, 4E03, 4F04, 4E03; 9-11 units of approved Level III or IV technical electives
   - P Stream ELEC ENG 3T04, ENG PHYS 4K03, 4S04, PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

**Engineering Physics and Society (B.Eng.Society)**
Interdisciplinary Engineering Stream
Nuclear Engineering and Energy Systems Stream
Nano- and Micro-Devices Stream
Photonics Engineering Stream

**Physics Engineering Stream**
Interdisciplinary Engineering Stream
Nuclear Engineering and Energy Systems Stream
Nano- and Micro-Devices Stream
Photonics Engineering Stream

**ADMISSION**
See Admission to Level II Engineering Programs.

**NOTES**
1. The Department of Engineering Physics offers a common core with four streams of study:
   • Interdisciplinary Engineering (I Stream)
   • Nuclear and Micro-Devices (M Stream)
   • Nuclear Engineering and Energy Systems (N Stream)
   • Photonics Engineering (P Stream)

Levels II and III are common to all streams in a five-level program. All students entering Level II will be enrolled in the Interdisciplinary Engineering Stream. Students entering Level IV choose one of the four streams offered in Engineering Physics. All students in Level IV and V in 2005-2006 and all students in Level V in 2006-2007 will be registered in the Interdisciplinary Engineering Stream.

2. 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 II.)

3. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
   • ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   • ENGINEER 1EE0, 2EE0 and 4EA0, or
   • ENGINEER 1EE0 and 4EB0

**LEVEL II: 39 UNITS**
- 4 units ENGINEER 2P04
- 15 units ENG PHYS 2A04, 2E04, 2H04, 2QM3
- 6 units ENGSOCTY 2X03, 2Y03
- 8 units MATH 2P04, 2004
- 3 units PHYSICS 2D03
- 3 units Engineering and Society focus electives

**LEVEL III: 37 UNITS (2005-2006 ONLY)**
- 10 units ENG PHYS 2S03, 3F03, 3W04
- 3 units ENGSOCTY 3Y03
- 9 units MATH 3C03, 3D03, 4Q03
- 9 units PHYSICS 3B06, 3M03
- 6 units Engineering and Society focus electives
LEVEL III: 35 UNITS (EFFECTIVE 2006-2007)

11 units ENG PHYS 2503, 2F04, 3W04
3 units ENGSOCY 3Y03
9 units MATH 3C03, 3D03, 4Q03
6 units PHYSICS 3B06
6 units Engineering and Society focus electives

LEVEL IV: 31-35 UNITS (2005-2006 ONLY)

13 units ENG PHYS 2S03, 3D03, 3Q03, 4U04
3 units ENGSOCY 3Z03
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units MATH 4Q03
3 units from MATLS 1M03 (or ENGINEER 2003), PHYSICS 2D03 or 3M03 (whichever has not been taken)
3-4 units approved Level III or IV technical electives
3-6 units Engineering and Society focus electives

LEVEL IV: 34-36 UNITS (EFFECTIVE 2006-2007)

4 units ENG PHYS 4U04
3 units ENGSOCY 3Z03
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units ENGINEER 4B03
9 units Engineering and Society focus electives

12-14 units Stream specific:

I Stream ENG PHYS 3D03, 3E03, 3P03; 3 units from ENG PHYS 3A03, 3E03, 3M03, 3P03
M Stream ENG PHYS 3E03, 3M03, 3P03; 3 units approved Level III or IV technical electives
N Stream CHEM ENG 2A04, 3D04, ENG PHYS 3D03, 3E03
P Stream ENG PHYS 3A03, 3E03, 3Q03, 3P03

LEVEL V: 34-39 UNITS (2005-2006 ONLY)

3 units ENGINEER 4B03
4 units ENG PHYS 4A04
6 units ENGSOCY 4X03, 4Z03
16-20 units approved Level III or IV technical electives, of which
10 units must be selected from the following courses:
ENG PHYS 3G03, 4D03, 4E03, 4F03, 4L03, 4Q04, PHYSICS 4D06

3-6 units Engineering and Society focus electives

LEVEL V: 36-41 UNITS (2006-2007 ONLY)

3 units ENGINEER 4B03
6 units ENG PHYS 4A06
6 units ENGSOCY 4X03, 4Z03
16-20 units approved Level III or IV technical electives, of which
10 units must be selected from the following courses:
ENG PHYS 3G03, 4D03, 4E03, 4F03, 4L04, 4Q04, PHYSICS 4D06

3-6 units Engineering and Society focus electives.

LEVEL V: 34-38 UNITS (EFFECTIVE 2007-2008)

6 units ENG PHYS 4A06
6 units ENGSOCY 4X03, 4Z03
22-26 units Stream specific:

I Stream ENG PHYS 4L04, 4M04, 4S04; 12-14 units of approved Level III or IV technical electives
M Stream ENG PHYS 4F03, 4M04, 4203; 14-16 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4E03, 4F03, 4L04, 4N03, 4N05, 4Q04, PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives
P Stream ELEC ENG 3TR4; ENG PHYS 4K03, 4S04; PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

Materials Engineering (B.Eng.)

ADMISSION

See Admission to Level II Engineering Programs.

NOTES

1. Students entering Level III can choose between the Materials Engineering stream, the Computational Materials Engineering stream, and the Nanomaterials Engineering stream. In addition, the Materials Engineering stream is designed to permit choices of electives in Levels III and IV which will allow in-depth study of various types of modern engineering materials, i.e. electronic, metallurgical and polymeric materials.

The following combinations of electives are suggested for specific areas of specialization:

- Metallurgy: MATLS 4C03, 4D03
- Polymer: CHEM ENG 3G03, MATLS 4P03
- Electronic Materials: ENG PHYS 3F03, 4E03

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:

- ENGINEER 1E00, 2E00, 3E00 and 4E00, or
- ENGINEER 1E00, 2E00 and 4E00, or
- ENGINEER 1E00 and 4E00

LEVEL I: 38 UNITS

5 units CHEM 1AA3, 2W02
4 units CHEM ENG 2A04
7 units ENGINEER 2M03, 2P04
13 units MATLS 2B03, 2D03, 2H04, 2X03
6 units MATH 2M06
3 units approved complementary studies electives

LEVEL III: (MATERIALS ENGINEERING STREAM) 36-38 UNITS

21 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3T04
3 units MATH 3I03
3 units STATS 3Y03
6-8 units from CHEM 2E03, CHEM ENG 3Q04, 3Q03, ENG PHYS 3F03, MATLS 3Q03, 4D03, 4P03, MECH ENG 3Q04
3 units approved complementary studies electives

LEVEL IV: (MATERIALS ENGINEERING STREAM)

35-36 UNITS (EFFECTIVE 2005-2007)

3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
7 units MATLS 3F03, 4A02, 4L02
4 units from MATLS 4K04, 4Z04
3 units approved complementary studies electives (above Level I)

12-13 units approved Level III or IV technical electives, which must include either CHEM ENG 3Q04 or MECH ENG 3Q04, if not completed

LEVEL IV: (MATERIALS ENGINEERING STREAM)

36-37 UNITS (EFFECTIVE 2006-2007)

3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
8 units MATLS 4A02, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
3 units approved complementary studies electives (above Level I)

12-13 units approved Level III or IV technical electives, which must include either CHEM ENG 3Q04 or MECH ENG 3Q04, if not completed

Materials Engineering - Computational Materials Engineering Stream (B.Eng.)

Materials Engineering Co-op - Computational Materials Engineering Stream (B.Eng.)

LEVEL III: 39 UNITS

24 units MATLS 3A03, 3B03, 3C04, 3E04, 3F03, 3M03, 3T04
3 units MATH 3I03
3 units STATS 3Y03
3 units PHYSICS 2G03
3 units from CHEM 2E03, ENG PHYS 3F03, MATLS 3Q03, MATH 2E03, 2T03, PHYSICS 3M03
3 units approved complementary studies electives

LEVEL IV: 34-35 UNITS (2005-2006 ONLY)

3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
11 units MATLS 3F03, 4A02, 4E04, 4L02
4 units from MATLS 4K04, 4Z04
4 units from CHEM ENG 3Q04, MECH ENG 3Q04
3-4 units from BIOCHEM 4Y03, CHEM ENG 3Q03, MATLS 4F04, 4H03, PHYSICS 3S03, 4S03
3 units approved complementary studies electives (above Level I)
LEVEL IV: 36 UNITS
4 units from CHEM ENG 3004, MECH ENG 3004
12 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENG MGT 4A03
13 units MATLS 3903, 3E04, 3M03, 3Q03
3 units approved complementary studies electives (above Level I)

LEVEL V: 36-37 UNITS (2005-2006 ONLY)
6 units COMMERCE 3QC3, 4PA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
11 units MATLS 3P03, 3A02, 4F04, 4L02
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2Q33
3-4 units approved Level III or IV technical electives

LEVEL V: 37-38 UNITS (EFFECTIVE 2006-2007)
6 units COMMERCE 3QC3, 4PA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
12 units MATLS 4A02, 4F04, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2Q33
3-4 units approved Level III or IV technical electives

Materials Engineering and Society (B.Eng.Society)

ADMISON

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 the following courses prior to graduation:
   • ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   • ENGINEER 1EE0, 2EE0 and 4EE0, or
   • ENGINEER 1ES0 and 4ES0

LEVEL II: 33-35 UNITS
2 units CHEM 2WW2
3 units ENGINEER 2MM3
6 units ENGSOCY 2X03, 2Y03
13 units MATLS 2B03, 2D03, 2H04, 2X03
6 units MATH 2M06
3-6 units Engineering and Society focus electives

LEVEL III: 34-37 UNITS
4 units CHEM ENG 2A04
3 units CHEM 1A03
4 units ENGINEER 2P04
3 units ENGSOCY 3Y03
11 units MATLS 3C04, 3F03, 3T04
3 units MATH 3I03
3 units STAT 3Q03
3-6 units Engineering and Society focus electives

LEVEL IV: (MATERIALS ENGINEERING STREAM) 32-36 UNITS
4 units from CHEM ENG 3004, MECH ENG 3004
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units ENGSOCY 3Z03
10 units MATLS 3B03, 3E04, 3M03
6-7 units approved Level III and IV technical electives

LEVEL V: (MATERIALS ENGINEERING STREAM) 32-36 UNITS (2005-2006 ONLY)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
7 units MATLS 3F03, 4A02, 4L02
4 units from MATLS 4K04, 4Z04
6-7 units approved technical electives
3-6 units Engineering and Society focus electives

LEVEL V: (MATERIALS ENGINEERING STREAM) 33-37 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
8 units MATLS 4A02, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
6-7 units approved technical electives
3-6 units Engineering and Society focus electives


NOTE
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.)

LEVEL IV: 32-36 UNITS
4 units from CHEM ENG 3004, MECH ENG 3004
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units ENGSOCY 3Z03
13 units MATLS 3B03, 3E04, 3M03
3-6 units Engineering and Society focus electives

LEVEL V: 33-37 UNITS (2005-2006 ONLY)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
11 units MATLS 3F03, 4A02, 4E04, 4L02
4 units from MATLS 4K04, 4Z04
6-7 units approved technical electives

LEVEL V: 34-38 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
12 units MATLS 4A02, 4E04, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
6-7 units approved technical electives

LEVEL V: 33-37 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
13 units MATLS 3B03, 3E04, 3M03
3-6 units Engineering and Society focus electives

Materials Engineering and Society - Nanomaterials Stream (B.Eng.Society)
Materials Engineering and Society Co-op - Nanomaterials Stream (B.Eng.Society)

NOTE
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.)

LEVEL IV: 32-36 UNITS
4 units from CHEM ENG 3004, MECH ENG 3004
3 units from ENGSOCY 3X03, LABR ST 3W03
3 units ENGSOCY 3Z03
13 units MATLS 3B03, 3E04, 3M03
3-6 units Engineering and Society focus electives

LEVEL V: 32-36 UNITS (2005-2006 ONLY)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
11 units MATLS 3F03, 4A02, 4F04, 4L02
4 units from MATLS 4K04, 4Z04
2-3 units approved technical electives
3-6 units Engineering and Society focus electives

LEVEL V: 33-37 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 4B03, 4J03
6 units ENGSOCY 4X03, 4Z03
12 units MATLS 4A02, 4F04, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
2-3 units approved technical electives
3-6 units Engineering and Society focus electives
LEVEL IV: 35-36 UNITS (EFFECTIVE 2006-2007)
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
12 units MATLS 4A02, 4E04, 4J04, 4L02
4 units from MECH ENG 3Q04, 4Q04
4 units from CHEM ENG 3Q04, MECH ENG 3Q04
3-4 units approved complementary studies electives (above Level I)
3 units approved Level III or IV technical electives

Materials Engineering - Nanomaterials Stream (B.Eng.)

LEVEL II: 36-37 UNITS
24 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3Q03, 3T04
3 units MATH 3I03
3 units STATS 3Y03
3-4 units from CHEM 2E03, CHEM ENG 3Q04, 3Q03, 4Z03, MATLS 4D03, 4F03, MECH ENG 3Q04
3 units approved complementary studies electives

LEVEL IV: 35-36 UNITS (2005-2006 ONLY)
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
11 units MATLS 3F03, 4A02, 4F04, 4L02
4 units from ENG 3K04, 4Z04
8-9 units approved Level III or IV technical electives which must include CHEM ENG 3Q04 or MECH ENG 3Q04, if not completed
3 units approved complementary studies electives (above Level I)

LEVEL IV: 36-37 UNITS (EFFECTIVE 2006-2007)
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
12 units MATLS 4A02, 4E04, 4J04, 4L02
4 units from ENG 3K04, 4Z04
8-9 units approved Level III or IV technical electives which must include CHEM ENG 3Q04 or MECH ENG 3Q04, if not completed
3 units approved complementary studies electives (above Level I)

LEVEL IV: (MATERIALS ENGINEERING STREAM) 36-37 UNITS (EFFECTIVE 2006-2007)
4 units from CHEM ENG 3Q04, MECH ENG 3Q04
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
10 units MATLS 3B03, 3E04, 3M03
3 units approved complementary studies electives (above Level I)
3-4 units approved Level III or IV technical electives

LEVEL V: (MATERIALS ENGINEERING STREAM) 35-36 UNITS (2005-2006 ONLY)
6 units COMMERCE 3QC3, 4PA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
7 units MATLS 3F03, 4A02, 4L02
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2QB3
6-7 units approved technical electives

Materials Engineering and Management - Computational

Materials Engineering Stream (B.Eng.Mgt.)

Materials Engineering and Management Co-op - Computational

LEVEL III: 36 UNITS
4 units from CHEM ENG 3Q04, MECH ENG 3Q04
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
13 units MATLS 3A03, 3B03, 3E04, 3M03
3 units approved complementary studies electives (above Level I)

LEVEL V: 36-37 UNITS (2005-2006 ONLY)
6 units COMMERCE 3QC3, 4PA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
11 units MATLS 3F03, 4A02, 4E04, 4L02
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2QB3
6-7 units approved technical electives

Materials Engineering and Management Co-op - Nanomaterials Stream (B.Eng.Mgt.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
- ENGINEER 1EE0, 2EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
- ENGINEER 1EE0 and 4E00

LEVEL II: 35 UNITS
2 units CHEM 2WW2
3 units COMMS 2MA3
6 units ECON 1BB3, 2X03
2 units ENGN MGT 2AA2
3 units ENGINEER 2MM3
6 units MATH 2M06
13 units MATLS 2B03, 2D03, 2H04, 2X03

LEVEL III: 38 UNITS
4 units CHEM ENG 2A04
3 units CHEM 1AA3
9 units COMMERC 2AA3, 2BA3, 2FA3
1 unit ENGN MGT 3AA1
4 units ENGINEER 2P04
11 units MATLS 3C04, 3F03, 3T04
3 units MATH 3I03
3 units STATS 3Y03

LEVEL IV: (MATERIALS ENGINEERING STREAM) 36-37 UNITS
4 units from CHEM ENG 3Q04, MECH ENG 3Q04
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
10 units MATLS 3B03, 3E04, 3M03
3 units approved complementary studies electives (above Level I)
3-4 units approved Level III or IV technical electives

LEVEL V: (MATERIALS ENGINEERING STREAM) 35-36 UNITS (2005-2006 ONLY)
6 units COMMERCE 3QC3, 4PA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
7 units MATLS 3F03, 4A02, 4L02
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2QB3
6-7 units approved technical electives

Materials Engineering and Management - Nanomaterials Stream (B.Eng.Mgt.)

Materials Engineering and Management Co-op - Nanomaterials Stream (B.Eng.Mgt.)
Mechanical Engineering (B.Eng.)  \{4330\}

Mechanical Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering 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.

PROGRAM OPTION COMPULSORY COURSES:
• GENERAL: two of MECH ENG 3D03, 4Q03, 4S03, 4Z03
• MECHANICS AND DESIGN: MECH ENG 4Q03, 4Z03; two of MATLS 4T03, MECH ENG 4H03, 4I03, 4K03, 4L03, 4T03
• MANUFACTURING: MECH ENG 4Q03, 4Z03; two of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4A03, 4D03, 4H03, 4K03, 4T03
• THERMOFLUID SCIENCES: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4K03, 4L03

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E02, 2E00, 3E00 and 4E00, or
• ENGINEER 1E02, 2E00 and 4E00, or
• ENGINEER 1E00 and 4E00

LEVEL II: 37 UNITS
9 units COMMERCE 2A33, 2BA3, 2MA3
6 units ECON 1BB3, 2X03
4 units ENGINEER 2P04
6 units MATH 2M06
10 units MECH ENG 2D03, 2W04, 3C03
2 units ENGN MGT 2AA2

LEVEL III: 37 UNITS
3 units COMMERCE 2FA3
1 unit ENGN MGT 3AA1
3 units ENGINEER 2M03
3 units MATH 3I03
24 units MECH ENG 2B03, 2C03, 2Q04, 3A03, 3F04, 3Q04, 3R03
3 units STATS 3Y03

LEVEL IV: 34 UNITS
12 units COMMERCE 2AB3, 3B03, 3FA3, 3MC3
1 unit ENGN MGT 4A01
3 units MATH 3M03
12 units MECH ENG 3E04, 3MO2, 4R03, 4V03
6 units from required option courses or approved technical electives

LEVEL V: 35 UNITS
6 units COMMERCE 3C03, 4PA3
5 units Commerce electives selected from Level III or IV Commerce or COMMERCE 2Q03
3 units ENGN MGT 5B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives (above Level I)
8 units MECH ENG 4M06, 4P02
6 units from required option courses or approved technical electives. (See Note above.)

Mechanical Engineering and Society (B.Eng.Society)

Mechanical Engineering and Society Co-op (B.Eng.Society)

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Effective in the 2005-2006 academic year, 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.

PROGRAM OPTION COMPULSORY COURSES:
• GENERAL: two of MECH ENG 3D03, 4Q03, 4S03, 4Z03
• MECHANICS AND DESIGN: MECH ENG 4Q03, 4Z03; two of MATLS 4T03, MECH ENG 4H03, 4I03, 4K03, 4L03, 4T03
• MANUFACTURING: MECH ENG 4Q03, 4Z03; two of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4A03, 4D03, 4H03, 4K03, 4T03
• THERMOFLUID SCIENCES: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4K03, 4T03
• APPROVED TECHNICAL ELECTIVES: any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 3Q03

2. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
• ENGINEER 1E02, 2E00, 3E00 and 4E00, or
• ENGINEER 1E02, 2E00 and 4E00, or
• ENGINEER 1E00 and 4E00

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.)
LEVEL II: 33-35 UNITS
4 units ENGINEER 2P04
6 units ENGSOCTY 2X03, 2Y03
6 units MATH 2M06
14 units MECH ENG 2C03, 2D03, 2Q04, 2W04
3-6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS
3 units ENGSOCTY 3Y03
3 units ENGINEER 2M03
5 units MATH 3J03
20 units MECH ENG 2B03, 3A03, 3C03, 3F04, 3O04, 3R03
3-6 units Engineering and Society focus electives

LEVEL IV: 33-36 UNITS
3 units ENGINEER 3N03
3 units MATHS 3M03
3 units STATS 3Y03
3 units ENGSOCTY 3Z03
3 units from ENGSOCTY 3X03, LABR ST 3W03
12 units MECH ENG 3E04, 3M02, 3R03, 3V03
3 units from required option courses or approved technical electives
3-6 units Engineering and Society focus electives

LEVEL V: 32-35 UNITS
6 units ENGSOCTY 4X03, 4Z03
3 units ENGINEER 4B03
8 units MECH ENG 4M06, 4P02
3-6 units Engineering and Society focus electives
12 units from required option courses or approved technical electives
(See Note 1 above.)

Photonics Engineering (B.Eng.) (4426)
Photonics Engineering Co-op (B.Eng.)
Photonics Engineering and Management (B.Eng.(Mgt.)) (4426325)
Photonics Engineering and Management Co-op (B.Eng.(Mgt.))
Photonics Engineering and Society (B.Eng.Society)
Photonics Engineering and Society Co-op (B.Eng.Society)

The Photonics Engineering program has been discontinued as a separate program and converted to one of four new streams within the Engineering Physics program. Students who intended to register in this program should refer to the Engineering Physics (Photonics Engineering Stream) program for an equivalent option. Students currently registered in the Photonics Engineering program will be transferred to the Engineering Physics (Photonics Engineering Stream) program.

Software Engineering (B.Eng.) (4517)
Software Engineering Co-op (B.Eng.)

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
ENGINEER 1EE0, 2EE0 and 4EA0, or
ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
ENGINEER 1EE0 and 4EB0

LEVEL III: 38 UNITS (2005-2006 ONLY)
6 units ENGINEER 3K03, 4A03
32 units SFWR ENG 3A04, 3B04, 3D03, 3E03, 3F03, 3GA3, 3H03, 3I03, 3R03, 3X03

LEVEL III: 38 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 3K03, 4A03
32 units SFWR ENG 3A04, 3B04, 3D03, 3E03, 3F03, 3GA3, 3H03, 3I03, 3R03, 3X03

LEVEL IV: 36 UNITS (2005-2006 ONLY)
3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
24 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4I03, 4O03
6 units from SFWR ENG 4F03, 4J03, 4TE3

LEVEL IV: 36 UNITS (2006-2007 ONLY)
3 units ENGINEER 4B03
24 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4I03, 4O03

LEVEL IV: 36 UNITS (EFFECTIVE 2007-2008)
3 units ENGINEER 4B03
27 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4I03, 4O03
6 units from SFWR ENG 4F03, 4J03, 4TE3

Software Engineering and Management (B.Eng.(Mgt.)) (4517325)
Software Engineering and Management Co-op (B.Eng.(Mgt.))

ADMISSION
See Admission to Level II Engineering Programs.

NOTE
As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
ENGINEER 1EE0, 2EE0 and 4EA0, or
ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
ENGINEER 1EE0 and 4EB0

LEVEL II: 39 UNITS
6 units COMMERCE 2AA3, 2MA3
3 units ECON 1BB3
2 units ENGMGT 2AA2
6 units MATH 2M06
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2E03, 2F03, 2MX3, 2S03

LEVEL III: 36 UNITS (2005-2006 ONLY)
6 units SFWR ENG 3A04, 3B04, 3D03, 3E03, 3F03, 3GA3, 3H03, 3I03, 3R03, 3X03
3 units ENGINEER 3K03

LEVEL III: 36 UNITS (EFFECTIVE 2006-2007)
6 units ENGINEER 3K03
3 units ENGINEER 3K03
29 units SFWR ENG 3A04, 3B04, 3D03, 3E03, 3F03, 3GA3, 3RA3, 3S03, 3X03

LEVEL IV: 37 UNITS (2005-2006 ONLY)
15 units COMMERCE 2AB3, 2B03, 2C03, 2D03, 2E03, 2F03, 2M03, 2R03, 2S03
3 units ENGINEER 3K03
4 units ENGMGT 2AA2, 3AA1, 4A01
6 units SFWR ENG 4AA3, 4C03, 4D03
3 units from SFWR ENG 4F03, 4J03, 4O03, 4TE3
3 units from STATS 3N03, 3Y03
3 units approved Science electives

LEVEL IV: 37 UNITS (EFFECTIVE 2006-2007)
15 units COMMERCE 2AB3, 2B03, 2C03, 2D03, 2E03, 2F03, 2M03
3 units ECON 2X03
1 unit ENGMGT 4A01
9 units SFWR ENG 4AA3, 4D03, 4M03
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<thead>
<tr>
<th>FACULTY OF ENGINEERING</th>
<th>53</th>
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</table>

<table>
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<tr>
<th>LEVEL V: 39 UNITS (2005-2006 ONLY)</th>
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<tbody>
<tr>
<td>3 units</td>
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<tr>
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<td>6-9 units</td>
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<tr>
<th>LEVEL V: 30-33 UNITS (2005-2006 ONLY)</th>
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<tbody>
<tr>
<td>6 units</td>
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<td>15 units</td>
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<tr>
<td>6 units</td>
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<td>3-6 units</td>
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</tbody>
</table>

Software Engineering and Society (B.Eng.Society)

**Software Engineering and Society Co-op (B.Eng.Society)**

**ADMISSION**

See Admission to Level II Engineering 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 the following conditions prior to graduation:
   - ENGINEER 1EE0, 2EE0, 3EE0 and 4EE0, or
   - ENGINEER 1EE0, 2EE0 and 4EA0, or
   - ENGINEER 1EE0 and 4EB0

**LEVEL II: 37 UNITS**

| 6 units | ENGSOCTY 2X03, 2Y03 |
| 6 units | MATH 2M06 |
| 22 units | SFWR ENG 2AA4, 2C03, 2DA3, 2E03, 2F03, 2MX3, 2S03 |
| 3 units | Engineering and Society focus electives |

**LEVEL III: 35-38 UNITS (2005-2006 ONLY)**

| 3 units | ENGSOCTY 3Y03 |
| 29 units | SFWR ENG 3A04, 3BB4, 3DX3, 3E03, 3F03, 3GA3, 3H03, 3R03, 3X03 |
| 3-6 units | Engineering and Society focus electives |

**LEVEL III: 35-38 UNITS (EFFECTIVE 2006-2007)**

| 3 units | ENGSOCTY 3Y03 |
| 29 units | SFWR ENG 3A04, 3BB4, 3DX3, 3E03, 3F03, 3GA3, 3R03, 3S03, 3X03 |
| 3-6 units | Engineering and Society focus electives |

**LEVEL IV: 33-36 UNITS (EFFECTIVE 2007-2008)**

| 6 units | ENGINEER 3K03, 4B03 |
| 3 units | ENGSOCTY 3Z03 |
| 3 units | from ENGSOCTY 3X03, LABR ST 3W03 |
| 9 units | SFWR ENG 4AA3, 4F03, 4M03 |
| 3 units | from STATS 3N03, 3Y03 |
| 3 units | approved technical electives |
| 6-9 units | Engineering and Society focus electives |

**Software Engineering and Society Co-op (B.Eng.Society)**

**ADMISSION**

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2005-2006 academic year, a B.Eng. program in Software Engineering and Game Design will be offered.

**PROGRAM FOR THE B.TECH. DEGREE**

The Bachelor of Technology Degree Program in Manufacturing Engineering Technology is offered jointly by Mohawk College of Applied Arts and Technology and McMaster University. The objectives of the program are to upgrade the knowledge and skills of existing technologists/technical specialists and to allow them to perform with a broad technical and academic background along with hands-on experience. The program is designed to complement and enhance the student's background in basic engineering sciences, mathematics and advanced manufacturing technologies. An attempt has been made to structure the curriculum in concert with examinations typically assigned by Canadian professional engineering licensing bodies. Individuals seeking licensure in Mechanical Engineering may apply directly to the respective provincial (or territorial) professional engineering association. The number of examinations required for professional engineering licensing may be reduced.

**ACADEMIC REGULATIONS**

Students enrolled in a 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 THE PROGRAM**

All students must maintain a CA of at least 3.5 at each academic review to continue at the University. Students may be allowed to continue on academic probation for one reviewing period with a CA of 3.0 to 3.4. If your CA is less than 3.0, you may not continue at the University.
REINSTATEMENT
A student who is ineligible to continue may apply for reinstatement to the program. Application for reinstatement must be made in writing to the Committee of Instruction and should include a recommendation from the current employer. 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. If at any review after reinstatement the student's Cumulative Average falls below 3.5, the student will be required to withdraw from the University for a period of at least 12 months.

Manufacturing Engineering {4317}
Technology (B.Tech.)

ADMISSION
Enrolment in this program is limited. Admission requires satisfactory completion of a three-year Mechanical Engineering Technology Diploma (or equivalent). Applicants who meet the academic requirements may be interviewed, and some applicants may be required to write specific entrance examinations.

NOTE
Advance credit may be considered at the time of admission. However, a minimum of 33 units of work must be completed at McMaster in order to obtain the degree.

LEVEL I: 18 UNITS
3 units ENG TECH 1MA3
3 units ENG TECH 1ML3
3 units ENG TECH 1PG3
3 units MAN TECH 1CD3
3 units MAN TECH 1ID3
3 units MAN TECH 1TF3

LEVEL II: 18 UNITS
3 units ENG TECH 2CT3
3 units ENG TECH 2FE3
3 units ENG TECH 2MN3
3 units MAN TECH 2MD3
3 units MAN TECH 2MT3
3 units MAN TECH 2TF3

LEVEL III: 15 UNITS
3 units MAN TECH 3FB3
3 units MAN TECH 3FM3
3 units MAN TECH 3FT3
3 units MAN TECH 3MT3
3 units MAN TECH 3ST3
FACULTY OF HEALTH SCIENCES

WEB ADDRESS: http://www.fhs.mcmaster.ca

Dean and Vice-President
J. G. Kelton/M.D., F.R.C.P. (C.)

Associate Dean Research
J. P. Capone/B.Sc., Ph.D.

Associate Dean Academic
S. D. Denburg/B.A., M.A., Ph.D.

Associate Dean (Nursing)
C. Tompkins/B.Sc., M.Ed., Ph.D., R.N.

For information concerning Health Sciences education programs and admission requirements, contact:
Office of the Registrar
McMaster University
Gilmour Hall, Room 188
Hamilton, Ontario, L8S 4L8
Telephone (905) 525-4600

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 professional 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. 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 Physiotherapy and Occupational Therapy (School of Rehabilitation Science) was added and in 1993 the Midwifery Education Program was established. 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) (B.H.Sc. Honours), Bachelor of Health Science (B.H.Sc.) in Midwifery. In addition to its undergraduate programs, the Faculty of Health Sciences also has responsibility for Residency Programs in Postgraduate Medical Education.

Through the School of Graduate Studies, the Faculty offers the Medical Sciences program leading to the M.Sc. and Ph.D. degrees in the following research areas: Cell Biology and Metabolism; Hemostasis, Torbomboembolism; Atherosclerosis; Molecular Virology and Immunology; Neuroscience and Behavioural Sciences; Physiology/Pharmacology; and Reproductive Biology and Human Genetics. M.Sc. and Ph.D. programs in Clinical Health Sciences (Health Research Methodology) and Clinical Health Sciences (Nursing) are available through Medical Sciences. A professional master's degree program in Rehabilitation Science (Occupational Therapy and Physiotherapy) has been established and replaces the respective baccalaureate-level professional programs.

Interprofessional programs, postprofessional in nature and leading to an academic diploma, include: Child Life Studies; Clinical Behavioural Sciences; Environmental Health; and Occupational Health and Safety.

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, Henderson). St. Joseph's Centre for Mountain Health Services, St. Joseph's Hospital, St. Peter's Hospital, Hamilton Regional Cancer Centre and the Health Sciences Education Centre, Mohawk College. Extensive use is made of a variety of community agencies. A satellite program has been developed with institutions in Northwestern Ontario. 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 PROFESSIONAL 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 Bachelor of Health Sciences (Honours) program (B.H.Sc. Honours), School of Medicine (MD), the Midwifery program (B.H.Sc.), the School of Nursing (B.Sc.N.).

The following application deadlines are strictly enforced. Deadline dates are for consideration of admission to a program in the following September.

<table>
<thead>
<tr>
<th>Program</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Health Sciences (Honours) (B.H.Sc. Honours)</td>
<td>February 25</td>
</tr>
<tr>
<td>Medicine (MD)</td>
<td>February 15</td>
</tr>
<tr>
<td>Registration with OMSAS</td>
<td>September 15</td>
</tr>
<tr>
<td>Final application deadline</td>
<td>October 3</td>
</tr>
<tr>
<td>Midwifery (B.H.Sc.)</td>
<td>January 1</td>
</tr>
<tr>
<td>Nursing (B.Sc.N.)</td>
<td>March 1</td>
</tr>
<tr>
<td>Applicants directly from Ontario Secondary School</td>
<td>May 1</td>
</tr>
<tr>
<td>Diploma Registered Nurses</td>
<td>February 15</td>
</tr>
<tr>
<td>Nurse Practitioner Certificate</td>
<td>March 1</td>
</tr>
<tr>
<td>Applicants with Other Qualifications</td>
<td>February 15</td>
</tr>
<tr>
<td>Transfers from other degree Nursing programs</td>
<td>June 30</td>
</tr>
<tr>
<td>McMaster Site</td>
<td>May 15</td>
</tr>
<tr>
<td>Mohawk and Conestoga Site</td>
<td>March 1</td>
</tr>
<tr>
<td>Child Life Studies Diploma Program</td>
<td>July 1</td>
</tr>
<tr>
<td>Diploma Program in Clinical Behavioural Sciences</td>
<td>July 1</td>
</tr>
</tbody>
</table>

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.

An evaluation of Unsatisfactory in the School of Medicine signifies that the student has failed to meet these objectives and the University may require the student to withdraw from the School at any time.

The University reserves the right to require the withdrawal of a student should his or her conduct so warrant.
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 REGULATIONS FOR ADMISSION

Before registration, students must file with the University evidence of a recent health examination, immunization screening and chest X-ray. More detailed medical information will be required upon acceptance into the program.

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 at any time during the semester, until completion of the course is reviewed.

INFORMATION AND ACADEMIC COUNSELLING

In certain programs, a faculty member is selected for each student in the semester of entry to a degree program and provides each student with advice on evaluations, electives and other educational needs throughout the program. In the MD program, the advisor is also responsible for the collation of all evaluations and completion of the final transcript. Changes in advisors may be entertained as each student becomes acquainted with Faculty well enough to choose his or her own advisor. The academic advisor for students must be available for 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 PRACTISE

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 licence 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.

POST-PROFESSIONAL HEALTH SCIENCES EDUCATION PROGRAMS

CHILD LIFE STUDIES FULL-TIME DIPLOMA PROGRAM

This is an eight-month applied professional program in the Faculty of Health Sciences, focusing on the development of knowledge and skills for individuals working with infants, children, youth and families in a health care setting and community based programs.

The learning objectives are:

1. to examine and review the growth and development of infants, children and youth, incorporating communication, play, expression of feelings, discovery and mastery of the environment, behaviour management, and parent/child relationships, and
2. to examine the child life role in assessment, intervention, prevention, advocacy and documentation in situations critical to the child’s development and experience of acute and chronic illness and potentially traumatic or life-changing events.

Coursework involves small group learning, case studies and self-directed learning. Two eight-week internship placements in children’s hospitals and community settings are a requirement of this program.

A related university degree with an overall B average is required, as well as relevant experience. Admission is based on the assessed strengths of each applicant as determined by the application package and interviews. Applications must be submitted by March 1 of each year for the study period beginning in September. Information outlining application requirements can be obtained by contacting the Child Life Studies program office at (905) 525-9140 ext. 22793, or by email at humphre@mcmaster.ca or at http://www.fhs.mcmaster.ca/childlife.

Part-Time Multidisciplinary Distance Learning Courses

The Child Life Studies on-line educational program offers a variety of research-based courses related to supporting the psychosocial needs of children, youth and families through health care experience and life changing events. For a current listing of courses, schedules and registration fees, visit the web site at http://www.fhs.mcmaster.ca/childlife or call (905) 525-9140, ext. 22795.

DIPLOMA PROGRAM IN CLINICAL BEHAVIOURAL SCIENCES

The Clinical Behavioural Sciences (CBS) Post-Baccalaureate Diploma and Selected Studies Program is offered through the Department of Psychiatry and Behavioural Neurosciences. This part-time program is designed to expand the knowledge and skills of allied health professionals by demonstrating a variety of approaches to understanding clinical problems. The aim is to enable health workers to more effectively carry out the mandate of their professional discipline in a variety of settings. Courses vary from 10 to 20 weeks in length. A small group learning format is used. Applicants must have basic professional qualifications (degree, certificate or mandate in current job); employment (possibly including volunteer positions); leave from employer to attend classes; and approval to use course-related material from the work setting (with signing of University legal waiver). Courses must be applicable to job responsibilities. Applications must be submitted to the CBS Office (HSC 2E12) by July for September courses and by November for January and April courses. Personal interviews will be arranged if required. For additional information visit the CBS web site at http://www.fhs.mcmaster.ca/cbs. Applications can be obtained by contacting the CBS Office at (905) 525-9140 ext. 22796.

DIPLOMA PROGRAM IN ENVIRONMENTAL HEALTH

The diploma program is a distance education program offered through the McMaster Institute of Environment and Health. Students are required to register on-line starting in September and to April committing one day a week for self-directed learning, one hour per week for on-line tutorials and one day a week for completion of assigned work. The program is designed to provide new and/or upgraded skills and knowledge in the environmental health area to individuals with a degree or certification in a recognized field. It is suitable for public health unit professionals, physicians, community health nurses, environmental industrial profession­als and those in labour and non-governmental organizations dealing with environmental health issues. Participants must be sufficiently motivated to undertake self-directed learning.

Students come from a variety of disciplinary backgrounds. A relevant university degree or equivalent will normally be required. Admission is based on the number of places available and on the experience of applicants. Those without environmental health experience will also be considered.

Applications, a Transcript Assessment Fee, original transcripts and a letter of interest must be submitted by the end of June for the study period starting in September. Applications can be obtained by contacting the McMaster Institute of Environment and Health at (905) 525-9140, ext 27344. Applicants will be notified of admissions decisions in July. Further information is available on our web site (http://www.mcmaster.ca/meh).

DIPLOMA PROGRAM IN OCCUPATIONAL HEALTH AND SAFETY

The Program in Occupational Health and Environmental Medicine offers a diploma program designed to provide basic instruction in the principles of occupational health and safety. Students can enrol in the program on a full-time or a part-time basis. The full-time program starts in September catering to those who wish to complete the course in three months. The part-time program is designed for students within commuting distance from Hamilton wishing to continue their normal employment while enrolled in the program. The part-time program also begins in September and continues through to the end of April, one day per week, but includes two extended periods of full-time study each lasting two weeks.

While special consideration will be given to those already in the occupational health field, interested individuals without such experience may also be considered. Physicians, nurses, hygienists, related professionals and others are invited to apply. A relevant university degree or equivalent is generally required.

Applications must be submitted by March 31 each year for the course beginning in September. Applications can be obtained by contacting the Program in Occupational Health and Environmental Medicine at (905) 525-9140, ext. 22333 or emailing Jean Bodnar at bodnar@mcmaster.ca. Further information can be obtained on our web site (http://www.fhs.mcmaster.ca/pohem).
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Program Administrator,
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PROGRAM GOALS
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standing of the structure, function and behaviour' of the
in subsequent educational or occupational environments.

FACULTY OF HEALTH SCIENCES

THE BACHELOR OF HEALTH SCIENCES (HONOURS) PROGRAM

WEB ADDRESS: http://www.fhs.mcmaster.ca/bhsc

Michael G. DeGroote Centre for Learning and Discovery,Room 3308
Ex. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)
D.G. Harnish/B.Sc., M.Sc., Ph.D., 3M Teaching Fellow
Program Administrator
T. M. Basilio

Program Overview
This program, first offered in September 2000, is an innovative interdiscipli- nary 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 social 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 discipline-based courses, in which students use resources, and to obtain

- Registration in Level I of the program is limited to approximately 160 students, with expansion to 180 students at Level II.

PROGRAM GOALS
The overall goal of the program is to educate students in such a way that upon graduation students have a firm foundation in the health sciences, and the skills necessary to learn and adapt in subsequent educational or occupational environments.

KNOWLEDGE
To acquire a broad knowledge base that reflects the Faculty's commitment to studying health from biological, behavioural and population-based perspectives. This should include an understanding of the structure, function and behaviour of the human body, the environmental determinants of health and the ways that these factors interact to result in disease or illness.

SKILLS
To acquire and apply the following skills as a student and member of society:
1. Self directed learning skills: The ability to identify gaps in one's own knowledge that prevent solving a problem, to formulate a plan based on the obtained knowledge and resources, and to identify these perspectives and to formulate solutions that are comprehensive and adequate reflections of various levels of analysis.
2. Critical thinking skills: The ability to evaluate the merit of information obtained in various ways and to present information in a way that shows evidence of a critical, reflective approach to information and problems.

3. Synthesizing skills: The ability to understand that most problems can be analyzed from a number of perspectives, to identify these perspectives and to formulate solutions that are comprehensive and adequate reflections of various levels of analysis.
4. Communication skills: the ability to communicate an issue in oral and written form, both effectively and concisely.

PERSONAL QUALITIES
Individuals who successfully complete this program should be prepared to accept responsibility for a life-long process of learning and personal and professional growth. They should respect the various approaches to the study of health, and the beliefs associated with these studies, and be open to new ways of learning and understanding. They should understand that health care is a collaborative process and be capable of working collegially with others, while being prepared to contribute to the well-being of those around them.

Admission Procedures and Requirements
The following are the requirements for admission in the academic year 2004-2005. 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 B.H.Sc. (Honours) 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
http://www.ouac.on.ca

Application forms are available in secondary school guidance offices. Applications for all studies beginning in September must be received by OUAC no later than February 25. 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 Form which must be received in the B.H.Sc. (Honours) Program Office by February 25, 2005 (for September 2005 admission). Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc/supp/supp_app.htm

Applicants with Qualifications Equivalent to 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 the Admissions Office, 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 which must be received in the B.H.Sc. (Honours) Program Office by February 25, 2005 (for September 2005 admission). Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc/supp/supp_app.htm

Applicants from other countries should contact the Office of International Affairs at http://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 online via MUGSI by April 15th and a mandatory Supplementary Application by April 29th.

Applicants from other post-secondary institutions are required to contact the Ontario Universities’ Application Centre (OUAC) (please refer to the OUAC address above) and complete a mandatory Supplementary Application by April 29th. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc/supp/supp_app.htm.
Second Bachelor’s Degree Applicants
McMaster University graduates are required to complete a McMaster University Returning Student Application and a mandatory Supplementary Application by April 29th. McMaster University Returning Student Application forms are available from the Office of the Registrar, Gilmour Hall, Room 108, 1280 Main St. W., Hamilton, Ontario, L8S 4L8. Graduates from other universities are required to apply through the Ontario Universities’ Application Centre (OUAC) (please refer to the OUAC address above) and complete a mandatory Supplementary Application by April 29th. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc/supp/supp_app.htm

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 Round 2 (mid-late May). A minimum of 88% is required for consideration. In Round 2, the following grade information will be used:

a) Semester schools: all final Grade 12 U and/or M courses from first semester or prior years, and second semester mid-year courses for Grade 12 U and/or M courses.

b) Non-semester schools: second term grades for full-year Grade 12 U and/or M courses.

Offers based on interim and/or mid-year grades will be conditional upon maintaining satisfactory performance on final grades. Supplementary Applications are to be submitted electronically via the web at: http://www.fhs.mcmaster.ca/bhsc/supp/supp_app.htm. 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. Advanced Functions and Introductory Calculus U;
5. One U or M course from Social Sciences (Geography, History, Law, Psychology, Sociology) or Humanities (Art, Drama, English, French, Music, other languages);
6. One additional U or M course in any other subject area to total six courses.

Note: Courses in technological education, science or mathematics are not acceptable as the Social Sciences or Humanities course requirement.

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 with the exception of out-of-province students in jurisdictions that do not offer the equivalent of Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus). If this course is unavailable, a course equivalent to Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics) is acceptable.

Transfer Applicants
Transfer and second degree applicants will be admitted to the B.H.Sc. (Honours) 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 B.H.Sc. (Honours) Program must have completed the equivalent of six units of university Level I Biology and six units of university Level I Chemistry. A cumulative average of at least 7.0 (minimum overall average of 6.0) will be required for admission. Students who are accepted into Level II of the program may be required to complete a university Level I Inquiry Course offered within the B.H.Sc. (Honours) Program, after admission to the program.

Second Bachelor’s Degree Applicants
Transfer and second degree applicants will be admitted to the B.H.Sc. (Honours) 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. A Cumulative Average of at least 7.0 (minimum overall average of 6.0) will be required for admission. Previous university undergraduate studies must involve a significant component of work in subject areas unrelated to the B.H.Sc. (Honours) Program. Certain subject combinations may not be permitted. Applicants who have not completed a full course at the University level in Biology and Chemistry should be aware that completion of Grade 12 Biology U or OAC Biology and Grade 12 Chemistry U or OAC Chemistry are highly recommended prior to application. Applicants who have not completed these high school courses will be considered for admission. However, if accepted, an introductory Biology and Chemistry course at the university undergraduate level must be completed prior to proceeding to required courses that list these courses as prerequisites.

Curriculum

NOTE
While registration in HTH SCI 4X03 will occur in Level IV, students will begin studies in Level I. Detailed course information is available at http://www.fhs.mcmaster.ca/bhsc/courses/procourses.htm

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses

LEVEL I: 30 UNITS
6 units HTH SCI 1106
6 units CHEM 1A03, 1AA3
6 units HTH SCI 1E06
3 units HTH SCI 1G03
1 course SCIENCE 1A00
9 units Electives

LEVEL II: 30 UNITS (2005-2006 ONLY)
3 units HTH SCI 2E03
3 units HTH SCI 2F03
3 units HTH SCI 2G03
3 units HTH SCI 2J03
3 units HTH SCI 2K03
12 units Electives

LEVEL II: 30 UNITS (EFFECTIVE 2006-2007)
3 units HTH SCI 2A03
3 units HTH SCI 2E03
3 units HTH SCI 2F03
3 units HTH SCI 2G03
3 units HTH SCI 2J03
3 units HTH SCI 2K03
9 units Electives

LEVEL III: 30 UNITS
3 units HTH SCI 3E03
3 units HTH SCI 3G03
3 units HTH SCI 3G03
3 units HTH SCI 3H03
18 units Electives

LEVEL IV: 30 UNITS
6-9 units HTH SCI 4A09 or 4B05
18 units
18-21 units Electives

Bursaries
B.H.Sc. (Honours) students are eligible to apply for one of the following bursaries provided they are Canadian citizens and demonstrate financial need. Bursary application forms are available online through MUGSI via My Financial Aid menu and the quick link Bursary Application Form from mid-October to mid-November. Bursaries are intended to offset provincial financial assistance. The following bursaries have been generously donated to assist Bachelor of Health Sciences (Honours) students in financial need:

• Ruth Murray Memorial B.H.Sc. Bursary
• Loucks Family and Friends B.H.Sc. Bursary

There are many other bursaries provided through the campus bursary program, which will be disbursed to students in the fall each year. For further information about bursaries, please contact Teresa Basilio, (905) 525-9140 ext. 22786.
In addition to the regulations in the General Academic Regulations section of this Calendar, the following Program regulations apply.

**STUDENT ACADEMIC RESPONSIBILITY**

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

A student may not continue at the University if they fail to meet the minimum University's academic requirements.

**CONTINUATION IN THE PROGRAM**

Students who are enrolled in the B.H.Sc. (Honours) Program must maintain a minimum 3.0 grade average throughout their studies. If a student's grade average falls below 3.0 at any point, they may be placed on program probation for one period of at least 12 months.

**LETTERS OF PERMISSION**

Students enrolled in the B.H.Sc. (Honours) Program may apply to the Office of the Registrar for permission to take courses at another university. Permission forms are available from the Office of the Registrar.

**LEVEL OF REGISTRATION**

A student with six or more units in incomplete any level may proceed to the next level of the program only with the permission of the B.H.Sc. (Honours) Program Office.

**REINSTATEMENT TO THE B.H.SC. (HONOURS) PROGRAM**

A student who was not enrolled in the B.H.Sc. (Honours) Program at the University and wishes to return to the program must complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $50.00 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 include the reasons for the student's ineligibility, 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 a student is reinstated to the University, their Cumulative 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 Cumulative Average. If at any review after reinstatement, the student's Cumulative 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 personal degree audit via MUGSI on the working day following each time you drop or add courses and seek academic counseling from the B.H.Sc. (Honours) 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.

**SPRING COUNSELLING**

Academic counselling is available throughout the year from the B.H.Sc. (Honours) Program Office. It is recommended that students make an appointment with an advisor from this office during the March counselling period. Level I students must indicate their intention to continue in the B.H.Sc. (Honours) Program at that time.

**GRADUATION**

A CA of 5.0 is required for graduation.

Students who successfully complete Level III of the program may request permission from the B.H.Sc. (Honours) 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.

**THE MICHAEL G. DEGROOTE SCHOOL OF MEDICINE**

**WEB ADDRESS:** http://www.fhs.mcmaster.ca/mdprog/

Michael G. DeGroote Centre for Learning and Discovery, Room 3101
Ext. 22141

**Assistant Dean**


**Program Administrator**

C. Oudshoorn

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 not only the teaching hospital and ambulatory care and research facilities at the McMaster University Medical Centre division of Hamilton Health Sciences, but also the clinical teaching units at several of the major Hamilton hospitals and community health-care centres.

The Undergraduate Medical Program for the MD degree was initiated in 1969, graduating its first students in May 1972. At present, 138 students are admitted to the program each year.
The academic program operates on an 11 months-a-year basis 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, Community Medicine, Critical Care, Emergency Medicine, Family Medicine, Internal Medicine (and subspecialities), Laboratory Medicine (and subspecialities), Obstetrics and Gynecology, Pediatrics (and subspecialities), Psychiatry, Radiology, and Surgery (and subspecialities).

More details on these postgraduate programs are available from the Postgraduate Medical Education Office.

The Northwestern Ontario Medical Program (NOMP) has been developed in cooperation with the Northern Academic Health Science Network (NAHSN) and physicians in towns in Northwestern Ontario. Clinical training opportunities exist in community hospitals throughout Central West Ontario. Excellent clinical experience in these settings is part of both the undergraduate and postgraduate medical programs.

Graduate programs leading to the M.Sc. and Ph.D. degrees are offered in Biochemistry and in Medical Sciences. An M.H.Sc. (Health Care Practice) program is Interprofessional in nature and is for experienced health professionals who wish advanced preparation as clinicians.

The Undergraduate Medical Program  {7880}

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 units with early exposure to patients and case management.

UNDERGRADUATE PROGRAM GOALS

The Undergraduate Medical 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 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 NEW COMPASS CURRICULUM

In September 2005, the Undergraduate MD Program at McMaster University is inaugurating a completely new curriculum called the COMPASS curriculum. The new curriculum focuses on the mastery of fundamental concepts in medicine. It continues the McMaster tradition of problem-based learning but incorporates research findings from the learning sciences. 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. Tutorial problems will be selected to illustrate these concepts in a clinical setting and when students are exploring tutorial problems which will remain the focus of learning, they will be directed towards asking questions of what and why and how much as what is the diagnosis. The curriculum is specifically designed with designated curricular time for deliberate practice applying the concepts that have been learned.

The pre-clerkship curriculum is divided into five Medical Foundations as shown in the curriculum outline. A novel feature of the new curriculum is a horizontal Professional Competencies curriculum. This curriculum will run through all three years of the program. As in the Foundations tutorial-based curriculum, students will work in small groups throughout the Professional Competencies curriculum which integrates and remains connected to the Foundations curriculum throughout the pre-clerkship and into the clerkship. The core competencies of the Professional Competencies curriculum are effective communication, lifelong learning, self-awareness and responsibility, reasoning, ethical and moral reasoning, professionalism and role recognition, social and community context of health care, using science to guide practice, basic clinical skills and clinical reasoning. The Professional Competencies curriculum is also problem-based and will include inter-professional education and competency-based assessment using portfolios and learning plans. Some of the components addressed in this component of the curriculum are medical ethics, health economics, communications, etc.

LEARNING METHODS

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. Three main components are planned during the tutorials: the understanding of tutorial problems, requiring for their solution the understanding of underlying biological, population and behavioural principles, the appropriate collection of data and the critical appraisal of evidence. The faculty act as learning resources or guides. Learning by a process of inquiry is stressed.

The central focus of the program is the tutorial. The class is divided into small groups, each with a tutor. In the tutorial session students develop a series of learning objectives from each health-care problem 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 learning and working habits. Attendance is mandatory. In the Professional Competencies curriculum, students work in groups of 10, with two facilitators, one an MD, the other a non-MD.

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 EVALUATION METHODS

The evaluation format has been designed to complement learning in the Undergraduate Medical Program. Evaluation methods have been developed to measure how well the student achieves the stated educational objectives in the various foundations of the program. Continual evaluation of the student occurs within the tutorial setting with input from their peers, faculty preceptors and the tutor.

One objective evaluation exercise is required in each foundation. At the completion of the foundation, the tutor is responsible for the final summarization statement of student performance in the tutorials and all associated activities during that foundation. A copy of the evaluation summary is given to the student and to the student advisor while the original is kept in the student's evaluation file. The evaluation format is in addition to, and does not replace, a final exam or summative evaluation. The Program monitors student progress, and responds to students showing persistently low progress.
The acquisition of clinical and professional skills is evaluated by clinical skills preceptors in each foundation, including the clerkship, and additionally by Objective Structured Clinical Evaluations (OSCE's) which are run on an annual basis. The Evaluation Committee, a subcommittee of the Medical Education Committee, has the responsibility of working with the Medical Program to assist with the development and implementation of valid and reliable evaluation methods to provide timely and helpful information to assist students and faculty in assessing progress and performance. Continuation in the Program is subject to satisfactory performance.

**Curriculum Plan - COMPASS Curriculum**

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**MEDICAL FOUNDATIONS 1:** The first three weeks of this block address patterns of determinants of health. The premise of this introductory component of the curriculum is that health care systems do not account for much of the systematic differences in health status within or among populations in advanced industrial economies and that health care students need to understand why people get sick in the first place and why people get well. Social epidemiologists see that causes of ill health in populations are different from causes of ill health in individuals. After this introductory look at determinants of health, the curriculum moves on to address the first of the major concept themes in the curriculum, that of oxygen supply and exchange. In addressing problems that arise from inspired air right through to oxygen at the cellular level, students will learn much related to the respiratory, hematologic and cardiovascular systems.

**MEDICAL FOUNDATIONS 2:** This is the first of the two Foundations that addresses aspects of homeostasis, particularly that of energy balance, including issues related to the GI tract, endocrine system and nutrition.

**MEDICAL FOUNDATIONS 3:** This Foundation covers the second part of homeostasis, including the balance of acid and base, blood pressure and renal function and then goes on to address reproduction and pregnancy and a number of issues in genetics related to reproduction.

**MEDICAL FOUNDATIONS 4:** This Foundation addresses host defense, which includes immunology and infectious disease, and then moves on to look at neoplasia and the genetics of neoplasia. An integration week between each of these Medical Foundations allows students to review on a continuous basis material learned up to each integration point. In this way, students can build their knowledge in a systematic way.

**MEDICAL FOUNDATIONS 5:** This covers the concepts of movement control and interacting and communicating, which includes the locomotor system, the nervous system and behaviour. Aspects of human development will run throughout all of the five Medical Foundations.

**THE CLERKSHIP:** While the Clerkship will be firmly linked to the pre-clerkship concept-based curriculum and will include continuing delivery of the Professional Competencies curriculum, this is now the time for students to participate in the direct care of patients as they learn about the management of health and illness. The health care problems are now real patients or populations. Students are given self-directed choice of contemporary medicine, able to sense when today's medicine becomes out-of-date by adopting good habits of learning and assessment. The Clerkship program consists of rotations in medicine, which includes geriatrics, surgery, family medicine, anesthesia, psychiatry, pediatrics, obstetrics and gynecology and emergency medicine. There is also electives time, one half of which must be spent in clinical activity. The compulsory components of the Clerkship are carried out in teaching practices and in all the teaching hospitals in the Hamilton region; in community hospitals, including those in St. Catharines, Guelph, Brantford, Burlington, Niagara Falls and the Kitchener-Waterloo region, and in association with the Northwest Ontario Medical Program. Students are expected to travel outside the Hamilton area for clerkship rotations. It is anticipated that further rotations will be developed in rural, under-serviced and remote areas. The elective experience can be spent in various activities utilizing local, regional or distant resources.

**ELECTIVES**

Elective studies form an integral part of the Clerkship Plan. They may be considered the epitome of self-directed learning, since students must define goals for electives 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.

The three 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, after Medical Foundation 5, during the Clerkship and immediately after the New Year of third year.

2. **Horizontal Electives:** These are undertaken concurrently with other parts of the curriculum. Horizontal electives are entirely voluntary, not being required for completion of the program, but are used to explore or review a specific area of knowledge or practice in more detail. It is particularly important that the student's advisor be involved in all decisions concerning the selection and carrying out of horizontal electives.

3. **Enrichment Electives:** There are arrangements in place for a small number of students from each class to devote longer periods of time (from six to 12 months) to the pursuit of special academic experiences. The intent is to encourage students to explore special frontier areas of medicine and health care. Examples include: research training and experience; community health projects; international health opportunities. These experiences are often undertaken following Medical Foundation 5 or during the first half of Clerkship. Some experiences may potentially have partial funding (e.g. by student research fellowships).

**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. It is expected that students in Ontario medical schools will be required to register with the College of Physicians and Surgeons of Ontario (CPSO) in September 2005 as a result of an agreement between the Council of Faculties of Medicine and CPSO. Students in Ontario medical schools were not required to register with the CPSO prior to September 2005. Students intending to practise 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 issuance of a Certificate of Registration: Authorized to practice medicine as follows:

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.
In general, students are expected to obtain a certificate from either the College of Family Physicians of Canada or from the Royal College of Physicians and Surgeons of Canada in order to be licensed in the province of Ontario.

Admission Policy

The Matching Service is a clearing-house designed to help final-year Canadian 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 declare 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.

Further information is available from Cathy Oudshoorn, MD Program Administrator, (905) 525-9140, ext. 22141.

Basic Cardiac Life Support Training

All students are required to have obtained a current certificate in Basic Cardiac Life Support (Adult and Child CPR) prior to registration in the medical program. Courses are readily available in most communities. Information will be sent to successful applicants prior to registration.

Specific questions can be directed to Cathy Oudshoorn, MD Program Administrator, (905) 525-9140, ext. 22141.

Immunization

The Ontario Public Hospitals Act requires that all persons working in a hospital setting must meet certain criteria related to surveillance for infectious diseases. In order for the registration to be completed, students must be enrolled in the MD Program, they must annually complete Pre-Clinical Communicable Disease Screening through the Student Health Services. More information will be sent to successful applicants prior to registration.

Specific questions can be directed to Cathy Oudshoorn, MD Program Administrator, 905 525-9140, ext. 22141.

Admission Policy for the Medical Program

The official admission policy and deadlines for the Undergraduate Medical Program for entry in late August 2005 shall be as published in the 2006 Ontario Medical School Application Booklet. This booklet is available through:

Ontario Medical School Application Service (OMSAS), 170 Research Lane, Guelph, Ontario, N1G 5E2

(519) 823-1940
http://www.ouac.on.ca/omsas/
email: 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 documents and the MD Program Application Form 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 the Medical Education Program procedures. The University reserves the right to change the admission requirements at any time without notice.

Admission and Registration

Admission to 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. Candidates applying for entry in 2006 must register their intention to apply with the Ontario Medical School Application Service (OMSAS) by September 15, 2005. The final application deadline is October 3, 2005. The deadline is strictly enforced.

Admission Policy and Procedure

The intention of the McMaster Undergraduate Medical Program is to prepare students to become physicians who have the capacity and flexibility to select 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.

Applications received in the Fall of 2005 are for the academic year commencing late August 2006. Applicants who will not be ready or able to begin studies at that time may withdraw their applications without prejudice. Application fees cannot be refunded.

Registration on the OMSAS web site must be completed by September 15, 2005. Final applications must be submitted by October 3, 2005, 4:30 p.m. EDT. Several hundred applicants will be invited for interviews in Hamilton in March or April. From this group a class of 138 is selected.

All applicants are notified in writing, by McMaster University, of the results of their application. These letters are mailed to applicants no later than the last business day in May, 2006.

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 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 years.

Academic Eligibility Requirements

Applicants must submit to the Post-Secondary Education Form of the OMSAS application all grades received in the degree credit courses in which they have ever registered. Failure to report courses, grades or grades on the Post-Secondary Education Form will result in the disqualification of the application. All grades are converted by the applicant on the Post-Secondary Education Form to a 4.0 scale according to the OMSAS Undergraduate Grading System Conversion Table. (The Conversion Table is provided with the OMSAS Application.)

All applicants must fulfill the requirements described below in both a) and b).

a) By June 2006, applicants must have completed a minimum of three years of undergraduate work. Only degree credit courses taken at an accredited university will be considered. To satisfy the minimum requirements, academic credentials obtained from a Canadian University must be from an institution that is a member of the Association of Universities and Colleges of Canada (AUCC). The applicant must be able to demonstrate a high level of academic achievement consistently over that extended period of time.

A minimum of 15 full-courses, or 30 half-courses (three years) of undergraduate university work from a recognized university is required. A year is the full block of work specified for a year or level of the program as indicated on the university transcript and in the appropriate university calendar. If requested, applicants must provide evidence that this requirement has been met. Any discrepancy in interpretation of full block of work will be settled using the OMSAS definition.

An applicant who has completed a diploma at a CEGEP must have completed by June 2005, at least two additional full academic years of degree credit work at an accredited university. One of these years must be a full academic year of courses above Level I.

Applicants who have completed the requirements for a baccalaureate degree in less than three years by October 3, 2005 are also eligible.

b) By October 3, 2005, 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 students should be aware that given the rapidly rising level of competition for a limited number of positions, a significantly higher GPA would provide the applicant with a more reasonable chance of admission. Due to changes from year to year in the level of competitiveness, an approximate GPA in this regard cannot be provided.

c) Marks on supplementary and summer courses will be included in the grade point average calculation.
d) Graduate experience of applicants will be considered in the admission process. Graduate work will not be considered unless it is complete and the degree has been conferred by the application deadline, October 3, 2005. Individual grades received for course work taken as part of a graduate degree will not be included in the calculation of the grade point average.

ABORIGINAL APPLICANTS

Applicants who wish to be considered under the Aboriginal (Indian, Inuit or Metis, as recognized in the Constitution Act, 1982) application process will also be required to provide a letter of recommendation from their First Nation, Band Council, Tribal Council, Treaty Community or organizational affiliation.

Aboriginal applicants are 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 set out for the general pool of candidates and have an overall GPA of at least 3.0 as calculated on the OMSAS 4.0 scale.

GEOGRAPHICAL CONSIDERATION

The geographical status of the applicant is determined from the Autobiographical Sketch. Applicants may be asked to provide evidence of geographical status. In selecting applicants for interview, the final decision 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 by October 3, 2005, 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. To qualify for Canadian status an applicant must be a Canadian citizen or permanent resident.

TRANSCRIPT REQUIREMENTS AND TRANSCRIPT REQUEST FORMS (TRF)

All transcripts from Ontario universities will be ordered by OMSAS. The TRF must indicate the intent of applicants who request all other transcript materials prior to September 15, 2005 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 3, 2005. 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 entirely the applicant’s responsibility to ensure that all of the above are received at OMSAS by October 3, 2005. 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.

REGISTRAR STATEMENTS

Please note that the transcripts do not always report the fall/winter/summer 2005/2006 courses in which applicants are registered. In this case, applicants must arrange to have the Registrar of the institution that they are attending send a statement of registration and a list of courses to OMSAS by October 3, 2005. When undergraduate courses are in progress at the time of application, applicants must submit a Registrar Statement by October 3, 2005. This is particularly important to establish that the applicant will have satisfied the minimum academic requirement by June 2006. A similar rule applies to graduate work in progress by October 3, 2005.

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 3, 2005.

CREDENTIALING OF NON-CANADIAN GRADES

Applicants, Canadian or non-Canadian, who have not met minimum course number criteria utilizing their Canadian data and require inclusion of their international education data 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 3, 2005. Those requiring WES assessment must also ensure that transcripts are received by WES in time for their assessment to reach OMSAS by October 3, 2005.

AUTOBIOGRAPHICAL SUBMISSION

Applicants must provide an Autobiographical Submission which is a description about their preparedness for medicine and suitability for the McMaster Undergraduate Medical Program. The Autobiographical Submission Booklet is included in the on-line application package.

Detailed instructions with regard to the length and format of the Autobiographical Submission are on the OMSAS web site. Those instructions are considered to be part of the Admission Policy and Procedures for the McMaster Undergraduate Medical Program.

Failure to comply with the instructions for the Autobiographical Submission Package will result in disqualification of the application.

ENGLISH LANGUAGE PROFICIENCY

Each student granted admission to McMaster’s Undergraduate Medical Program must be proficient in spoken and written English. All application materials must be submitted in English, including the Autobiographical Sketch. Otherwise the application will not proceed further in the admissions process.

Applicants whose first language is not English must satisfy the following conditions:
1. provide evidence that a score of at least 580 on the paper based TOEFL or 237 on the computer based test; or the equivalent on other recognized tests has been achieved (McMaster University code is #0936, department code is 49); or
2. have attended an education 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 Hamilton for an interview. Because the interviews involve many other people, applicants must attend on the date and time specified. Applicants are responsible for their own travel and expenses.

The interview process itself is composed of a series of ten-minute encounters over a two-hour period. A further autobiographical assessment may be required on interview day.

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 mailed to applicants no later than the last business day in May 2006.

Anyone accepting an offer of admission must provide, within two weeks of acceptance, a cheque in the amount of $1,000 (Canadian), non-refundable, which will subsequently be applied towards tuition.

APPLICATION FOR DEFERRED REGISTRATION

Deferred registration may be granted only under exceptional circumstances. Deferred registration applications may be requested only by those candidates offered a place in the class on the last working day in May and who have accepted that offer. The request for deferral must be submitted within two weeks of the offer of admission.

SPECIAL APPLICANTS

The Special Applicant Pool is on hold this admissions cycle.

INTERNATIONAL APPLICANT POOL

The International Applicant Pool is on hold this admissions cycle. Interested International applicants may still apply through the regular pool.
ADVANCED STANDING/TRANSFER

The structure of the McMaster Program requires that all students begin in Unit 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, the OMSAS Information Booklet, and the McMaster Autobiographical Submission for the new admission selection cycle.

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 2004-2005, 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 .................................................. $15,002.86
Year II .................................................. $15,002.86
Year III ............................................... $15,002.86

In addition, the cost of books and diagnostic equipment for a Year I student was approximately $2,994. 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 clinical study.

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 an extensive 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 following list of bursaries is available to Undergraduate Medical Students who are Canadian citizens. The following bursaries have been generously donated to assist medical students in financial need:

- Adrachas (Archie) Ylan Moughall Memorial Bursary
- Altana Pharma Family Medicine Bursary
- Andrew Talatia Memorial Bursary
- Burlington Medical Society Bursary
- Cholowsky Family Multiple Sclerosis Bursary
- Daniel Giannini Bursary
- Gall Haning Memorial Bursary
- J.W. Harry Butler Estate Bursaries
- Daniel and Natalie Strub Bursary
- Medical Student Opportunity Trust Bursary
- Ontario Medical Student Bursary Fund
- Ragonetti Family Bursary
- Ripley Estate Bursaries
- Ron and Gina Fraser Medical Bursary
- Ronald Pye Bursary
- Ruth Tomlinson Memorial Bursaries
- Schenkel Medical Assistance Fund
- Scotiabank McMaster Medical Scholarship
- Scotiabank Breast Cancer Scholarship
- UCO Ferwerda Humanitarian Memorial Bursary
- William A. Vanderburgh Estate Bursaries

There are many other bursaries provided through the central campus bursary program, which will be disbursed to students in the fall each year. Information about each award, criteria and amounts will be provided to all medical students each fall. For further information about bursaries, please contact Cathy Oudshoorn, (905) 525-9140, ext. 22141.

ACADEMIC AWARDS

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 program 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 financial assistance awards.

A small but 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 projects or activities.

Students are required to submit an application through the MD Program Office, outlining the nature of their work and the need for funds. For further information, contact Cathy Oudshoorn, (905) 525-9140, ext. 22141.

ABBOTT MEMORIAL SCHOLARSHIP LOAN FUND

This fund was established by the Federation of Medical Women of Canada. Small loans are available to any female medical student or first-year resident. In special cases, a loan up to $1,000 may be made to a student for recognized postgraduate training. Loans are payable within five years of date of issue, after which time interest will be charged at a rate of 5% compounded annually.

Information regarding these loans may be obtained from Kay Moffat, Executive Coordinator, Federation of Medical Women of Canada, Box 8244, Ottawa, Ontario, K1G 3H7.

MEDICAL OFFICER TRAINING PLAN

The Department of National Defence administers a program for medical students known as the Canadian Forces Medical Officer Training Plan. Under this plan, students may be subsidized (tuition, fees) through their undergraduate medical studies and residency. To qualify for enrolment a student must be acceptable without condition in a program in medicine in a Canadian university or in an accredited Residency Program.

Further information on this program and on the career opportunities in medicine in the Canadian Armed Forces may be obtained from local Canadian Forces Recruiting Centres. In Hamilton, the Recruiting Centre is at 100 Main Street East. Telephone (905) 572-4000.

LOAN FUND

The Undergraduate Medical Program administers a small loan program to assist medical students with demonstrable need. Unfortunately, these funds are limited and cannot be relied on to meet a major portion of any student's financial obligations. The sources of these funds include: The Ontario Medical Association Loan Fund, the William Andrew Vanderburgh Sr. Memorial Fund, the Ripley Estate Loan Fund, the Dr. Elizabeth Bagshaw Fund and the Dr. A. Bolt Memorial Fund.

For further information about loans contact Cathy Oudshoorn, (905) 525-9140, ext. 22141.
WEB ADDRESS: http://www.th.mcmaster.ca/midwifery/

Michael G. DeGroote Centre for Learning and Discovery, Room 3103
Ext. 26654

Assistant Dean
K. Kaufman/B.S.N., M.S., Dr.P.H., R.M.

Program Administrator
B. Pindar-Donick

Program Overview

The Midwifery Education Program at McMaster University leads to a Bachelor of Health Sciences (B.H.Sc.) in Midwifery. The program reflects the philosophy of midwifery in Ontario. Midwifery is potentially one of the most important components of women's health care in Ontario. Midwives' expertise in the care of normal pregnancy and childbirth arises from their understanding of child-bearing as a social, cultural and biological process and from their ability to competently exercise clinical skills and decision-making. Midwifery education provides the base for sound professional practice. The educational program is an integral part of the evolution of the profession of midwifery in Ontario and Canada. The program helps create future leaders and teachers. It assures practice and teaching as a continuum so that learning environments become available across Ontario. Midwives, as primary health care providers, should have well-developed interpersonal skills.

They must be competent in areas of health education, counseling and interprofessional collaboration. Applicants to the program will be assessed for their ability to exhibit and further develop these important personal/professional qualities. Midwives provide care and advice to women during pregnancy, labour and the postpartum period; conduct deliveries and provide care for newborn babies. The Midwifery Education Program is a collaborative venture shared by McMaster, Ryerson and Laurentian Universities.

Curriculum

The four year program which spans nine terms, includes courses from basic sciences, social sciences, health sciences, women's studies and electives, in addition to clinical courses. A variety of course formats include distance learning through teleconferencing and print-based self-study courses. Teaching methods include lecture format, small group tutorials, self-directed activities and practical learning experiences.

INTENSIVES

Intensives provide the opportunity for the students to group together for several days for workshops, clinical skills sessions. All intensives are held at McMaster University and generally last one week. In Level IV, the intensive session includes students from all three institutions, intensives are part of the curriculum and therefore, attendance is mandatory.

CLINICAL COURSES

Clinical courses consist of a clinical placement and concurrent problem-based weekly tutorials. Students are assigned to a midwifery practice for an extended period of time to ensure continuity of care to expectant mothers and supervision from a clinical preceptor. Throughout the program, students will be placed in more than one midwifery practice and will gain clinical experience in a hospital setting and with an obstetrician. Efforts are made to assist students in being assigned to the clinical practice of their choice, however, due to limited placements, students may have to relocate or travel for clinical placements. Travel and living expenses are the responsibility of the student.

REQUIREMENTS

138 units total (Levels I to IV)

LEVEL I: 31 UNITS

6 units HTH SCI 1D06
6 units HTH SCI 1C06
6 units WOMEN ST 1A06
4 units HTH SCI 3C04 (Term II)
6 units MIDWIF 1A06
3 units MIDWIF 1C03 (Term I)

LEVEL II: 30 UNITS

3 units MIDWIF 2D03
9 units Electives from the Faculties of Health Sciences, Humanities, Social Sciences (Term I)
15 units MIDWIF 2A03, 2E12
3 units MIDWIF 2F03

LEVEL III: 42 UNITS

15 units MIDWIF 2E15
9 units MIDWIF 3A09
15 units MIDWIF 2C15 (Spring/Summer)
3 units MIDWIF 3F03

LEVEL IV: 80 UNITS

15 units MIDWIF 3B15
12 units MIDWIF 3C12
3 units MIDWIF 3E03

Transfer credit may be available.
Clinical course.

Admission Procedures and Requirements

Admission into the Midwifery Education Program is reserved for candidates who meet all requirements and who satisfy the academic regulations of the university. It is recommended that applicants have completed at least one year of university studies with at least an 0.7 average. All candidates must meet the first year admissions of secondary and post secondary universities previously attended must be forwarded to the Office of the Registrar. The application deadline is February 1 each year. Applications received after February 1 will not be considered. Please note that required courses must be completed at the time of application (excluding current High School students).

All documents submitted with the application become the property of the university. Successful applications remain on file.

All applicants must have completed the following course requirements in order to be considered for admission:

1. Science (Biology or Chemistry - both strongly recommended)
2. English
3. A Social Science (Anthropology, Family Studies, Geography, History, Law, Psychology, Sociology)

70% in each course is required.

It is recognized that applicants apply to the program with varying educational backgrounds. Applicants can fulfill the courses required from the following educational backgrounds:

Applicants Directly from Ontario Secondary Schools

The following are the minimum Grade 12 U and M requirements under the Ontario Secondary School curriculum:

1. English U;
2. One of Biology U or Chemistry U (both are recommended);
3. One Grade U or M course in Social Science (History, Sociology, Psychology, Geography, Law);
4. Completion of additional Grade 12 U or M courses to total six credits;
5. Students must obtain a minimum grade of 70% in each of the three (3) required courses listed in points 1, 2, and 3 above AND a minimum overall average of 70% on six Grade 12 U and M courses including the required courses.

Prior/Current College Diploma Studies

Applicants with College Diploma Studies or equivalent must have fulfilled courses that are equivalent to the Grade 12 U or M courses (or OACs) in the three required subjects as stated above. In addition, a minimum of 70% must be obtained in each of the three required subject areas and a minimum overall average of 70% in college work must be obtained. Applicants with CEGEP background should consult the Ontario Secondary School Course Equivalents Chart found in the Admissions Requirements section of this Calendar.

Prior/Current University Students

Applicants with prior or current university studies, at the time of application must have Grade 12 U or M courses (or OACs) from high school or equivalent university courses in three of the required subject areas noted above. Students must have 70% in each of the three required subjects. In addition, the applicant's overall average from the ten best most recent course work must be a minimum of 70%.
Mature Students

Mature students must have completed the three required subjects as noted in the basic requirements, and have obtained a minimum grade of 70% in each course. Students who do not meet the basic academic requirements as listed below are advised to take Grade 12 U or M courses or introductory university level courses. The two years absence from formal studies clause may be waived for those who take Grade 12 or U or M course upgrading. The following University requirements for Mature Students also apply. A student must:

1. be a least 21 years old, or will be prior to the first day of classes for the session to which application is made;
2. have not attended secondary school for at least two years;
3. have never attended university;
4. have not been enrolled in a college diploma program within the last five years or have completed less than one year of college work.

Prior Midwifery Education or Experience

For applicants with prior Midwifery Education or Experience, Ryerson University, through the division of Continuing Education, offers the International Midwifery Pre-Registration Program. The purpose of this program is to provide internationally educated midwives with assessment and education which will prepare them to register as midwives in Ontario.

Aboriginal Applicants

Applicants who wish to be considered under the Aboriginal (Indian, Inuit or Metis, as recognized in the Constitution Act, 1982) application process will also be required to provide a letter of recommendation from their First Nation, Band Council, Tribal Council, Treaty, community or organizational affiliation.

Aboriginal applicants will also be required to apply to the Ontario Universities Application Centre (http://www.ouac.on.ca) and receive an Offer of Admission. They must then provide additional information to the Office of the Registrar by February 1 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 are encouraged to review their own educational records in preparation for the complete application process. Upon receipt of the complete application, the Admissions Committee will review the information and notify the applicant of any further information that is required. The committee will then consult with the appropriate academic department(s) to ensure that all academic requirements have been met before an offer of admission is sent.

Transfer Credit

Students who have completed courses at another post-secondary institution, either within Canada or abroad, may be eligible for transfer credit. The maximum number of transfer credits will be determined on an individual basis. Please see Credit in Courses by Special Assessment in the Admission Requirements section of this Calendar.

Selection Procedure

The Midwifery Education Program has a limited number of placements and the admission process is very competitive. The admission requirements stated are minimum requirements. Preference will be given to candidates who meet the best qualifications. The actual standing required for admission in recent years has been an average in the low to mid 80's. The program has two step selection procedures:

1. Assessment of academic eligibility.
2. Personal interview.

Applications will be considered at stage one, and only to the extent that they meet the minimum academic requirements as stated in stage one. All candidates who meet the minimum academic requirements will be invited to Stage Two. A full academic transcript and supporting documents will be required for this stage of the application process.

APPLICATION FOR DEFERRED REGISTRATION

Deferred registrations are not normally granted in the Midwifery Education Program. Under exceptional circumstances, applications for deferral will be reviewed by the Admissions Committee for those candidates who are accepted into the program but decide not to register at the time of acceptance. Requests for deferrals must be submitted in writing no later than one year after receiving an offer of acceptance. If granted, registration may be deferred for one year only.
A student must obtain a minimum pass grade (D- except in HTH SCI 1D06 and MIDWIF 1A06) in the course being repeated and receive an overall CA of 6.0 at the completion of a probation period. Planned course work for any student on probation will be assessed by the Academic Review Committee.

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 Average (CA) of less than 6.0 at the end of a probation period.
2. fails two courses in an academic year.
3. fails any two clinical courses at any time throughout the program.
4. fails the second attempt at a course or receives a grade below the required grade for HTH SCI 1D06 and MIDWIF 1A06.
5. fails to complete program requirements for graduation within the maximum allowable time (five years).

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 CA of 9.5 on graded courses taken throughout the program.

For the Provost's Honour Roll, students will be assessed if they have a CA 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 the following criteria are met. The student must:
1. complete all required courses, including electives, with a CA of at least 6.0 including a minimum grade of C in HTH SCI 1D06 and a minimum grade of B in MIDWIF 1A06.
2. complete all clinical courses with a Pass/Satisfactory grade.
3. complete all courses for the degree within five years.

The practice of midwifery is regulated by the College of Midwives under the Midwifery Act, 1991 and the Regulated Health Professions Act, 1991.

Graduation from the Midwifery Education Program does not guarantee registration with the College of Midwives. 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. The program will maintain a close working relationship with the regulatory body so that students obtain the required clinical experiences to be eligible for registration.

THE SCHOOL OF NURSING
WEB ADDRESS: http://www.fhs.mcmaster.ca/nursing

Health Sciences Centre, Room 1M7
Ext. 22694

Assistant Dean (Acting), Undergraduate Nursing Education
Janet Landeen/B.Sc.N., M.Ed., Ph.D., R.N.
Program Administrator
A. Cholewka/B.A.
Coordinator of Studies
M. Parsons/B.N.Sc., M.H.Sc., R.N.

Student Advisors
E. Reeves (McMaster site)  
M. Davis (Conestoga and Mohawk sites)

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 degree upon graduation. The program has functioned completely under the supervision of the University, while enjoying the full cooperation of community hospitals and agencies in the operation of its clinical courses. In July 1974, the Schools of Nursing and Medicine became the Faculty of Health Sciences.

In 1982, the Post Diploma Stream of the B.Sc.N. Program was introduced. This second category of admission was created to provide Diploma Registered Nurses with the opportunity to work towards a B.Sc.N. degree.

McMaster University is one of ten Ontario universities collaborating with the Council of Ontario University Programs in Nursing to offer a Primary Health Care Nurse Practitioner Program. The program, which commenced in September 1995, enables nursing diploma-prepared students to obtain a B.Sc.N. degree and a Nurse Practitioner Certificate. The final intake for diploma-prepared nurses was September 2004. Those students who hold a Nursing Baccalaureate degree receive the Nurse Practitioner certificate upon completion of the program.

In 1994, the first Ph.D. candidates entered the Clinical Health Sciences (Nursing) graduate program which is offered by the School of Graduate Studies through the Faculty of Health Sciences. M.Sc. candidates entered in the fall term of 1995. All enquiries about the Nursing graduate program should be directed to the Graduate Programs Office, HSC-3N10, (905) 525-9140, ext. 22983.

Information Sessions for high school students are hosted by the Student Liaison Office during the school year. For more detailed information about the sessions or to register for one, please call the Office of the Registrar at (905) 525-4600. Applicants not applying directly from high school who require an application package should call (905) 525-9140, ext. 22232.

The 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 Mohawk Conestoga Collaborative B.Sc.N. Program. Students wishing to register in the B.Sc.N. Program at McMaster should pay particular attention to the information which immediately follows this introduction. Those students who wish to register in the B.Sc.N. Program at either Mohawk or Conestoga College should refer to the Collaborative B.Sc.N. (D) Stream references throughout the School of Nursing section of the Calendar. Students are also advised to contact the Office of the Registrar at either Mohawk or Conestoga College for additional information.

The B.Sc.N. Program

The B.Sc.N. Program promotes the development of nursing as a caring, client-centred, scientific and humanistic profession. With an emphasis on problem-based, small group, self-directed learning, the program provides a general 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 enhance the quality of health 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, advocacy and collective action.

As students progress in the B.Sc.N. Program, they will find an increasing emphasis on interpersonal and communication skills, independent learning and leadership qualities. Applicants should evaluate their own potential for developing abilities to interact with others and to assume leadership roles. Learning is a process of inquiry, a skill to develop as a life-long activity in an environment conducive to openness and sharing among faculty and students. Emphasis on small group tutorials and self-directed learning promotes the development of self-evaluation skills and critical thinking abilities. Extensive multimedia, laboratory and library resources support a belief in the importance of independent study. Students apply concepts from Nursing and related disciplines to their experiences in classroom and clinical settings. Opportunities exist for international and out-patient clinical practice experiences.

Evaluation by self, peers and faculty is part of an on-going assessment process of the achievement of clinical, course, and program objectives.
GOALS
Graduates of the McMaster University B.Sc.N. Program will be prepared to provide, facilitate and promote professional practice in a variety of health care contexts and with diverse clients (individual, family, group, communities, populations) who have stable and unstable outcomes and multi-factorial influences (internal and external) on their health status within an ethic of professional care. Graduates will:
1. Provide nursing care reflective of primary health care principles.
2. Demonstrate sensitivity to client diversity and recognize the influence this has on professional and personal meaning, clients' health and healing practices.
3. Demonstrate ability to establish, maintain and terminate therapeutic relationships with clients.
4. Demonstrate critical thinking in the assessment, planning and evaluation of client care through the synthesis and application of:
   - Validated knowledge and theories from nursing, the humanities, biological, psychological, social and public health sciences
   - Knowledge of the health care system
   - Knowledge of the client context
   - Knowledge of self.
5. Engage in effective decision-making to set goals and establish priorities, going beyond the application of general rules to the application of unique combinations of principles and concepts.
6. Provide safe, ethical, competent care within established professional standards and guidelines.
7. Assess, plan and evaluate programs of care with clients and an interprofessional health care team and with partners from multiple sectors (i.e. education, social services, politics, etc.).
8. Demonstrate leadership and beginning competencies in managing a health care team, managing resources and coordinating health care.
9. Access and manage relevant information, required for professional caring, through the effective use of information technology.
10. Contribute to the body of nursing knowledge through demonstrating an inquiring approach to practice, identifying research questions, applying research findings, participating in research activities, and sharing research results with others.
11. Identify the need for appropriate change, create a climate for adapting to change in self and others, and contribute to effecting and evaluating change.
12. Participate in developing and implementing strategies for advocacy and political and social action on behalf of and with clients.
13. Recognize, develop and maintain the personal characteristics associated with professionalism:
   - awareness of competencies and limitations
   - accountability for own actions
   - commitment to the search for new knowledge
   - advocacy for the voice of professional nursing
   - commitment to self-directed, life-long learning
   - critical self-reflection and reflective practice.

Admission Policy and Procedure

ADMISSION POLICY
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.

As places in the B.Sc.N. Program are limited, admission is by selection. Possession of the published minimum requirements does not guarantee admission.

There are three streams of study leading to the completion of the B.Sc.N. degree. The Basic (A) Stream and Collaborative B.Sc.N. (D) Stream require four years of study, and are 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.

The Post Diploma (B) Stream is available to Diploma Registered Nurses only. Graduates of an approved diploma nursing program who are admitted to the B.Sc.N. Program are granted advanced credit and may complete the program in five academic terms if taken on a full-time basis.

The requirements and application deadlines vary depending on the applicant's background. 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.

Detailed medical information, including a record of completion of required immunizations, will be required upon acceptance into the program and annually thereafter. Evidence of CPR certification must also be presented annually: Basic Cardiac Life Support Certificate (BCLS) equivalent to the Heart and Stroke Foundation's Level C, Basic Rescuer (for Targeted Responder).

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 clinical standards for all students and does not require significant program change. Applicants should refer to the School of Nursing Admissions Procedure and Guidelines for Applicants with Disability available from the School of Nursing Admissions Office (905) 525-9140, ext. 22232 and consult the Centre for Student Development at (905) 525-9140, ext. 24711 or TTY (905) 528-4307.

ADMISSION PROCEDURE
Applicants from Ontario Secondary Schools (A) Stream
Applicants currently completing Grade 12 U or M courses apply through the Ontario Universities' Application Centre (OUAC). (See address below.) Application forms are available in secondary school guidance offices or online at http://www.ouac.on.ca/101/ssa. Applications for all studies beginning in September must be received by OUAC no later than May 1. Secondary schools will forward mid-term and final transcripts directly to OUAC in support of applications.

Applicants With Qualifications Equivalent to Ontario Secondary School (A) Stream
Applicants should contact the Ontario Universities' Application Centre (OUAC) for an application package and return it to them by May 1, to be considered for admission. (See address below.) Application may be made on-line at http://compass.ouac.on.ca. Applicants must also have official transcripts forwarded from their secondary school to the McMaster B.Sc.N. Program by May 1.

Return to:
Ontario Universities' Application Centre (OUAC)
Centre for Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca

Applicants with Other Qualifications and Post Diploma Applicants (A) and (B) Streams
Applicants should contact the Ontario Universities' Application Centre (OUAC) for an application form and the web site http://www.fhs.mcmaster.ca/nursing/ for an application package.

Applications for all studies beginning in September must be received by February 15.

Ontario Universities' Application Centre (OUAC)
170 Research Lane
Guelph, ON, N1G 5E2
http://www.ouac.on.ca

Admissions Coordinator (Nursing)
McMaster University, HSC-1M7
1200 Main Street West
Hamilton, ON, L8N 3Z5

Collaborative B.Sc.N. Program (D) Stream
(Mohawk and Conestoga Sites)
Applicants must contact the Ontario College Application Services (OCAS) for an application package. Applicants should also forward all official academic documentation, including all university transcripts if applicable, to the College they wish to attend.

Return to:
Ontario College Application Services (OCAS)
370 Speedvale Ave. W.
P.O. Box 810
Guelph, ON N1H 6M4
http://www.ucas.on.ca
Admission Requirements

A student who plans to enter the Undergraduate Nursing Program may qualify under one of the categories described below.

I. BASIC (A) STREAM

Applicants Directly from Ontario Secondary Schools

Note: Normally to be considered in this category, applicants to the program must:

1. apply within two years of completion of the Grade 12 U or M course requirements and
2. not have attended any post secondary educational program during the two-year period.

The selection method for Ontario secondary school applicants is by academic qualifications. Early conditional offers of admission are made in late March or early April based on the following:

a) six appropriate midterm/interim Grade 12 U or M course grades, 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.

Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

Requirements

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

1. English U or M
2. One of Geometry and Discrete Mathematics U, Advanced Functions and Introductory Calculus U, or Mathematics of Data Management U;
3. Two of Biology U, Chemistry U or Physics U;
4. Two additional Grade 12 U or M courses to total six.

Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed above in their secondary school graduation year.

Applicants with Other Qualifications

For applicants not applying directly from Secondary School or without the necessary Grade 12 U or M or OAC course equivalents, selection is based on academic qualifications and a rating obtained on a questionnaire. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni, and the community.

Applicants may be invited to a personal interview at McMaster. Applicants are responsible for their own travel expenses. Failure to attend the interview will result in cancellation of the application. The scores awarded by the assessors are final.

Applicants will be informed of the admission decision by mid-June. Where courses are in progress at the time of admission, the offer of admission will be conditional upon the applicant achieving a final Cumulative Average of B- in the required course work.

Applicants normally should:

1. achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.)
2. submit Form 105D to OUAC along with the required fees no later than February 15;
3. submit a completed original and three copies of the response to the questionnaire provided in the application package to McMaster by February 15.

Applicants From Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at a university or in a college/university consortium may apply to transfer to the McMaster site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. Availability of space and placement in the program will be determined by the level Coordinator in consultation with course planners and all potential applicants should contact the Coordinator of Studies to determine if there is space for transfer applicants.

Applicants must:

1. be currently enrolled in or have completed Level I of a B.Sc.N. Program with an overall Cumulative Average of at least B- (70%), and at least a B average in nursing and science courses.
2. achieve a satisfactory score on a questionnaire comprised of two questions found on the supplementary application at http://www.fhs.mcmaster.ca/nursing/admissions

Note: Applicants do not complete the supplementary application form.

Enrolment in this program is limited. Possession of the minimum admission requirements does not guarantee an offer of admission.

Applications for transfer into the B.Sc.N. Program to commence studies in September must be received by the Ontario Universities Application Centre (OUAC) in Guelph no later than June 30. Applicants must submit the following to the Admissions Coordinator by June 30 (See address above):

1. four (4) copies of the response to the questionnaire found on the supplementary application at http://www.fhs.mcmaster.ca/nursing/admissions
2. an official letter from the Dean/Director of the Program in which the applicant is currently enrolled stating that the applicant is in good standing in that program.
3. course descriptions and outlines for all nursing and science courses for assessment of advanced credit.

II. POST DIPLOMA (B) STREAM

Selection is based on academic qualifications and the rating obtained on a questionnaire. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni, and the community.

Applicants will be informed of the admission decision by mid-June. Applicants enrolled in diploma nursing programs at the time of application normally must be eligible to write College of Nurses of Ontario registration examinations no later than August of the year of application to the B.Sc.N. Program.

Applicants normally must:

1. possess a current College of Nurses of Ontario annual registration payment card or be eligible for reciprocity, or be eligible to write and subsequently pass the Registration examinations.
2. have an Ontario diploma in nursing or the equivalent with a minimum overall average of 2.7 (B-)
3. submit Form 105D to OUAC along with the required fees no later than February 15;
4. submit a completed original and three copies of the response to the questionnaire provided in the application package, a photocopy of the current College of Nurses of Ontario annual registration payment card and transcripts to McMaster by February 15

Note: University degree credit courses completed prior to admission will be assessed for advanced credit by the Office of the Coordinator of Studies following admission to the program.

Applicants From Other Degree Nursing Programs

Applicants enrolled in a Nursing degree program at another university who wish to apply to transfer to the McMaster (B) Stream should contact the Admissions Coordinator (See address above) for information.

III. COLLABORATIVE B.Sc.N. PROGRAM (D) STREAM

(MOHAWK AND CONESTOGA SITES)

Admission requirements for students applying to the Mohawk and Conestoga sites of the McMaster B.Sc.N. program are equivalent to those for students applying to the B.Sc.N. Basic (A) Stream.

Applicants Directly from Ontario Secondary Schools

Normally to be considered in this category, applicants to the program must:

1. apply within two years of completion of the Grade 12 U or M or OAC course requirements and
2. not have attended any post secondary educational program during the two-year period.

Requirements

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

1. English U;
2. One of Geometry and Discrete Mathematics U, Advanced Functions and Introductory Calculus U or Mathematics of Data Management U;
3. Two of Biology U, Chemistry U or Physics U;
4. Two additional Grade 12 U or M courses to total six.

Note: Application to the program must be made within two years of completion of the Grade 12 U or M course requirements.
Applicants with Qualifications Equivalent to Ontario Secondary School

Applicants from other provinces and countries must achieve the equivalent to the qualifications listed above in their secondary school graduation year.

Applicants with Other Qualifications

For applicants not applying directly from secondary school or without the necessary Grade 12 U or M course equivalents, selection is based on academic qualifications. For information on how to qualify, applicants should contact the Office of the Registrar (Admissions), Gilmour Hall, Room 108, McMaster University, Hamilton, ON L8S 4L8.

Applicants should:
1. achieve a Cumulative Average of at least B- in all university degree credit courses taken. A minimum of 12 units or equivalent are required. (These courses may be taken as a full-time or part-time student. University correspondence degree courses are acceptable.) All university transcripts must be submitted to the College. Failure to do so will result in withdrawal of the offer of admission.
2. University degree credit courses completed prior to admission will be assessed for advanced credit by the Chair, Nursing Program, at the site where application was made, following admission to the program.
3. apply to Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received on or before this date to be given equal consideration by the colleges. Please note that February 1 is not a deadline for submitting applications as OCAS will continue to process applications received after this date. You are encouraged, however, to submit your application as early as possible, especially in the case of oversubscribed programs where there are often enough qualified applications received by the equal consideration date (February 1) to fill the program.

Applicants From Other Degree Nursing Programs

Applicants who are enrolled in a Nursing degree program at another university or in another college/university consortium may apply to transfer to the Mohawk or Conestoga site to earn a McMaster B.Sc.N. degree. Applicants will not be considered for studies above Level II. The Post Diploma B.Sc.N. is not available at the College sites. Availability of space and placement in the program will be determined by the level Coordinator in consultation with course planners.

All potential applicants should contact the appropriate site to determine if there is space available and to register. For Mohawk, contact the Chair, B.Sc.N. Program; for Conestoga, contact the Chair, Nursing Program.

Applicants must:
1. be currently enrolled in or have completed Level I of a B.Sc.N. Program with an overall Cumulative Average of at least B- (70%) and at least a B- average in nursing and science courses.
2. achieve a satisfactory score on a questionnaire comprised of two questions found on the supplementary application at http://www.fhs.mcmaster.ca/nursing/admissions.

Note: Applicants do not complete the supplementary application form.

Enrolment in this program is limited. Possession of the minimum admission requirements does not guarantee an offer of admission.

Applications for transfer into the B.Sc.N. Program to commence studies in September must be received by the Ontario Colleges Application Service (OCAS) in Guelph no later than May 15. Applicants must submit the following to the Registrar's Office at the appropriate College by May 15:
1. official transcripts of all university work taken;
2. four (4) copies of the response to the questionnaire found on the supplementary application at http://www.fhs.mcmaster.ca/nursing/admissions;
3. an official letter from the Dean/Director of the program in which the applicant is currently enrolled stating that the applicant is in good standing in that program;
4. course descriptions and outlines for all nursing and science courses for assessment of advanced credit.

Part-Time Students

It is possible to complete the B.Sc.N. Program on a part-time basis. University and program regulations governing full-time undergraduate students will govern part-time students although there are additional guidelines for part-time study.

As enrolment is limited, places reserved for part-time students at each level will be restricted. Normally, nursing courses are available only during the day. Electives may be taken either in the day or evening. Counseling sessions will be available for part-time students after admission.

Unsuccessful Applicants (A) and (B) Streams

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.

Application for Deferred Registration

Deferred registration is 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 postmarked no later than July 31 of the year for which deferral is requested.

Curriculum for the B.Sc.N. Program

Basic (A) Stream

The Faculty has planned the curriculum so that the study of nursing, the physiological, psychological and social sciences, and the humanities are interrelated and span the entire program. In Level I, the amount of nursing experience is relatively small; the major proportion of study is in the behavioural and natural sciences. The nursing component increases progressively through Levels II, III, and IV, as the study of natural sciences is completed. Normally, because of timetable constraints, courses must be taken in the level indicated in the curriculum.

Electives

Thirty units of electives are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be chosen from courses designated as Level II or above. Normally a maximum of nine units of electives may be selected from Nursing and Health Sciences elective courses. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.

Basic (A) Stream students are eligible to enrol in the following COLLAB elective courses: COLLAB 2F03 (Mohawk site) and COLLAB 2K03 (Conestoga site). Please see COLLAB courses in the Course Listings section of this Calendar under Nursing Consortium (D) Stream for more information.

Requirements

Level I: 32 Units

<table>
<thead>
<tr>
<th>Units</th>
<th>GRADED: 32</th>
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<tbody>
<tr>
<td>12 units</td>
<td>HTH SCI 1A3, 1B3, 1H03, 1HH3</td>
</tr>
<tr>
<td>8 units</td>
<td>NURSING 1F04, 1G04</td>
</tr>
<tr>
<td>6 units</td>
<td>PSYCH 1A03 and 1A04</td>
</tr>
<tr>
<td>6 units</td>
<td>Electives</td>
</tr>
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</table>

Level II: 30 Units

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<thead>
<tr>
<th>Units</th>
<th>GRADED: 24; UNITs PASS/FAIL: 6</th>
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<tbody>
<tr>
<td>6 units</td>
<td>HTH SCI 2H03, 2HH3</td>
</tr>
<tr>
<td>15 units</td>
<td>NURSING 2L03, 2M03, 2N03, 2P03, 2Q03</td>
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<tr>
<td>9 units</td>
<td>Electives</td>
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</table>

Level III: 32 Units

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<th>Units</th>
<th>GRADED: 24; UNITs PASS/FAIL: 8</th>
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<tbody>
<tr>
<td>7 units</td>
<td>HTH SCI 3B03, 3C04</td>
</tr>
<tr>
<td>16 units</td>
<td>NURSING 3S03, 3T03, 3U02, 3X04, 3Y04</td>
</tr>
<tr>
<td>9 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Level IV: 30 Units

<table>
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<tr>
<th>Units</th>
<th>GRADED: 16; UNITs PASS/FAIL: 14</th>
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<tbody>
<tr>
<td>2 units</td>
<td>HTH SCI 4L02</td>
</tr>
<tr>
<td>22 units</td>
<td>NURSING 4P04, 4Q04 (or NURSING 4A02, 4E03, 4F03, 4J07, 4K07)</td>
</tr>
<tr>
<td>6 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

Total Units: 124
REGISTRATION TO PRACTISE NURSING

On receiving the B.Sc.N. degree after successful completion of the (A) Stream of the B.Sc.N. Program, graduates are eligible to write the RN Licensing Examinations which are administered by the College of Nurses of Ontario. Application to write the RN Licensing Examinations is made through the Faculty of Health Sciences.

DIPLOMA RN (B) STREAM

The program of study for Diploma Registered Nurses is integrated with existing course offerings. The practice of nursing in diverse clinical settings will occur in all academic terms. The curriculum is designed to build on the existing knowledge and skills of the students, to prevent duplication of learning experiences and to prepare the students to function in an expanded role in community and institutional settings.

The option of continuing for five academic terms if taken on a full-time basis. If taken on a part-time basis, students are generally allowed six years after the first Nursing course to complete the program requirements.

ELECTIVES

Twenty-four units of electives are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be courses from the Nursing stream designated as Level II or above. Normally a maximum of nine units of electives may be selected from the College of Nurses of Ontario and Health Sciences elective courses. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.

REQUIREMENTS

ADVANCED CREDIT: 42 UNITS

LEVEL III: 45 UNITS

(UNITS GRADED: 45)

TERMS 1 AND 2: 33 UNITS

21 units HTH SCI 1C07, 2C07, 3B03, 3C04
12 units NURSING 3M03, 3N03, 3T03, 3V03

SPRING TERM: 6 UNITS

6 units Electives

SUMMER TERM: 6 UNITS

6 units Electives

LEVEL IV: 34 UNITS

(UNITS GRADED: 22; UNITS PASS/FAIL: 12)

TERMS 1 AND 2: 34 UNITS

2 units HTH SCI 4L02
20 units NURSING 4P04, 4Q04 (or NURSING 4A02, 4E03, 4F03), 4S06, 4T06
12 units Electives

TOTAL UNITS: 121

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All B.Sc.N (B) Stream students who entered the program prior to September 2001 have the option of continuing under the curriculum in effect when they entered as published in the Calendar of the year of entry. Alternatively, students may take advantage of the program requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies and to make an individual counselling decision to decide upon their program of study.

ADVANCED CREDIT: 34 UNITS

LEVEL III: 42 UNITS

(UNITS GRADED: 42)

TERMS 1 AND 2: 33 UNITS

21 units HTH SCI 1C07, 2C07, 3B03, 3C04
6 units NURSING 3S03, 3T03
8 units Electives

SUMMER TERM: 9 UNITS

9 units Electives

LEVEL IV: 44 UNITS

(UNITS GRADED: 34, UNITS PASS/FAIL: 10)

TERMS 1 AND 2: 31 UNITS

2 units HTH SCI 4L02
26 units NURSPRAC 4A05, 4B05, 4P03, 4R03, 4TA5, 4TB5
3 units Electives

SUMMER TERM: 13 UNITS

(UNITS GRADED: 3; UNITS PASS/FAIL: 10)

13 units NURSPRAC 4C13

TOTAL UNITS: 134

REQUIREMENTS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2001

All Nurse Practitioner (C) Stream students who entered prior to September 2001 have the option of continuing under the curriculum in effect when they entered as published in the Undergraduate Calendar of the year of entry. Alternatively, students may take advantage of the program requirements which took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies and to make an individual counselling decision to decide upon their program of study.

EXTENDED CLASS OF REGISTRATION (RN/EC)

On successful completion of the Ontario Primary Primary Health Care Nurse Practitioner Program, nurses registered with the College of Nurses of Ontario are eligible to write the Extended Class Licensing examination through the College of Nurses of Ontario (CNO). Updates regarding this process are available to registered students on the N.P. Network.

COLLABORATIVE B.Sc.N. (D) STREAM

CONESTOGA SITE

MOHAWK SITE

The Faculty has planned the curriculum so that the study of nursing, the physiological, psychological and social sciences, and the humanities are integrated and span the entire program. In Level I, the amount of nursing experience is relatively small; the major proportion of study is in the behavioural and natural sciences. The nursing component increases progressively through Levels II, III, and IV, as the study of natural sciences is completed. Normally, because of time and space, courses must be taken in the level indicated in the curriculum.

ELECTIVES

The curriculum followed at both sites is equivalent to the curriculum for the B.Sc.N. Basic (A) Stream. However, the specified Psychology component and 15 units of elective courses are college-based courses which have been assigned the McMaster designation COLLAB and are open only to Nursing students at the Mohawk and Conestoga sites as specified in prerequisite statements. For course descriptions, please see COLLAB courses in the Course Listings section of this Calendar under Nursing Consortium (D) Stream. Mohawk and Conestoga students must take 15 units of COLLAB electives and 15 units of McMaster electives. Enrolment in some COLLAB courses may be limited.

Thirty units of credit are to be selected from disciplines of the student's choice, of which a minimum of 12 units are to be chosen from courses designated as Level II or above. Normally a maximum of nine units of electives may be selected from Nursing and Health Sciences elective courses. For some courses, the amount of duplication of required content will preclude their being used for elective credit in the B.Sc.N. Program.
FACULTY OF HEALTH SCIENCES

REQUIREMENTS

LEVEL I: 32 UNITS

(UNITS GRADED: 32)

12 units HTH SCI 1AA3, 1BB3, 1HH3
8 units NURSING 1P01, 1G04
6 units COLLAB 1A03 and 1B03 (Mohawk Site) or COLLAB 1C03 and 1D03 (Conestoga Site)
6 units Electives.

LEVEL II: 30 UNITS

(UNITS GRADED: 24; UNITS PASS/FAIL: 6)
6 units HTH SCI 2H03, 2HH3
15 units NURSING 2L03, 2C03, 2N03, 3P03, 2Q03
9 units Electives.

LEVEL III: 32 UNITS

(UNITS GRADED: 24; UNITS PASS/FAIL: 8)
7 units HTH SCI 3B03, 3C04
16 units NURSING 3S03, 3T03, 3U02, 3X04, 3Y04
9 units Electives.

LEVEL IV: 30 UNITS

(UNITS GRADED: 16; UNITS PASS/FAIL: 14)
2 units HTH SCI 4L02
22 units NURSING 4P04, 4Q04 (or 4A02, 4E03, 4F03), 4J07, 4K07
6 units Electives.

TOTAL UNITS: 124

REGISTRATION TO PRACTISE NURSING

On receiving the B.Sc.N. degree after successful completion of the (D) Stream of the B.Sc.N. Program, graduates are eligible to write the RN Licensing Examinations which are administered by the College of Nurses of Ontario. Application to write the RN Licensing Examinations is made through the college attended.

Nurse Practitioner Certificate Program (6399)

The Ontario Primary Health Care Nurse Practitioner Certificate Program is a post degree program. Degree-prepared nurses require 12 months on a full-time basis or up to 36 months on a part-time basis to complete the Nurse Practitioner Certificate.

ADMISSION REQUIREMENTS

Selection is based on academic qualifications, professional experience, clinical references, and personal questionnaire scores. The response to the questionnaire is assessed by teams normally representing the faculty, the students or alumni and the community. The scores awarded by the assessors are final.

Applicants must:
1. possess an Ontario baccalaureate degree in nursing or the equivalent with a minimum overall average of 70%.
2. hold a current College of Nurses of Ontario annual registration payment card;
3. have the equivalent of a minimum of two years full-time nursing practice within the past five years as evidenced by the employer-completed Verification of Employment form(s);
4. submit Form 105D to OUAC along with the required fees by March 1;
5. submit a copy of the current College of Nurses annual registration payment card, the relevant professional experience form, verification of employment form(s), two clinical reference forms, a personal questionnaire response, official transcripts from a degree nursing program, copies of any additional professional registrations, memberships or certificates listed on the relevant professional experience form (i.e., RNAO, CPR) to McMaster by March 1.

Preference will be given to:
- Ontario residents
- work experience in nursing that has been continuous
- practical experience in one or more of the following areas: primary health care, ambulatory care, public health, community health, long term care, emergency care or outpatient nursing
- hands-on practical experience

REQUIREMENTS

LEVEL II: 26 UNITS

(UNITS GRADED: 26)

26 units NURSPRAC 4A05, 4A06, 4B03, 4R03, 4TA5, 4TB5
SUMMER TERM: 13 UNITS

(UNITS GRADED: 3; UNITS PASS/FAIL: 10)

13 units NURSPRAC 4C13

TOTAL UNITS: 39

Nursing Leadership/Management Program

The Nursing Leadership/Management Program, which was previously administered and is currently endorsed by the Canadian Nurses Association, was transferred to McMaster in 1995. The Program is offered to Registered Nurses located throughout Canada and internationally by means of distance education. It is also offered locally through individual self-directed study and tutorial.

The course work is designed to familiarize Registered Nurses with the theory and clinical application necessary to function effectively in a formal or informal leadership position. Content includes theory and techniques of management, leadership, organizational development and change, motivation, labour relations, legal implications, ethics, finance and the Canadian Health Care System.

Enrolment is by approval of the Coordinator. Further information may be obtained through the Program Office.

ACADEMIC REGULATIONS

Students in the Nursing Leadership/Management Program are subject to the General Academic Regulations of the University and the regulations of the B.Sc.N. Program.

CURRICULUM

6 units NURSING 4B06
1 unit NURSING 4G01
1 unit NURSING 4D01
3 units NURSPRAC 4D03

Students who are subsequently admitted to the Post Diploma (B) Stream of the B.Sc.N. Program will be granted credit for the equivalent courses in the B.Sc.N. Program.

Oncology Programs

ADMISSION POLICY

All candidates must reside in Ontario and be registered to practice nursing by the College of Nurses of Ontario. Selection criteria for admission to the Adult Oncology program is based on recent, relevant oncology nursing experience and demonstrated commitment to oncology nursing practice. Selection criteria for admission to the Paediatric Oncology program is based on relevant, recent paediatric oncology nursing experience and demonstrated commitment to paediatric oncology nursing practice. Further information may be obtained through the Oncology Program Office in Health Sciences Centre, Room 2J32.

ACADEMIC REGULATIONS

Students in the Oncology programs are subject to the General Academic Regulations of the University and the regulations of the B.Sc.N. Program.

ADULT ONCOLOGY PROGRAM (6398)

This program has been established to provide registered nurses working with adult cancer patients the opportunity to develop enhanced knowledge and skills required for the evolving challenges of their roles across the cancer consortium.

The program has been developed within the context of the existing post diploma stream. The McMaster model of Nursing and philosophy of student-centred and problem-based learning are maintained and provide the foundation for curriculum design. Key aspects of the program include professional role development, evidence based practice, and development of assessment, communication, supportive care and collaborative practice skills.

The Adult Oncology program is offered to nurses within the province of Ontario.
Academic Regulations

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

In addition to meeting the General Academic Regulations of the University, students enrolled in the B.Sc.N. Program shall be subject to the following program regulations:

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.

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. The B.Sc.N. Program reserves the right to remove a student from a 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. Such removal will result in the student receiving a grade of F in the course and may result in dismissal from the program. The clinical activities associated with any clinical course must be successful for attainment of a passing grade in the course.

B.Sc.N. Program Academic Regulations

Basic (A) and Post Diploma (B) Stream

A student must:
1. achieve a Cumulative Average (CA) of at least 3.5;
2. achieve a grade of at least C- in the graded Nursing and required Health Sciences courses. A grade of D-, D or D+ is permissible in two three-unit Level I Health Sciences courses (Basic (A) Stream) or one Level I Health Sciences course (Post Diploma (B) Stream) and in only one required Health Sciences course beyond Level I;
3. achieve a Pass designation in all clinical courses and the clinical component of NURSING 1F04 and 1G04.

The following courses are designated clinical courses:
Basic (A) Stream: NURSING 2L03, 2P03, 3X04, 3Y04, 4J07, 4K07, 4P07, 4T06
Post Diploma (B) Stream: NURSING 4S06, 4T06
All clinical courses above Level I are evaluated on a Pass/Fail basis. Areas of excellence in practice are noted in a detailed evaluation summary for each course.

(A course for which credit has not been given may be repeated only when approval is given by the B.Sc.N. Program Chair in consultation with the program Reviewing Committee.)

Post Diploma students must submit proof of current registration with the College of Nurses of Ontario before registration in Level IV of the Program is approved.

Nurse Practitioner (C) Stream and Nurse Practitioner Certificate Stream

A post-diploma student must:
1. achieve a Cumulative Average (CA) of at least 3.5;
2. achieve a grade of at least C- in the graded Nursing and required Health Sciences courses with the exception that a grade of D-, D or D+ is permissible in one Level I Health Sciences course and only once in required Health Sciences courses beyond Level I.

Both post-diploma and post-degree students must:
1. achieve a Pass designation in the clinical component as well as a grade of C- in the theoretical component in each of NURSPRAC 4A05, 4B05, 4C13, 4T05, 4T55;
2. achieve a grade of B- in NURSPRAC 4P03, 4R03.

The following courses are designated clinical courses:
NURSPRAC 4A05, 4B05, 4C13, 4T05, 4T55

CONTINUATION IN THE PROGRAM

Students are reviewed at the end of each term. To continue in the B.Sc.N. Program a student must obtain a CA of at least 3.5. A student whose CA is at least 3.0 may, at the discretion of the
B. Sc.N. Program Chair in consultation with the program Reviewing Committee, proceed in the program and will be placed on program probation. A student may be placed on program probation only once during the program.

FAILURE
A student whose CA is less than 3.5, and who has not been granted program probation, may not continue in the program.
A student who fails to obtain a CA of 3.5 at the completion of the program probation may not continue in the program.
A student may normally repeat a level of work only once.
If a student fails to meet the minimum grade requirements in the required graded Nursing and required Health Sciences courses or a Pass designation in the clinical nursing courses, the student may, at the discretion of the Program Chair in consultation with the program Reviewing Committee, be allowed to repeat the course in which the minimum grade or Pass requirement has not been met. If a student fails to meet the minimum grade or Pass requirements after repeating the course, he or she may not continue in the program. A student may normally be allowed to repeat only one clinical and one non-clinical Nursing or Health Sciences course during the program.

COLLABORATIVE B. SC.N. PROGRAM (D) STREAM
MOWAHK AND CONESTOGA SITES
In addition to meeting the General Academic Regulations of the University, (please refer to the General Academic Regulations section of this Calendar) as well as the academic regulations specific to the School of Nursing, (please refer to Academic Regulations in the School of Nursing outline in this section of the Calendar), Mohawk and Conestoga B. Sc.N. students are also subject to the following regulations.

PROGRAM APPROVAL: Selection of courses must be approved by the Chair of the Program at the site to which the student is admitted. Where the Calendar indicates that a faculty office, Associate Dean or Dean of Studies must be contacted, students should contact the Student Advisor at the appropriate site (Conestoga or Mohawk College). Before courses are selected, students are requested to determine the requirements for the program as outlined in the appropriate sections of this Calendar and to follow the instructions in the registration package.

ACADEMIC STANDING: The College Reviewing Committees shall be comprised of members from the Colleges and the University; these Committees shall be chaired by the Coordinator of Studies (McMaster).

REQUIRED TO WITHDRAW: Students must follow the withdrawal procedures for the respective College.

LETTERS OF PERMISSION: Letters of Permission must be approved by the Student Advisor at the site to which the student is admitted.

ACADEMIC RECORDS: Student files shall be kept at the respective College site for reference and audit purposes.

EXAMINATIONS: A Mohawk College, Conestoga College or McMaster student photo identification card is required at all examinations.

TRAVEL EXPENSES: Students are responsible for arranging their own travel to and from learning settings external to the College and for covering any costs incurred. All students who register in the B. Sc.N. Program are expected to be able to travel to any learning setting in Hamilton and surrounding area (Mohawk) and Kitchener-Waterloo and surrounding area (Conestoga).

HONOURS BIOLOGY AND PHARMACOLOGY PROGRAM (CO-OP)
This is a joint program between the Faculty of Health Sciences and the Faculty of Science (Department of Biology). The Pharmacology courses, which are run in a small group, problem-based format, are the responsibility of the Faculty of Health Sciences, drawn from the following departments: Biomedical Sciences, Medicine, Obstetrics and Gynecology, and Pathology.

Please see the Faculty of Science, Department of Biology section for admission requirements.

MEDICAL RADIATION SCIENCES PROGRAM
This Diploma-Degree program is offered jointly in a fully integrated format by McMaster University in partnership with Mohawk College of Applied Arts and Technology. Graduates are awarded the McMaster B. Sc. as well as an Ontario Advanced Diploma from Mohawk College.

Please see Medical Physics and Applied Radiation Sciences in the Faculty of Science, section of this Calendar for admission requirements.
FACULTY OF HUMANITIES

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Academic Advisors
E. Herrell/B.Sc.
S.A. Richard/B.A.
K. Singer/B.A.

Career Services, Liaison and Study Abroad Coordinator
R. Muhic-Day/B.A., M.A.

The Faculty of Humanities is dedicated to cultivating a teaching and research community which reflects the highest standards of our disciplines and to undertaking bold ventures in new arenas of interdisciplinary inquiry. We strive for a balance between the best traditions of Humanities education and the new forms of knowledge emerging within and at intersections of disciplines. By learning from past and pressing issues facing our global today, we promote advances in knowledge that make innovative, positive differences in diverse peoples' lives.

We provide a research-intensive educational environment in which students learn to value independent thinking and critical reflection on the nature of knowledge and how knowledge can be used to better the human condition. Our mission is to ensure that students acquire the analytical skills, historical depth, and appreciation of diverse cultures needed to assume leadership roles as responsible, ethical, and path breaking scholars, cultural workers, creative artists, or policy makers. We prepare our students to be thoughtful and engaged citizens of a global world.

The attainment of precise knowledge and fresh insights through lectures, class discussions, reflection, analysis and writing is the essence of study in the Faculty of Humanities’ seven academic units. These are:

- School of the Arts
- Department of Classics (Ancient History and Archaeology, Classical Languages and Literature)
- Department of English and Cultural Studies (English; Combined Honours in Cultural Studies and Critical Theory)
- Department of French
- Department of History
- Department of Modern Languages and Linguistics (German, Hispanic Studies, Italian, Japanese, Polish, Russian)
- Department of Philosophy

In addition, the Faculty offers the following interdepartmental programs and one Interdisciplinary Minor:
- Honours Communication Studies
- Combined Honours in Comparative Literature
- Combined Honours in German
- Combined Honours in Hispanic Studies
- Combined Honours in Italian
- Honours Linguistics
- Honours Modern Languages and Linguistics
- Combined Honours in Multimedia
- Combined Honours in Peace Studies
- Combined Honours in Women's Studies
- Combined B.A. in Indigenous Studies
- Interdisciplinary Minor in Archaeology

PROGRAMS AND DEGREES

A. Level I Programs

PROGRAM NOTES

1. A full-course load for Humanities I is 30 units. (The final digit in course numbers indicates the unit weight of a course. A 6-unit course is taught from September to April and a 3-unit course is a half-year course which may be taught either from September to December or January to April.) Admission to a Level II program normally requires completion of six units of the relevant subject. In order to be considered for admission to a Level II program, students should consult the admission statements for the Level II programs when selecting their Level I courses.

2. The Faculty offers INQUIRY 1U03, Inquiry in the Humanities. Humanities I students may choose this course as an elective. For a course description see Inquiry or Humanities in the Course Listings section of this Calendar.

3. Humanities I students are permitted to take up to 12 units of work in any single subject.

4. Students with an OAC (or Grade 12 U course) in Greek or Latin will register for six units of Level II Greek or Latin in lieu of the corresponding 1203 and 1223 courses.

5. Humanities I students are restricted to taking no more than 12 units of introductory language courses.

6. ART 1F03, 1FF3: Entrance to any Honours Art Program requires the permission of the School of the Arts as these programs and courses have limited enrolments. Students who wish to enrol in ART 1F03 and 1FF3 must first complete a portfolio interview. Portfolio interviews occur between January and April each year. Students are encouraged to apply for entrance in September of the same calendar year. Only those students who contact the Office of the School of the Arts before March 1 to book appointments for portfolio interviews will be guaranteed consideration for entrance into ART 1F03 and 1FF3. (Late applicants will only be interviewed if space availability permits.) The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs. Acceptance into ART 1F03 and 1FF3 will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Acceptance from the University guarantee a place in the program as long as the student meets the minimum academic requirements as outlined under School of the Arts programs in this section of the calendar. Applicants for this course should use the MHA OUA code.

7. Students wishing to take Music courses other than MUSIC 1A03 or 1AA3 must make arrangements with the School of the Arts for qualifying tests.

COURSE LIST

ART 1F03, 1FF3 (See Note 6 above.) Students in ART 1F03 and 1FF3 must also register in SCIENCE 1A00 when completing their registration.

ART HIST 1A03, 1AA3
CLASSICS 1A03, 1BB3, 1BB3, 1L03, 1LL3
CMST 1A03, 1BB3
COMP LIT 1A03, 1AA3
CSCT 1BB3, 1BB3
ENGLISH 1A03, 1A03, 1BB3, 1BB3, 1C06
FRENCH 1A06, 1BB3, 1BB3
GERMAN 1B03, 1BB3, 1BB3
GREEK 1B03, 1BB3, 1BB3
HISPANIC 1A03, 1BB3, 1BB3
HISTORY 1A03, 1A03, 1BB3, 1BB3, 1BB3, 1BB3
ITALIAN 1A03, 1AA3, 1BB3, 1BB3, 1BB3
JAPANESE 1BB3, 1BB3, 1BB3
LATIN 1B03, 1BB3, 1BB3
LINGUIST 1B03, 1BB3
MMEDIA 1B03, 1BB3
MUSIC 1A03, 1BB3, 1C06, 1D03, 1Y03, 1Y03
PEACE ST 1A03, 1BB3
PHILOS 1A03, 1BB3, 1BB3, 1BB3
THTR&FLM 1A03, 1BB3
WOMEN ST 1A06
This involves two years of study, beyond Level I, 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 Aca-
demic Regulations below.

There are a number of Humanities courses which may be taken as electives without prerequisites. Individual course descriptions, by Department, are given under the section entitled Course Listings. 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 Fac-


culty, 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. Degrees.
If students are reinstated at the University, their Cumulative 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 Cumulative Average.

If at any review after reinstatement the student’s Cumulative 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 registered, that prerequisites have been met, and that the appropriate term(s) has been obtained, if required. They should review their personal degree audit each time they cancel or add courses, and contact an Academic Advisor in the Office of the Dean of the Faculty of Humanities if they have questions, particularly if the degree audit 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**

Students who wish to take more courses than recommended for a single Level of their program may do so only if their Cumulative Average is at least 7.0. A student with outstanding deferred examinations or incomplete term-work will not be permitted to overload in the following term. Students registered in the final block of their program are permitted to overload up to six additional units in order to become eligible to graduate.

**SUMMER SCHOOL**

Students who have been granted deferred examination or term-work privileges for courses taken in the preceding Winter session must secure the advance permission of the Office of the Dean of the Faculty of Humanities before registering in Spring/Summer courses. A decision will be made based upon the academic record of the student and the amount of work outstanding.

**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 from the Office of the Dean of the Faculty of Humanities. 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 the student's academic standing. The transcript designation will read COM, indicating Complete, 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 Office of the Dean of the Faculty of Humanities to receive credit for work taken.

**SUMMER IMMERSION PROGRAMS IN FRENCH**

Students must obtain approval from the Office of the Dean of the Faculty of Humanities prior to participating in any language immersion program.

The government-sponsored summer language bursary 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 Office of the Dean of the Faculty of Humanities, (b) submit detailed course descriptions for assessment, and (c) obtain a Letter of Permission.

Students registered in a program in French may take a maximum of six units of credit in this manner as elective work only. Students not registered in a program in French may take up to 12 units of credit.

**EXCHANGE PROGRAMS WITHIN CANADA**

For information on the Canadian Scholars Exchange Program (CANEX), please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.

**THIRD YEAR STUDY ELSEWHERE/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) a Third Year Study Elsewhere Program.

(i) **Formal Exchange Program**

During Level III of Honours Programs

Formal Exchange Programs are those in which McMaster University has an agreement with another institution involving a temporary exchange of students. Exchange students register and pay tuition fees and supplementary fees at McMaster. No tuition is paid at the other institution. See the General Academic Regulations section in this Calendar and the sections on Eligibility and Application below.

(ii) **Third Year Study Elsewhere Honours Program**

Qualified Level III students may undertake studies at a university abroad for one or two terms in the Third Year Study Elsewhere Program. This program is not available at universities with which McMaster University has a Formal Exchange Agreement.

Students register at McMaster but do not pay tuition to the University. In addition to the fees associated with the institution, students must pay all associated travel, study and living expenses. See the General Academic Regulations section in this Calendar and the sections on Eligibility and Application below.

**Eligibility for Study Abroad**

Students registered 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 or equivalent institution 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 Cumulative 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 all credit for work completed elsewhere may be confirmed only after departments have received transcripts and reviewed students' academic achievements following their return and after they have officially registered for Level IV. In certain cases, students may be recommended for the Deans' Honour List on the basis of work completed elsewhere.

**Application for Study Abroad**

Students interested in applying for this program should consult Rowena Munic-Day, the Career Services, Liaison and Study Abroad Coordinator, Chester New Hall, Room 102A and the students' department(s) or School approximately one year before planning to begin their study abroad (i.e. during the Fall term of the year in which they enter Level II). A plan for the completion of the academic program, approved by the program counsellor(s), must be submitted together with the application to the Coordinator no later than the end of January. However, application for some exchanges may be due as early as December.

**PROGRAMS OFFERED BY THE FACULTY OF HUMANITIES**

**SCHOOL OF THE ARTS**

**WEB ADDRESS:** http://sola.humanities.mcmaster.ca

The School of the Arts offers programs in:

- Art History
- Multimedia
- Music
- Theatre & Film Studies

In addition, Minors are available in Art History, Music and Theatre & Film Studies.
PROGRAMS IN ART AND ART HISTORY

NOTE
Students intending to do graduate work in the field of Art History should note that most universities offering such programs require undergraduate work in French, German, or Italian for admission. These students are strongly encouraged to include one of these language courses as early as possible in their program.

Honours Arts & Science and Art History
(B.Arts.Sc.; See Arts & Science Program)

Honours Art
{2028}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Enrolment in Honours Art is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) a grade of at least B- in ART 1F06 and (c) the successful completion of ART HIST 1A03 and 1A13.

NOTES
1. Beginning in 2006-07, admission to this program will be revised as follows: Enrolment in Honours Art is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) an average of at least 7.0 in ART 1F03, and 1F03 and (c) the successful completion of ART HIST 1A03 and 1A13.
2. Students in Honours Art must complete the following courses before registering in Level III or IV: Art courses: ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3, 3D03, 3E06, 4E12.
3. Students must achieve a minimum grade of B- in ART 3E06 before registering in ART 4E12.
4. Students wishing to obtain a Minor in Art History should note that six, and only six, units of Art History required in the Art History program may be counted toward the Minor of 24 units.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
45 units ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3, 3D03, 3E06, 4E12
9 units from ART 3F03, 3G03, 3H03, 3I03
6 units ART HIST 2D03, 3AA3
6 units Levels III and IV Art History
3 units Levels II, III, or IV Art History
21 units Electives

Combined Honours in Art and Another Subject
Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) a grade of at least B- in ART 1F06; and (c) the successful completion of ART HIST 1A03 and 1A13.

NOTES
1. Beginning in 2006-07, admission to this program will be revised as follows: Enrolment in Honours Arts is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) an average of at least 7.0 in ART 1F03 and 1F03 and (c) the successful completion of ART HIST 1A03 and 1A13.
2. Students in Combined Honours Art must complete ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3 before registering in Level III or IV Art courses.
3. Because ART HIST 2D03 is required in all Art History programs, students registered in the Combined Honours Art and Art History program will substitute three units elective for ART HIST 2D03.
4. Students must achieve a minimum of B- in ART 3E06 before registering in ART 4C06.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
39 units ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2F03, 2FF3, 3D03, 3E06, 4C06
6 units ART HIST 2D03, 3AA3
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
9 units Electives

Honours Art History
{2029}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in ART HIST 1A03 and 1A13.

NOTES
1. Before choosing Level III courses, students should become familiar with the prerequisites for Level IV courses.
2. Upper-level students may wish to pursue an internship in an art museum or gallery by choosing HUMAN 3W03 or 4W03 and should consult with the Art History Counsellor for advice.

REQUIREMENTS
120 units total (Levels I to IV)
50 units from the Level I program completed prior to admission into the program
18 units ART HIST 2A03, 2B03, 2C03, 2D03, 2I03, 3P03
9 units Level III Art History
12 units Levels III and IV Art History
6 units from ART 4AA3, 4BB3, 4C03, 4E03, 4H03, 4I03, 4V03, 4X03
45 units Electives

Combined Honours In Art History and Another Subject
Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program and: (a) a Cumulative Average of at least 6.0, (b) a grade of at least B- in ART 1F06; and (c) the successful completion of ART HIST 1A03 and 1A13.

NOTES
1. Students combining Honours Art History with Honours Art must not register in ART HIST 3P03. These students will be required to substitute three units of Level III or IV Art History in lieu of ART HIST 3P03.
2. Before choosing Level III courses, students should become familiar with the prerequisites for Level IV courses.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
18 units ART HIST 2A03, 2B03, 2C03, 2D03, 2I03, 3P03
6 units Level III Art History
3 units from ART 4AA3, 4BB3, 4C03, 4E03, 4H03, 4I03, 4V03, 4X03
9 units Levels III and IV Art History
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

B.A. in Art History
{1029}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 5.5 including an average of at least 4.0 in ART HIST 1A03 and 1A13.
REQUIREMENTS

90 units total (Levels I to III)
30 units from the Level I program completed prior to admission into the program
15 units ART HIST 2A03, 2B03, 2C03, 2D03, 2I03
15 units Levels III and IV Art History
30 units Electives

Minor in Art History

24 units of Art History, of which no more than six units may be from Level I

PROGRAMS IN DRAMA

(SEE PROGRAMS IN THEATRE & FILM STUDIES)

MULTIMEDIA

WEB ADDRESS: http://www.humanities.mcmaster.ca/~mmedia/

Honours Arts & Science and Multimedia

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours B.A. in Multimedia and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Enrollment in this program is limited and highly competitive. Selection is based on academic achievement in Level I Multimedia courses but requires, as a minimum, completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in each of MMEIDA 1A03, 1B03.

NOTES

1. Applicants must have completed Level I (30 units including MMEIDA 1A03 and 1B03), by April of the year in which application is made.

2. Application for this program must be made by April 30.

3. The Combined Honours in Multimedia program is not available to students who already possess an undergraduate degree. As an alternative, such students may be interested in the Certificate/Diploma in Web Design and Development offered through the Centre for Continuing Education. Please refer to the Certificate and Diploma Programs section of this calendar under the heading Centre for Continuing Education.

4. Students must complete MMEIDA 4A03 and 4B03 in the same academic year.

COURSE LIST 1

CMST 2T03, COMP SCI 1MA3, 2SC3, 3SE3; LINGUIST 4D03; MMEIDA 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 4C03, 4D03; MUSIC 2F03; THTR&FLM 2E03; WOMEN ST 2D03

REQUIREMENTS

120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
18 units MMEIDA 2A03, 2B03, 3A03, 3B03, 4A03, 4B03
3 units from MMEIDA 2C03, 3G03
15 units from Course List 1
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

PROGRAMS IN MUSIC

NOTES

1. Completion of a Music degree requires considerable daytime attendance.

2. Normally, students who possess an undergraduate degree in Music will not be admitted to a B.Mus. degree program as a second undergraduate degree.

MUSIC I

REQUIREMENTS

Students admitted to Music I must complete 33 units of work as follows:

21 units MUSIC 1CC3, 1D03, 1E06, 1G03, 1Y03, 1YY3
12 units Electives

Honours Music (B.Mus.)

{2370}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of Music I and a Cumulative Average of at least 6.0.

NOTES

1. 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 their first year for advice on fulfilling the entrance requirements of Faculties of Education.

2. Students who intend to pursue graduate studies in music or who wish to use the music degree as preparation for postgraduate studies in other professions should select a significant number of the courses in Course List 2.

COURSE LIST 1

MUSIC 3A03, 3B03, 3C03, 3D03, 3E03, 3G03, 3H03, 3I03, 4G03, 4H03, 4I03, 4J03, 4Y03

COURSE LIST 2

MUSIC 2F03, 2I03, 2J03, 3T03, 3U03, 3V03, 3W03, 3X03, 4F03, 4I03, 4J03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03

COURSE LIST 3

MUSIC 2A03, 2F03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 2W03, 2X03, 2Y03

COURSE LIST 4

MUSIC 2A03, 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03

Combined Honours B.A. in Music and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of Music I and a Cumulative Average of at least 6.0.

NOTES

1. Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

B.A. in Music

{1378}

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of Music I and a Cumulative Average of at least 3.5.
**NOTES**

1. Students from another Level I program may be admitted with a Cumulative Average of at least 3.5, a weighted average of 4.0 in MUSIC 1A03 and 1A03, and a successful audition.
2. Students registered in the B.A. Music program who wish to transfer into the Honours B.Mus. program must apply through the Dean's Office before the end of classes in their final year of study.

**COURSE LIST 1**

All Level II, III and IV Music courses, except MUSIC 2G03, 3G03, 4G03

**REQUIREMENTS**

90 units total (Levels I to III)

- 33 units Music I program
- 15 units MUSIC 2CC3, 2D03, 2H03, 2Y03, 2YY3
- 12 units from Course List 1
- 30 units Electives

**Minor in Music**

24 units of Music of which no more than nine units may be from Level I, subject to the prerequisites and qualifying tests specified in this Calendar.

**DIPLOMA IN MUSIC PERFORMANCE**

The Diploma is intended to recognize a concentration in the area of music performance and is available to two distinct groups of people:

1. Students who are enrolled in, or graduates of, a Music degree program at McMaster, and
2. Students enrolled in, or graduates of, other McMaster degree programs, as well as musicians in the community, such as graduates from the Royal Conservatory of Music, Mohawk College, or other universities, etc., who wish to receive formal recognition for their musical achievements.

**GROUP 1 - MCMASTER STUDENTS**

**ADMISSION**

Registration in, or completion of, a degree program in Music. Students should meet with the Academic Counsellor for Music in the School of the Arts as early as possible in their degree program.

**GROUP 2 - OTHERS**

**ADMISSION**

Completion of a music audition/examination consisting of:

1. Demonstration of technique (a level equivalent to at least honors 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 level), including at least one from the 20th century;
3. Ear test appropriate to the Grade 8 honours performance level;
4. Written examination of rudiments of theory (Grade 2 level);
5. Interview; and
6. MUSIC 1E06 or equivalent, e.g., A.R.C.T. (Associate of the Royal Conservatory of Music).

In lieu of the above, students concentrating in jazz must complete an audition demonstrating equivalent experience in jazz performance.

Auditions take place between January and March. Applicants must contact the School of the Arts to arrange for an audition. Advanced credit, up to a maximum of 15 units, may be determined on an individual basis.

**REQUIREMENTS**

The Diploma will require completion of 24 units as follows:

- 15 units MUSIC 2E06, 3E06, 3S33, 4G03, 4U03
- 9 units MUSIC 4E09

- Lesson fees: Lesson fees are charged over and above tuition for MUSIC 2E06, 3E06, 3S33, and 4E09. Students registered in Honours Music will not be charged extra fees for MUSIC 2E06.
- For those registered in a degree program at McMaster University, MUSIC 4E09 must be taken over and above the total number of units required for a McMaster degree. Because this course may not be used for credit towards any McMaster degree, students pursuing the Diploma must plan their work to accommodate nine extra units.

**PROGRAMS IN THEATRE & FILM STUDIES**

The School of the Arts offers a broadly based program of study in the history, theory, and critical understanding of dramatic performance in both live and recorded media. Program requirements at Level II are designed to expose students to the breadth of the study. Level III courses offer more specific approaches to the study of theatre and film. A limited amount of student specialization within the program is possible at this level. The Honours Seminars at Level IV focus on independent research. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.

**Honours Arts & Science and Theatre & Film Studies**

(B.A. Arts.Sc.; See Arts & Science Program)

**NOTE**

Students registered in Honours Theatre & Film Studies are encouraged to complete courses in related art forms.

**Honours Theatre & Film Studies**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTR&FLM 1A03 and 1B03.

**NOTE**

A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English and Cultural Studies, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film course descriptions. Up to nine units from the list may be made available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

**REQUIREMENTS**

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2C03, 2D03, 2E03, 2F03 (Students may take only one of THTR&FLM 2AA3 or 2BB3.)
- 27 units Level III or IV Theatre & Film courses
- 6 units Level IV Theatre & Film courses including at least three units from THTR&FLM 4B03, 4C03, 4D03, 4E03, 4F03
- 45 units Electives

**Combined Honours in Theatre & Film Studies and Another Subject**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in THTR&FLM 1A03 and 1B03.

**NOTE**

A number of courses that directly pertain to Theatre & Film Studies are offered by other departments: Classics, Comparative Literature, English and Cultural Studies, French, Kinesiology and Women's Studies. These are recommended as electives listed at the end of the Theatre & Film course descriptions. Up to nine units from the list may be made available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.
REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2CC3, 2DD3, 2EE3, 2FF3. (Students may take only one of THTR&FLM 2AA3 or 2BB3.)
18 units Level III or IV Theatre & Film
6 units Level IV Theatre & Film courses including at least three units from THTR&FLM 4BO3, 4CO3, 4DO3, 4EO3, 4FO3
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

B.A. in Theatre & Film Studies
(1551)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in THTR&FLM 1A03 and 1B03.

REQUIREMENTS
90 units total (Levels I to III)
30 units from the Level I program completed prior to admission into the program
12 units Level II Theatre & Film courses with at least nine units from THTR&FLM 2AA3, 2BB3, 2CC3, 2DD3, 2EE3, 2FF3. (Students may take only one of THTR&FLM 2AA3 or 2BB3.)
12 units Level III or IV Theatre & Film
36 units Electives

Minor in Theatre & Film Studies
24 units of Theatre & Film

DEPARTMENT OF CLASSICS

WEB ADDRESS: http://www.humanities.mcmaster.ca/classics

Honours Arts & Science and Classics
(B.Arts.Sc.; See Arts & Science Program)

NOTES
1. Students in a Classics program may choose courses from the following subfields: Ancient History and Society, Ancient Philosophy, Classical Archaeology and Art History, Classical Literature in Translation, Greek Language and Literature, Latin Language and Literature.
2. With the approval of the Department of Classics 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 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.
3. Students may receive up to six units of credit for archaeological field work at an approved Classical site. Consult the Department for further details.
4. Students intending to do graduate work in the field of Classics should note that most universities offering such programs require undergraduate work in Greek and Latin for admission. These students are strongly encouraged to include Greek and Latin courses as early as possible in their program.
5. Students intending to do graduate work in the field of Classics may wish to include an independent study course (CLASSICS 4T03) in the final level of their program.

Honours Classics
(PROGRAM A: ANCIENT HISTORY AND ARCHAEOLOGY) (2131)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in any six units of Level I Classics, Greek or Latin. (Students with Grade 12 Greek U (or OAC Ancient Greek) may substitute six units of Level II Greek; students with Grade 12 Latin U (or OAC Latin) may substitute six units of Level II Latin.)

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
24 units from CLASSICS 2BB3, 2CC3, 2DD3, 2EE3, 2FF3, 3CC3, 3BB3, 3CC3, 3DD3, 3EE3, 3EE3, 3FF3, 3GG3, 3LL3, 3MM3, 3OO3, 3SS3, 3TT3
6 units from CLASSICS 4BB3, 4CC3, 4EE3, 4EE3
24 units Levels II, III and IV Classics, Greek, Latin
36 units Electives

Honours Classics
(PROGRAM B: CLASSICAL LANGUAGES AND LITERATURE) (2132)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in GREEK 1Z03 and 1Z23 or in LATIN 1Z03 and 1Z23 (Students with Grade 12 Greek U (or OAC Ancient Greek) may substitute six units of Level II Greek; students with Grade 12 Latin U (or OAC Latin) may substitute six units of Level II Latin.) Students are encouraged to include a Level I Classics course in their Level I program.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
6 units from CLASSICS 2BB3, 2CC3, 2DD3, 2EE3, 3CC3, 3TT3
24 units Greek (including GREEK 1Z03 and 1Z23 or (1Z6), if not completed in Level I)
24 units Latin (including LATIN 1Z03 and 1Z23 or (1Z6), if not completed in Level I)
6 units Levels II, III and IV Classics, Greek, Latin
30 units Electives

Combined Honours in Classics and Another Subject
(PROGRAM A: ANCIENT HISTORY AND ARCHAEOLOGY) (2131)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in any six units of Level I Classics, Greek or Latin courses. (Students with Grade 12 Greek U (or OAC Ancient Greek) may substitute six units of Level II Greek; students with Grade 12 Latin U (or OAC Latin) may substitute six units of Level II Latin.)

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
21 units from CLASSICS 2BB3, 2CC3, 2DD3, 2EE3, 2FF3, 3CC3, 3BB3, 3CC3, 3DD3, 3EE3, 3EE3, 3FF3, 3GG3, 3LL3, 3MM3, 3OO3, 3SS3, 3TT3
6 units from CLASSICS 4BB3, 4CC3, 4EE3, 4EE3
9 units Levels II, III and IV Classics, Greek, Latin
36 units Electives to total 120 units

Honours Classics
(PROGRAM A: ANCIENT HISTORY AND ARCHAEOLOGY) (2131)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.
Combined Honours in Classics and Another Subject

(PROGRAM B: CLASSICAL LANGUAGES AND LITERATURE)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in GREEK 1Z03 and 1ZZ3 or in LATIN 1Z03 and 1ZZ3. (Students with Grade 12 Greek U (or OAC Ancient Greek) may substitute six units of Level II Greek; students with Grade 12 Latin U (or OAC Latin) may substitute six units of Level II Latin.)

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

6 units from CLASSICS 2D03, 2E03, 2H03, 3EE3, 3I03, 3T03

24 units Greek or Latin

6 units Levels II, III and IV Classics, Greek, Latin

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

B.A. in Classics

1130

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 and an average of at least 4.0 in any six units of Level I Classics, Greek or Latin courses. (Students with Grade 12 Greek U (or OAC Ancient Greek) may substitute six units of Level II Greek; students with Grade 12 Latin U (or OAC Latin) may substitute six units of Level II Latin.)

NOTES

1. Students entering the program with GREEK 1ZZ3 or LATIN 1ZZ3 who have not also completed a Level I Classics course are strongly encouraged to include CLASSICS 2L03, 2L13 into their Level II program.

2. 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 as elective courses.

REQUIREMENTS

90 units total (Levels I to III)

30 units from the Level I program completed prior to admission into the program

12 units Level II Classics, Greek or Latin

12 units Level III Classics, Greek or Latin

36 units Electives

Minor in Classics

24 units of Classics, Greek or Latin, of which no more than six units may be from Level I

Minor in Greek

24 units of Greek, of which no more than six units may be from Level I

Minor in Latin

24 units of Latin, of which no more than six units may be from Level I

INTERDISCIPLINARY MINOR IN ARCHAEOLOGY

For details see Interdisciplinary Minors and Thematic Areas section of this Calendar.

COMMUNICATION STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/~cmst

Honours Communication Studies

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in CMST 1A03 and 1A13 in their Level I program. Students should select courses carefully in order to meet the prerequisites for courses listed in specific Streams.

NOTES

Communication Studies is an academic discipline which 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.

1. Students in this program must complete two of the following Streams:

   The Language and Social Life Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, linguistic methods and the importance of language in political and social life.

   The Cultural Studies Stream focuses on the critical analysis of popular culture through film, the visual arts and a variety of other forms. Unique to the Communication approach to Cultural Studies is a focus on empirical analysis as well as the social, political and cognitive significance of popular cultures.

   The Performance Studies Stream examines artistic and everyday performances. These performances range from theatre, concerts and performance art to story telling, ceremonies and public protests. Students will examine and analyze performances and their meanings and effects with particular emphasis on the relationships between these performances and their consequences with a particular emphasis on the role of actions in social communication.

   Mass Communication Stream focuses on the organization and functioning of information media such as television, radio, the Internet and the press as major institutions and sources of knowledge and understanding about society.

2. It is strongly recommended that students in the Language and Social Life Stream take LINGUIST 1A03 and 1A13 in Level I and Level II in order to take upper Level linguistics courses.

3. Some courses are listed in more than one Stream. Students can receive credit in only one stream for such courses.

4. It is recommended that students, especially those in the Language and Social Life Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND SOCIAL LIFE STREAM

6 units CMST 2E03, 3G03

3 units from CMST 4J03, 4L03

9 units from CMST 2F03, 2G03, 2H03, 2I03, 3C03, 3D03, 3E03, 3V03, 3W03, 3Y03, 4D03, 4G03, 4H03, 4I03, 4J03, 4L03, 4R03, 4S03, 4T03; PSYCH 2C03, 2H03, 3D03

COURSE LIST 2 - CULTURAL STUDIES STREAM

3 units CMST 2BB3

3 units from CMST 3C03, 4M03

12 units from CMST 2F03, 2G03, 2H03, 2I03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 3BB3, 3CC3, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3V03, 3W03, 3X03, 3Y03

COURSE LIST 3 - PERFORMANCE STUDIES STREAM

6 units CMST 2G03, 4C03

6 units from CMST 2H03, 2P03, 2R03, 2S03, 2T03, 3C03, 3D03

6 units from CMST 2F03, 2G03, 3H03, 3L03, 3M03, 3N03; KINESIOL 3J03, 3T03, 4J03

COURSE LIST 4 - MASS COMMUNICATION STREAM

6 units CMST 2K03, 4E03

3 units from CMST 2L03, 2Z03

3 units from CMST 3C03, 3D03

6 units from CMST 2F03, 2L03, 2Z03, 3C03, 3D03, 3I03, 3K03, 3M03, 4D03
COMBINED HONOURS IN COMMUNICATION STUDIES AND ANOTHER SUBJECT

Students wishing to enter this program must complete an application for admission to Level II on MUGSi in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in CMST 1A03 and 1B03. In their Level I program, students should select courses carefully in order to meet the prerequisites for courses listed in specific Streams.

NOTES

1. Students wishing to combine Communication Studies with a subject in the Faculty of Humanities should follow the requirements as outlined below. Those students wishing to combine Communication Studies with a subject in the Faculty of Social Sciences should follow the requirements as outlined in Combined Honours in Communication Studies and Another Subject in the Faculty of Social Sciences section of the Calendar.

2. Communication Studies is an academic discipline which 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. Students in this program must complete one of the following Streams:

   a. **The Language and Social Life Stream** involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, linguistic method and the importance of language in political and social life.

   b. **The Cultural Studies Stream** focuses on the critical analysis of popular culture through film, the visual arts and a variety of other forms. Unique to the Communication approach to Cultural Studies is a focus on empirical analysis as well as the social, political and cognitive significance of popular cultures.

   c. **The Performance Studies Stream** examines artistic and everyday performances. These performances range from theatre, concerts and performance art to story telling, ceremonies and public protests. Students will examine and analyze performances and their meanings and effects with particular emphasis on the relationships between these performances and their consequences with a particular emphasis on the role of actions in social communication.

   d. **The Mass Communication Stream** focuses on the organization and functioning of information media such as television, radio, the Internet and the press as major institutions and sources of knowledge and understanding about society.

3. It is strongly recommended that students in the Language and Social Life stream take LINQUIST 1A03 and 1A03 in Level I or Level II in order to take upper level linguistics courses.

4. It is recommended that students, especially those in the Language and Social Life Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND SOCIAL LIFE STREAM

<table>
<thead>
<tr>
<th>Units</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>6</td>
<td>CMST 2E03, 3G03</td>
</tr>
<tr>
<td>3</td>
<td>from CMST 4J03, 4L03</td>
</tr>
<tr>
<td>9</td>
<td>from CMST 2F03, 2H03, 2V03, 3W03, 3C03, 3D03, 3E03, 3V03, 3W03, 3WV3, 3Y03, 4D03, 4G03, 4H03, 4I03, 4J03, 4L03, 4R03, 4S03, 4T03, PSYCH 2C03, 2H03, 3U03</td>
</tr>
</tbody>
</table>
DEPARTMENT OF ENGLISH AND CULTURAL STUDIES

Programs Offered by the Department of English and Cultural Studies

Honours Arts & Science and English

(B.Arts.Sc.; See Arts & Science Program)

**AREAS OF STUDY**
The Department has defined four areas of study. Students should consult the Program Notes for their specific program to determine their requirements regarding these areas. Level II and III courses are allocated to the areas as follows:

<table>
<thead>
<tr>
<th>AREA</th>
<th>COURSES</th>
</tr>
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<tbody>
<tr>
<td>AREA 1</td>
<td>Early British Literature</td>
</tr>
<tr>
<td></td>
<td>2B06, 3C06, 3I06, 3K06, 3L06, 3V06</td>
</tr>
<tr>
<td>AREA 2</td>
<td>Later British Literature</td>
</tr>
<tr>
<td></td>
<td>2I06, 3G06, 3M06, 3N06</td>
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<tr>
<td>AREA 3</td>
<td>Canadian, American and Post-Colonial</td>
</tr>
<tr>
<td></td>
<td>2G06, 2H06, 3R06</td>
</tr>
<tr>
<td>AREA 4</td>
<td>Theory and Cultural Studies</td>
</tr>
<tr>
<td></td>
<td>2A03, 2K06, 2M03, 2M03,M03, 3A03, 3J06, 3Q03, 3QQ3</td>
</tr>
</tbody>
</table>

**Honours English**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**
Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I English.

**NOTES**
1. When registering, students should distribute their required English courses (see Requirements below) as follows:
   - Level II: 18 units of Level II and/or III English
   - Level III: 18 units of Level II and/or III English
   - Level IV: six units of Level II and/or III English; 12 units of Level IV English seminars (No student may take more than six units of Level IV seminars)

2. With permission of the Department, students may substitute ENGLISH 4X03 for three units of Level IV seminar work in second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term.

3. 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.

**REQUIREMENTS**

120 units total (Levels I to IV)

| 30 units | from the Level I program completed prior to admission into the program |
| 6 units  | from Area 1 English courses                                            |
| 6 units  | from Area 2 English courses                                            |
| 6 units  | from Area 3 English courses                                            |
| 6 units  | from Area 4 English courses                                            |
| 6 units  | from Areas 1-4 and ENGLISH 2D03, 3B03, 3CC3, 3D03, 3D03, 3E03, 3E03, 3H03, 3HH3, 3II3, 3S03, 3T03, 3U03, 3V03, 3X03, 3Y03 |

6 units Level IV English seminars

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

**Combined Honours in English and Another Subject**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**
Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from CSCT 1B03, 1B03, ENGLISH 1A03, 1AA3, 1B03, 1BB3, 1C06.

**NOTES**
1. When registering, students should distribute their required Cultural Studies and Critical Theory courses (see Requirements below) as follows:
   - Level II: 12 units of Levels II and/or III Cultural Studies and Critical Theory
   - Level III: 12 units of Levels II and/or III Cultural Studies and Critical Theory
   - Level IV: six units of Levels II and/or III Cultural Studies and Critical Theory; six units of Level IV Cultural Studies and Critical Theory seminars (No student may take more than six units of Level IV seminars.)

**Combined Honours in Cultural Studies and Critical Theory and Another Subject**

Cultural Studies and Critical Theory (CSCT) provides students with an opportunity to investigate the texts, practices, theories and concepts that animate modern individual and social experience. CSCT examines a wide range of cultural forms, including those that have been typically overlooked in universities (e.g. television, popular film and fiction, and practices of everyday life), while paying attention to topics such as gender, sexuality and the body, class, race and ethnicity, postcolonialism, subjectivity and representation, ideology and power/knowledge, aesthetics and taste, and technology and culture.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**
Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from CSCT 1B03, 1B03, ENGLISH 1A03, 1AA3, 1B03, 1BB3, 1C06.

**NOTES**
1. When registering, students should distribute their required Cultural Studies and Critical Theory courses (see Requirements below) as follows:
   - Level II: 12 units of Levels II and/or III Cultural Studies and Critical Theory
   - Level III: 12 units of Levels II and/or III Cultural Studies and Critical Theory
   - Level IV: six units of Levels II and/or III Cultural Studies and Critical Theory; six units of Level IV Cultural Studies and Critical Theory seminars (No student may take more than six units of Level IV seminars.)
2. With permission of the Department, students may substitute CSCT 4X03 for three units of Level IV seminar work in second term. Students who are interested in taking CSCT 4X03 should contact the faculty member chairing the CSCT 4X03 committee early in the first term.

3. Most graduate programs in Cultural Studies and/or Critical Theory require proficiency in a second language. Students who plan to pursue graduate studies in these areas are strongly encouraged to include in their program a second language beyond the introductory level.

**CORE COURSE LIST**

CSCT 2J03, 2M03, 2MM3, 2P03, 3A03, 3AA3, 3CC3, 3Q03, 3Q03, 3R06

**REQUIREMENTS**

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

24 units from Core Course List

6 units Levels II or III Cultural Studies and Critical Theory

6 units Level IV Cultural Studies and Critical Theory seminars

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

**B.A. in English**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units of Level I English.

**NOTE**

When registering, students should distribute their required English courses (see Requirements below) as follows:

- Level II: 12 units of Levels II and/or III English
- Level III: 18 units of Levels II and/or III English

**REQUIREMENTS**

90 units total (Levels I to III)

30 units from the Level I program completed prior to admission into the program

6 units from Area 1 English courses

6 units from Area 2 English courses

6 units from Area 3 English courses

6 units from Area 4 English courses

6 units from Areas 1-4 and ENGLISH 2D03, 3B03, 3CC3, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03

30 units Electives

**Minor in English**

Six units of Level I English and 18 units of Levels II and III English

**DEPARTMENT OF FRENCH**

**WEB ADDRESS:** http://www.dhumanities.mcmaster.ca/~french

**Honours Arts & Science and French**

(B.Arts.Sc.; See Arts & Science Program)

**Honours French**

**PROGRAM A: LANGUAGE AND LITERATURE**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06. Students who are interested in entering this program are advised to take LANGUAGE 2A03 and 2A06.

**NOTE**

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.

**COURSE LIST 1**

FRENCH 3A03, 3AA3, 3BB3, 3CC3, 3KK3, 3QQ3, 3SS3, 3ZZ3, 4F03, 4I03, 4J03, 4LL3, 4MM3, 4N03, 4Q03, 4U03, 4V03, 4X03, 4Y03

**REQUIREMENTS**

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

12 units FRENCH 2B03, 2BB3, 3C03, 4A03

6 units from FRENCH 2G03, 3CC3, 3F03, 4BB3

3 units from FRENCH 2J03, 2J3

3 units from FRENCH 2W03, 2WW3

3 units from FRENCH 3K03, 3KK3

3 units from FRENCH 3Q03, 3QQ3

3 units from FRENCH 3A03, 3SS3, 4J03

9 units from Course List 1

9 units Levels III and IV French

36 units Electives

**Honours French**

**PROGRAM B:**

**LANGUAGE, LINGUISTICS AND TRANSLATION**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06. Students who are interested in entering this program are advised to take LANGUAGE 2A03 and 2A06.

**NOTE**

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.

**COURSE LIST 1**

FRENCH 3A03, 3AA3, 3BB3, 3CC3, 3KK3, 3QQ3, 3SS3, 3ZZ3, 4F03, 4I03, 4J03, 4LL3, 4MM3, 4N03, 4Q03, 4U03, 4V03, 4X03, 4Y03

**REQUIREMENTS**

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

12 units FRENCH 2B03, 2BB3, 3C03, 4A03

6 units from FRENCH 2G03, 3CC3, 3F03, 4BB3

3 units from FRENCH 2J03, 2J3

3 units from FRENCH 2W03, 2WW3

3 units from FRENCH 3K03, 3KK3

3 units from FRENCH 3Q03, 3QQ3

3 units from FRENCH 3A03, 3SS3, 4J03

9 units from Course List 1

9 units Levels III and IV French

36 units Electives

**Combined Honours in French and Another Subject**

**PROGRAM A: LANGUAGE AND LITERATURE**

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

**NOTES**

1. Students are not permitted to combine this program with Combined Honours French Program B.

2. Upon completion of 60 units of work (including at least 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.
ADMISSION

Students wishing to enter the program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

NOTES

1. Students are not permitted to combine this program with Combined Honours French Program A.
2. Upon completion of 60 units of work (including at least 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.

COURSE LIST 1

FRENCH 4P03, 4I03, 4L03, 4M03, 4N03, 4S03, 4U03, 4V03, 4X03, 4Y03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2B03, 3C03, 4A03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2K03, 2W03
- 3 units from FRENCH 3K03, 3KK3
- 3 units from FRENCH 3Q03, 3QSS
- 3 units from FRENCH 3A03, 3BB3, 3Z03, 4U03
- 6 units from Course List 1
- 3 units from FRENCH 3A03, 3SS3, 4J03
- 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

Combined Honours in French and Another Subject

PROGRAM B: LANGUAGE AND LINGUISTICS

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

NOTES

1. Students are not permitted to combine this program with Combined Honours French Program A.
2. Upon completion of 60 units of work (including at least 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.

COURSE LIST 1

FRENCH 2E03, 2I03, 2JJ3, 2N03, 2W03, 2W03, 3A03, 3BB3, 3C03, 3KK3, 3Q03, 3QSS, 3S03, 3Z03, 4U03, 4V03, 4X03

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2B03, 3C03, 4A03
- 9 units from Course List I, including at least three units from Levels III or IV
- 6 units from FRENCH 2H03, 3H03
- 9 units from Course List 2
- 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

B.A. in French

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 3.5 including a grade of at least C in FRENCH 1A06 or 2M06 or a grade of at least C+ in FRENCH 1N06.

REQUIREMENTS

90 units total (Levels I to III)

- 30 units from the Level I program completed prior to admission into the program
- 12 units FRENCH 2B03, 2B03, 3C03, 3F03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2K03, 2W03
- 6 units from FRENCH 3A03, 3K03, 3KK3, 3Q03, 3SS3
- 12 units Levels II, III or IV French
- 24 units Electives

Minor in French

REQUIREMENTS

24 units total

- 6 units from FRENCH 1A06, 1N06, 2M06
- 9 units from FRENCH 2B03, 2B03, 3C03
- 3 units from FRENCH 2K03, 2JJ3, 2L03, 2W03, 2W03, 3A03, 3BB3, 3K03, 3KK3, 3Q03, 3QSS
- 6 units Level II or III French, excluding FRENCH 2M06 and 2V03

DEPARTMENT OF HISTORY

WEB ADDRESS: http://www.humanities.mcmaster.ca/~history/

Honours Arts & Science and History (B.Arts.Sc.; See Arts and Science Program)

SUBFIELDS

The Department has defined three fields of study. Students should consult the Program Notes for their specific program to determine the requirements regarding these fields. Level II and III courses are allocated to the fields as follows:

- Europe
  - HISTORY 2C06, 2F03, 2FF3, 2I06, 2M03, 2MM3, 2P03, 2Q03, 2QSS, 2U03, 2U03, 3D03, 3F03, 3I03, 3J03, 3L03, 3PP3, 3Q03, 3QSS, 3R03, 3RR3, 3SS3, 3T03, 3Y03, 3Z03, 3ZSS

- Ancient and Non-Western World
  - HISTORY 2E03, 2F03, 2K03, 3K03, 3L03, 3M03

- The Americas
  - HISTORY 2AA3, 2D03, 2G03, 2P03, 2R03, 2RR3, 2T03, 2TT3, 3G03, 3I03, 3J03, 3K03, 3K03, 3L03, 3NN3, 3O03, 3P03, 3V03, 3W03, 3W03, 3Y03

Honours History

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History.

NOTES

1. In selecting courses, students must ensure that they take a minimum of six units in each of three fields of History. This requirement must be satisfied by the end of Level III. All Level II and III History courses from the above list may be used towards this requirement.

2. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV.

3. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.

4. With permission of the Department of History and the instructor, KINESIOL 4LL6 (Advanced Topics in Canadian Sport History) may be taken as a substitute for one Level IV History seminar.

REQUIREMENTS

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 18 units Level II History
- 15 units Level III History
- 12 units Level IV History
- 45 units Electives

Combined Honours in History and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Level I History.
NOTES
1. In selecting courses, students must ensure that they take a minimum of three units in each of three fields of History. This requirement must be satisfied by the end of Level III. All Level II and III History courses from the above list may be used toward this requirement.
2. No Level IV seminar may be taken before completion of 12 units of History beyond Level I.
3. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV.
4. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.
5. With permission of the Department of History and the instructor, KINESIOL 4L58 (Advanced Topics in Canadian Sport History) may be taken as a substitute for one Level IV History seminar.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units Level II History
6 units Level III History
12 units Level IV History
36 units Courses specified by the other subject. (Combinations with Social Sciences may require more than 36 units.)
24 units Electives to total 120 units

B.A. in History [1290]
Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 3.5 including an average of at least 4.0 in any six units of Level I History.

NOTES
1. In selecting courses, students must ensure that they take a minimum of three units in each of three fields of History. All Level II and III History courses from the above list may be used toward this requirement.
2. KINESIOL 3A03 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.

REQUIREMENTS
90 units total (Levels I to III)
30 units from the Level I program completed prior to admission into the program
12 units Level II History
12 units Level III History
36 units Electives

Minor in History
24 units of History of which no more than six units may be from Level I. Consult the Course Listings section for course prerequisites and limited enrolment courses.

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

For details see Combined B.A. in Indigenous Studies and Another Subject section of this Calendar.

JAPANESE STUDIES

The Combined Honours program in Japanese Studies and Another Subject is being phased out. No new registrants will be accepted after September 2005.

Combined Honours in Japanese Studies and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.
2. Upon completion of 60 units of work and with the approval of the Department of Modern Languages and Linguistics 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 university under the Humanities Study Elsewhere Program.

**COURSE LIST**

All Linguistics courses beyond Level I; and all courses taught in a language other than English: CMST 3E03, MMedia 1A03, 2D03, 2I03, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03

**REQUIREMENTS**

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 15 units from LINGUIST 2L03, 2LL3, 3A03, 3I03, 3I13, 3M03
- 6 units from LINGUIST 2A03, 2AA3, 2E03, 3X03
- 6 units from LINGUIST 3B03, 3P03, 4B03, 4D03
- 3 units from LINGUIST 4L83, 4C03, 4T03
- 6 units from LINGUIST 4D03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03
- 12 units from one of the languages (beyond Level I) as specified in Note 1 above
- 6 units from a second language as specified in Note 1 above
- 18 units from Course List 1
- 18 units Electives

**Combined Honours in Linguistics and Another Subject**

This program is designed for students who want to combine the scientific study of language with another subject of their choice.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in LINGUIST 1A03 and 1AA3.

**NOTES**

1. Students are required to complete 18 units of a language other than English for this program with six units at Level I and 12 units above Level I. Please note however, that some languages begin at Level II. Students are also advised that some languages may not offer sufficient units to meet this 18 unit requirement. Students should consult the Academic Counsellor in Linguistics in selecting their language of concentration.

2. Students whose other subject involves the study of a language may substitute the 12 units of language other than English with 12 units from Course List 1.

3. Upon completion of 60 units of work and with the approval of the Department of Modern Languages and Linguistics, 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 university under the Humanities Study Elsewhere Program.

**COURSE LIST 1**

All Linguistics courses beyond Level I; and all courses taught in a language other than English; CMST 3E03, MMedia 1A03, 2D03, 2I03, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03

**REQUIREMENTS**

120 units total (Levels I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units from LINGUIST 2A03, 2AA3, 2E03, 2LL3, 3B03, 3P03, 3X03, 4B03, 4D03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03, 4X03
- 12 units from LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03
- 12 units from a language other than English, above Level I. (See Notes 1 and 2 above.)
- 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 Modern Languages and Linguistics

This program combines the study of two modern languages (French, German, Italian, Japanese, Spanish) with some areas of Linguistics (sociolinguistics, pragmatics, applied linguistics).

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in PHIL 1A03 and 1B03.

NOTES

1. Students should note that certain courses in Course Lists 1 and 2 have their own disciplinary prerequisites.
2. Upon completion of 60 units of work and with the approval of both the Director of Peace Studies and the Office of the Dean of the Faculty of Humanities, one or both terms of Level III of this program may be replaced by courses of study at a university or universities under the Humanities Studies Elsewhere program.

COURSE LIST 1

All Linguistics courses beyond Level I; and all courses taught in a language other than English; MMEDIA 1A03, 2D03, 2I03, 3B03, 3D03, 3E03, 4C03; PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03.

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission to the program
18 units from LINGUIST 2A03, 2AA3, 2E03, 3X03, 4B03, 4D03, 4E03, 4I03, 4M03, 4N03, 4R03, 4S03, 4T03
18 units from a language other than English (above Level I)
18 units Electives from Course List 1
18 units Electives

Minor in German

24 units of German, of which no more than six units may be taken from Level I

Minor in Hispanic Studies

24 units of Hispanic Studies, of which no more than six units may be taken from Level I

Minor in Italian

24 units of Italian, of which no more than six units may be taken from Level I

Minor in Japanese Language

24 units of Japanese, of which no more than six units may be taken from Level I

Minor in Linguistics

24 units of Linguistics, of which no more than six units may be taken from Level I

PEACE STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/~peace

Honours Arts & Science and Peace Studies

(B.Arts.Sc.; See Arts & Science Program)

Combined Honours in Peace Studies and Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in PEACE ST 1A03 and 1B03.

NOTE

With the permission of the Director of Peace Studies, some courses not listed may be substituted, at the appropriate Level, from Anthropology, Biology, English, History, Indigenous Studies, Labour Studies, Philosophy, Religious Studies, Science and Sociology provided that the course prerequisites are fulfilled.

Minor in Peace Studies

REQUIREMENTS

24 units total

6 units PEACE ST 1A03, 1B03
18 units from ANTHRO 2X03, 3T03, ECON 2F03, 2L03, LABR ST 2A03, 2C03, 2D03, 3G03; PEACE ST 2A03, 2AA3, 2G03, 2I03, 2S03, 3A03, 3B03, 3E06, 3F03, 3G03, 3I03, 3L03, 3M03, 3S03, 3W03, 3X03, 3Y03, 3Z03, 4A03, 4B03, 4C03, 4D03; POL SCI 3AA3, 3KK3, 3Q03, 3S03, 3W03, 3X03, 3Y03, 3Z03, 4A03, 4B03, 4C03, 4D03; RELIG ST 2E03, 2H03, 2L03, 2MM3; SOCIO 3K03

DEPARTMENT OF PHILOSOPHY

WEB ADDRESS: http://www.humanities.mcmaster.ca/~philos

Honours Arts & Science and Philosophy

(B.Arts.Sc.; See Arts & Science Program)

Honours Philosophy

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.
NOTES
1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. 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.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
27 units PHILOS 2A06, 2C06, 3A06, 3G03, 3H03, 4H03
3 units PHILOS 2B03
3 units Levels II, III or IV Philosophy
15 units Levels III and IV Philosophy
6 units Level IV Philosophy
36 units Electives

Combined Honours in Philosophy

Another Subject

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES
1. Students intending to do graduate work in Philosophy are advised to include PHILOS 2B03 in their program.
2. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
3. 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.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units PHILOS 2A06, 2C06
3 units from MATH 1A03, 1A93
15 units Levels III and IV Philosophy
6 units Level IV Philosophy
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 Philosophy

and Biology (B.A.)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy and of 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.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units from MATH 2A03, 2A93, 2B03, 2C03, 2D03, 3A03, 3B03, 3G03, 4H03
15 units PHILOS 2A06, 2C06, 3G03, 4H03
3 units PHILOS 2B03
3 units from PHILOS 2D03, 2F03, 2G03
3 units from PHILOS 3G03, 3N03
6 units Level III or IV Philosophy
3 units Level IV Philosophy
18 units Electives to total 120 units

Honours Philosophy

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B in each of MATH 1A03 or 1A93 and 1B03 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES
1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. 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.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units from BIOCHEM 2B03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03, CHEM 2E03, 2A03, 2B03
24 units Level II and IV Biology courses
15 units PHILOS 2A06, 2C06, 3G03, 4H03
3 units PHILOS 2B03
3 units from PHILOS 2D03, 2F03, 2G03
3 units from PHILOS 3G03, 3N03
6 units Level III or IV Philosophy
3 units Level IV Philosophy
18 units Electives to total 120 units

Honours Philosophy

and Mathematics (B.A.)

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in each of MATH 1A03 or 1A93 and 1B03 and an average of at least 7.0 in six units of Level I Philosophy or, if no such course was taken, in six units of work acceptable to the Department of Philosophy.

NOTES
1. Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.
2. 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.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
24 units MATH 2A03, 2A93, 2B03, 2C03, 2D03, 3A03, 3B03, 3G03, 3H03
3 units from MATH 3A03, 3E03
3 units from MATH 4B03, 4E03, 4X03
12 units from Level III and IV Mathematics, Statistics
12 units PHILOS 2A06, 2C06
3 units PHILOS 2B03
21 units Level III or Level IV Philosophy
3 units Level IV Philosophy
9 units Electives

B.A. in Philosophy

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION
Completion of any Level I program and a Cumulative Average of at least 3.5 and an average of at least 4.0 in six units of Level I Philosophy.

NOTE
Students are advised to note carefully the prerequisites for all courses. Students are also advised to take note which courses are offered in alternate years.

REQUIREMENTS
90 units total (Levels I to III)
30 units from the Level I program completed prior to admission into the program
12 units PHILOS 2A06, 2C06
3 units from PHILOS 2B03, HUMAN 2C03
3 units Levels II, III or IV Philosophy
6 units Levels III or IV Philosophy
36 units Electives

Minor in Philosophy

24 units from PHILOS 2A06 and 2C06; and 12 additional units of Philosophy, of which no more than six units may be from Level I.
WOMEN'S STUDIES

WEB ADDRESS:  http://www.humanities.mcmaster.ca/-womensst/

Honours Arts & Science and Women's Studies
(B.Arts.Sc.; See Arts & Science Program)

Combined Honours B.A.

In Women's Studies and Another Subject

Women’s Studies may be taken as a Combined Honours degree or as a Minor. All Women’s Studies courses are interdisciplinary, allowing students to explore the relationship between different branches of knowledge and to examine critically different approaches to knowledge construction and theoretical positions in understanding the contributions and social locations of women. Graduates of the Program will be able to choose from a wide career list which includes industrial and government consulting, personnel management, labour relations, education and health care professions. The Program’s focus on research prepares students for graduate school.

Students wishing to enter this program must complete an application for admission to Level II on MUGSI in mid-March to be considered for admission.

ADMISSION

Completion of any Level I program and a Cumulative Average of at least 6.0 including a grade of at least B- in WOMEN ST 1A06.

NOTES

1. Students who have not taken WOMEN ST 1A06 because they have transferred from another university may be considered for admission to the program if they are deemed by the Admissions Committee to have fulfilled requirements equivalent to WOMEN ST 1A06.
2. In Levels II, III and IV, students must take six units of Women’s Studies courses appropriate to their level and six additional units of approved discipline-related courses at each level.
3. The courses required for the Women’s Studies portion of the Combined Honours program may not include courses offered in the student’s other subject area.

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission to the program

6 units WOMEN ST 2A03, 2AA3

6 units from LABR ST 2D03, RELIG ST 2SS3, SOCIOL 2Q06, WOMEN ST 2C03, 2F03, 2FF3, 2H03, 2HH3, 2J03, 2K06, 2L03

6 units WOMEN ST 3A03, 3AA3

6 units from LABR ST 3E03, WOMEN ST 3B03, 3BB3, 3C03, 3DD3, 3E03, 3G03, 3GG3, 3H03, 3HH3, 3I03, 3NN3, 3Z03

6 units WOMEN ST 4A06

6 units from HISTORY 4I06, KINESIO 4T03, SOC WORK 4R03, WOMEN ST 4B03, 4BB3, 4C03, 4CC3, 4J03

36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)

18 units Elective course work beyond Level I

With the permission of the Director of Women’s Studies, some courses not listed above may be substituted, at the appropriate level, from: Anthropology, Classics, Comparative Literature, English, French, Geography and Earth Sciences, History, Kinesiology, Labour Studies, Philosophy, Religious Studies and Sociology.

Minor in Women’s Studies

NOTE

The courses required for the Minor may not include courses offered in the student’s other subject area.

REQUIREMENTS

24 units total

6 units WOMEN ST 1A06

18 units Level II and III Women’s Studies courses as listed under Women’s Studies in the Course Listings section of this Calendar
A. Level I Programs

The Faculty of Science offers three Level I programs:

**SCIENCE** {0710}

**MATHEMATICS AND STATISTICS** I {0320}

**MEDICAL RADIATION SCIENCES** I {0345}

The Faculty of Science also offers an Honours B.Sc. Kinesiology Degree. Please refer to the Faculty of Social Sciences, Programs and Degrees, Level I Programs section of this Calendar, for Kinesiology Level I requirements for admission to Honours Kinesiology (B.Sc.).

**LEVEL PROGRAM NOTES**

1. INQUIRY 1SC3 and MATH 1C03 may be taken as electives. The Faculty of Science emphasizes inquiry courses.
2. It is possible to complete Science I and Mathematics and Statistics I through evening/summer studies. Students wishing to take this option should consult the Office of the Registrar for timetable information.
3. SCIENCE 1A00 is a one-hour mandatory Health and Safety course which must be completed by all Science students.
4. SCIENCE 1B00 is a web-based interactive university survival course for Science students.

**For Students Registered in Science I**

5. Courses must be selected carefully to meet the admission requirements for entry to Level II of a specific program. (See Faculty of Science Program Listings in this section of the Calendar for Level II program admission requirements.) Pre-registration counselling is strongly advised. Please contact Level I Advisor of the Associate Dean (Science Studies) Office.
6. Up to six units of electives may be taken from any courses offered by any faculty provided the prerequisites have been met and provided the course is open to students in the Faculty of Science.

**For Students Registered In Mathematics and Statistics I**

7. Students may also be admitted to the Honours B.Sc. Computer Science programs upon successful completion of Mathematics and Statistics I, with the inclusion of COMP SCI 1FC3, 1M3, 1MD3. Six additional units from Science I Course List must be completed before entry to Level IV of any Computer Science Program. It is strongly advised that these six units be completed before entry to Level II. (CHEM 1A03 and PHYSICS 1B03 are the recommended additional six units.)
8. Up to 18 units of electives may be taken from any courses offered by any faculty provided the prerequisites have been met and provided the course is open to students in the Faculty of Science.

**For Students Registered in Medical Radiation Sciences I**

9. As places in the Medical Radiation Sciences program are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission.
10. The University reserves the right to grant admission to a limited number of students, and to refuse reapplication 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.
11. If Grade 12 Physics U (or OAC Physics) has not been completed with a grade of at least 60%, PHYSICS 1F03 must be completed in Term I in order to register in MEDRADSC 1C03.

**SCIENCE I COURSE LIST**

Each course consists of three units and is completed in one term, i.e., from September to December (Term 1) or from January to April (Term 2). Some courses are offered again in the Spring/Summer Session (May to August).

**astron 1f03** Introduction to Astronomy and Astrophysics

**biology 1a03** Cellular and Molecular Biology

**biology 1a3** Biodiversity, Evolution and Ecology

**chem 1a03** Introductory Chemistry I

**chem 1a03** Introductory Chemistry II

**comp sci 1f03** Mathematical Foundations for Computer Science

**comp sci 1mA3** Computer Science I

**comp sci 1m03** Computer Science II

**comp sci 1s03** Computing Fundamentals

**envir sc 1a03** Atmosphere and Hydrosphere

**envir sc 1b03** The Living Environment

**envir sc 1g03** Earth and the Environment

**math 1a03** Calculus I

**math 1b03** Linear Algebra I

**math 1d03** Mathematical Computing

**physics 1a03** Mechanics and Waves

**physics 1a3** Introduction to Modern Physics A

**physics 1b3** Introduction to Modern Physics B

**psych 1a03** Introduction to Experimental Psychology

**psych 1a3** The Psychology of Interpersonal Behaviour

**stats 1cc3** Introductory Computer-Aided Statistics

1. CHEM 1R03 may be completed as an elective for those students who did not complete Grade 12 Chemistry U (or OAC Chemistry) and wish to proceed to CHEM 1A03.
2. Students who have done a number of computer science courses may substitute COMP SCI 1S03 for COMP SCI 1MA3; however, students must achieve a grade of at least B+ in COMP SCI 1SA3 to satisfy the prerequisite for COMP SCI 1MD3.
3. ENVIR SC 1G03 provides more Level II course and program choices.
4. PHYSICS 1P03 may be completed as an elective to provide the background necessary to proceed to PHYSICS 1B03 for those students who did not complete Grade 12 Physics U (or OAC Physics) or who completed it with a grade of less than 60%.

**SCIENCE I**

**REQUIREMENTS: 30 UNITS**

3 units **math 1a03**

3 units from **MATH 1A03, 1B03, STATS 1CC3**

6 units from **BIOLOGY 1A03 (or 1A3), CHEM 1A03, PHYSICS 1B03**

12 units from the Science I Course List (of which no more than six units may be taken from any one discipline) (see above)

6 units Electives

2 courses **SCIENCE 1A00, 1B00**

*See Note 8 from Level I Program Notes.*
MATHEMATICS AND STATISTICS I  

REQUIREMENTS: 30 UNITS  
9 units MATH 1A03, 1AA3, 1B03  
3 units from the Science I Course List (see above)  
18 units Electives  
2 courses SCIENCE 1A00, 1B00  

MEDICAL RADIATION SCIENCES I  

ENROLMENT IN THIS PROGRAM IS LIMITED.  
REQUIREMENTS: 30 UNITS  
3 units BIOLOGY 1A03  
3 units CHEM 1A03  
6 units KINESIOL 1Y03, 1Y13  
3 units MATH 1A03  
9 units MEDRADSC 1A03, 1B03, 1C03  
3 units STATS 1C03  
3 units Electives  
2 courses SCIENCE 1A00, 1B00  

See Note 11 from Level I Program Notes.  

B. Degree Programs  

Honours B.Sc. Programs  

A Cumulative Average of at least 6.0 is required for admission to most Honours B.Sc. Programs.  

Each Department or School offers an Honours B.Sc. Program and one or more Honours B.Sc. Programs with Specialization. An Honours B.Sc. requires the completion of a set of core courses in a specific discipline and allows for interdisciplinary, and/or liberal arts studies through electives from other departments and faculties. All Science students are strongly encouraged to take these electives outside the Faculty of Science. An Honours B.Sc. with Specialization requires the completion of the same set of core courses as well as designated upper level courses in the specialization. Please refer to departmental program descriptions for details.  

There are also four Honours Science Programs that provide a breadth of study in science. Each program requires a concentration of studies from one of the four areas of science: Geo Science, Life Science, Mathematical Science or Physical Science. They also require the completion of at least 15 units from the remaining three areas of science, completion of 15 units from faculties other than the Faculty of Science and completion of six units of Capstone course work in the final year.  

ORIGINS RESEARCH SPECIALIZATION  

The Specialization in Origins Research is designed to re-introduce to students the 19th century ideal 'Natural Science' but from a modern perspective. This specialization may be combined with some B.Sc. Honours programs. See Origins Research Specialization in this section of the Calendar for more information.  

CO-OP PROGRAMS  

The Faculty of Science has instituted Cooperative Education programs, beginning in Level III, in Honours Biochemistry, Honours Biology (Genetics Specialization), Honours Biology and Pharmacology, Honours Chemistry, Honours Earth and Environmental Sciences, Honours Mathematics and Statistics, Honours Medical and Health Physics, and Honours Physics.  

Co-op programs have limited enrolment and admission is by selection. Please see the admission statement for each program in this section of the Calendar. Employment must be full-time during the work term. Students enrolled in Co-op programs must be registered in full-time studies during the academic terms of the program and will be charged a full-load tuition. An additional Science Co-op fee will be charged for each academic term of a Co-op program. With written permission from the work term supervisor, one three unit course 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 the Associate Dean of Science or Science Cooperative Education in the Faculty of Science.  

INDUSTRIAL INTERNSHIPS  

The Faculty of Science offers students the opportunity to participate in 12-16 month full-time paid work placements in industry that provide students with technical work experience related to their academic curriculum. Internship placements are available to students registered as Full Time students in Level II or III of an Honours B.Sc. program, who will have at least 24 units left to complete upon their return and are eligible to return to complete their undergraduate degree. Students who qualify complete pre-employment preparation sessions. Students compete for placements with participating companies through an application and interview process. A fee is assessed following the start of the placement.  

For further information, please consult the Associate Dean of Science or Science Cooperative Education in the Faculty of Science. For Computer Science internships, please consult the Associate Dean of Science or Engineering Co-op and Career Services in the Faculty of Engineering.  

STUDENT EXCHANGES  

Exchange Programs Within Canada  

McMaster University participates in the Canadian Scholars Exchange Program (CANEX) which includes ten universities.  

International Study for Honours Level III  

There are two ways to undertake international studies during Level III of an Honours program: via a Formal Exchange Program or a Third Year Study Elsewhere program.  

McMaster University has formal student exchanges with universities in 26 countries abroad.  

The Third Year Study Elsewhere Program is available at universities with which McMaster University does not have a Formal Exchange Agreement. Students registered in any Honours program in the Faculty of Science are encouraged to apply to study the whole Level III elsewhere.  

To be eligible to take part in this program, students are expected to complete Level II with a Cumulative Average of at least 7.0. Students must pay all associated travel, study and living expenses. For students in need of financial assistance, OSAP (Ontario Student Assistance Program) grants, loans and bursaries may be available.  

Students interested in these opportunities should begin discussions with the Associate Dean of Science 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 session.  

Students must maintain links through correspondence with their departments at McMaster University while they are engaged in study elsewhere. All credit for work completed may only be confirmed if students have received the students' academic achievement following their return and registration in their final year of study. The maximum credit available in this way is normally 30 units for the full year of study, equivalent to Level III. In certain cases, students may be recommended for the Deans' Honour List on the basis of work undertaken in the program.  

For information on the Canadian Scholars Exchange Program (CANEX) and other exchange programs please refer to the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.  

MINORS  

Within the Faculty of Science, minors are available to students registered in an honours program only. 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.  

Depending on the student's program, there may be certain minors which are excluded. Please see the Program Notes for individual programs in this section of the Calendar.  

Please see Minors in the General Academic Regulations section in this Calendar for further information.  

Minors offered by the Faculty of Science include:  

- Astronomy  
- Biochemistry  
- Biology  
- Chemistry  
- Computer Science  
- Earth Science  
- Environmental Science  
- Geographical Information Systems (GIS)  
- Materials Properties  
- Materials Processing  
- Mathematics and Statistics  
- Physics  
- Psychology
THREE-LEVEL B.SC. PROGRAMS

Three-level B.Sc. programs provide a science education which is less demanding than the Honours programs. Three-level B.Sc. programs are offered in Geoscience, Life Science, Mathematical Science and Physical Science.

Students are advised to seek counseling to ensure that their course selections are appropriate. Students who identify a subject area of emphasis should seek counseling from the corresponding department.

The program requirements for B.Sc. programs are listed under the heading 'Three-Level B.Sc. Programs' in this section.

COURSES

SCIENCE CAPSTONE COURSES

As the capstone of a building or the keystone of an arch, a Science Capstone course is designed to provide the student with an opportunity to bring all the acquired academic skills and knowledge together in a meaningful way. It may take the form of a thesis, a senior project or an inquiry course. Capstone courses are restricted to students in an Honours program that specifically requires the completion of such courses.

Normally, no more than six units of Science Capstone may be taken unless permission for a nine unit Senior Project or Thesis is obtained. Please refer to specific programs for their Capstone Course Lists.

SCIENCE CAPSTONE COURSE LIST

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<td>PHYSICS 4A03</td>
<td>Inquiry in Physics</td>
</tr>
<tr>
<td>PSYCH 4D06</td>
<td>Senior Thesis</td>
</tr>
<tr>
<td>PSYCH 4D09</td>
<td>Senior Honours Thesis</td>
</tr>
<tr>
<td>PSYCH 4J03</td>
<td>Inquiry in Psychology</td>
</tr>
</tbody>
</table>

FIELD COURSES

Field courses are offered through the Departments of Biology, the Medical Physics and Applied Radiation Sciences Unit and the School of Geography and Earth Sciences. Some of these courses are taken outside the Fall/Winter session, during the spring or summer.

Students who enroll in field courses must pay both:
- a fee to the department to cover travel expenses, room and board and
- the associated tuition fee to McMaster at Fall registration.

Although students initially register for field courses through the appropriate department, it is their responsibility to include field courses on their registration forms for the appropriate Fall/Winter session.

Detailed information regarding field courses and deadlines for registration may be obtained from the individual departmental offices.

LIMITED ENROLMENT COURSES

There are three types of limited enrolment courses:

1. Limited enrolment courses requiring permission:
   These courses have a prerequisite stated as: Permission of the instructor, department, coordinator, chair, etc.
   During the March Counselling period and before March 31st, it is the student's responsibility to apply to the corresponding departmental office for permission for courses in which they wish to register for the following Fall/Winter session.
   If a limited enrolment course is an absolute requirement for a program, students in that program have a guaranteed place in the course. This will be noted in the course prerequisite.

2. Limited enrolment courses not requiring permission:
   These courses do not have a prerequisite stated as: Permission of the instructor, department, coordinator, chair, etc.
   Registration in these courses is handled on a first-come, first-served basis.

3. Limited enrolment courses requiring preregistration preferential ballot:
   Students must complete and submit a ballot by April 20, 2005. Ballots can be obtained from the Psychology Department website at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

ACADEMIC REGULATIONS AND ADMINISTRATIVE INFORMATION

SPECIFIC TO THE FACULTY OF SCIENCE

STUDENT ACADEMIC RESPONSIBILITY

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

Students enrolled in Science programs, in addition to meeting the General Academic Regulations of the University, shall be subject to additional Faculty Regulations.

MUGSI

McMaster University General Student Information, MUGSI, is an on-line system that, among other options, enables students to track their academic progress. The Degree Audit, available on MUGSI, gives a listing of courses completed or in progress for the program and is continually updated as courses are added and successfully completed.

GENERAL ACADEMIC COUNSELLING

Counselling is available throughout the year from the Office of the Associate Dean of Science and the academic departments in the Faculty of Science. It is highly recommended that all students in the Faculty of Science make a counselling appointment with their student advisor in the Office of the Associate Dean of Science and also with their Departmental Undergraduate Advisor.

MARCH COUNSELLING

The dates for the March Counselling period may vary somewhat from year to year. The dates and information will be posted on campus, on the Web, outlined in the campus newspaper, and will be announced during classes. It is the student's responsibility to participate in March Counselling activities.

APPLICATION 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 session must submit an Application for Admission to Level II through MUGSI by March 31. Students may rank up to four program choices and will be notified on their grade reports in June of their eligibility for the Level II programs. Students will only be able to register for these approved programs.

Admission to limited enrolment programs is by selection and is based on Cumulative Average. See Limited Enrolment Programs in this section of the Calendar.

Limited enrolment courses do not 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 force when they enter Level II, except when a later Calendar explicitly modifies such requirements.
Students who have a Result of Session of May Continue at the University but who do not achieve the admission requirements for any Level II program may continue in the Faculty of Science, or apply to transfer to another Faculty. Students may repeat or upgrade any of the previous Level I courses but are advised to take only twelve units of additional Level I courses. Only forty-two units of Level I courses may be used as credit towards a three-level program.

**ACADEMIC REQUIREMENTS FOR ADMISSION TO PROGRAMS**

The admission criteria for the three-level B.Sc. programs, in each of Geoscience, Life Science, Mathematical Science and Physical Science, are listed under the heading Three-Level B.Sc. Programs in this section of the Calendar. Level I students must complete the required courses with the stated grades and a Cumulative Average of at least 6.0. Students must register for the stated grades and a Cumulative Average of at least 6.0 may be used as credit towards a three-level program.

**LEVEL III, IV REQUIREMENTS**

Students in Honours programs are required to take a minimum of 36 units of Level III, IV work (some programs may require more). Please see the program descriptions in this section of the Calendar for specific courses.

**COURSE CHANGES**

Students are responsible for ensuring that their course selection meets the requirements of their program. All course changes are subject to the deadline dates for adding, cancelling and withdrawing established by the University. (See Sessional Dates section of this Calendar.)

Beyond the September deadline date, first term three unit courses may be cancelled up to the November deadline. Students who cancel a three unit first term course may not overload in second term. Beyond the January deadline date, second term courses may not be replaced. Students who cancel a full year course by the January deadline date may add a three unit second term course.

**ADDITIONAL ENROLMENT COURSE OR A COURSE REQUIRING PERMISSION/WAIVER**

Permission/waiver must be obtained and entered onto the data base before a student completes the on-line registration or changes to the registration.

**WORKLOAD**

All programs in the Faculty of Science may be taken by full-time and part-time students, with the exception of the 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 session 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 Cumulative Average on completion of the previous Fall/Winter session is at least 7.0. Students registered in the final level of their program are permitted to overload up to six additional units in order to become eligible to graduate.

**LETTER OF PERMISSION**

All students enrolled in science programs, with the exception of students registered in second degree programs, may apply to the Office of the Associate Dean of Science to take courses at another university on Letter of Permission. Students must achieve a grade of at least C- for transfer credit. The transcript designation reads COM, indicating complete, 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. Courses required by the program but not given by the department offering the program may be taken elsewhere. For example, a student registered in a Biology program, all Biology courses must be taken at McMaster, however, the required Chemistry course may be taken elsewhere. 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 Cumulative or Sessional 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 be in good standing to be eligible to take courses on a Letter of Permission.

**TRANSFERS**

Students in Level II or III may be permitted to transfer between Faculty of Science programs on the recommendation of the Department concerned and with the approval of the Associate Dean of Science. Students in other Faculties may apply to transfer to a program in the Faculty of Science.

Students are eligible to apply for transfer from a B.Sc. program to a related Honours Program or between Honours programs provided that they have:
1. attained a Cumulative Average of at least 6.0,
2. completed the courses required for admission to the program and
3. completed a reasonable number of Science courses with appropriate grades relevant to the program.
Permission to transfer to a program is subject to any exceptions or special restrictions outlined in the Admission statement or the Program Notes for that program.

Note: The minimum Cumulative Average required to transfer to an Honours program in the Faculty of Science is 5.0. Students entering Level III of a three-level B.Sc. program should note that if they have completed 60 units with a Cumulative Average of 5.5, they must attain a Sessional Average of at least 7.0 on 30 units of course work to raise their Cumulative Average to 6.0. Students registered in the final year of a three-level B.Sc. Program must register for all courses required for completion of the program unless registering for fewer units than permitted to complete the program. A student may only be reviewed for transfer to an Honours Program two times: on completion of Level II and on completion of Level III.

**TRANSFER PROCEDURES**

Students in Levels II or III who wish to transfer to another program in the Faculty of Science for the following Fall/Winter session must complete an Application to Transfer to Another Program during the March Counselling period. This form must be completed and returned to the Office of the Associate Dean of Science by the end of March. Students will be notified of the results of their applications on their grade reports in early June. Program transfers are not normally permitted during the Fall/Winter academic session. Students who did not apply to transfer in March, may submit an application to transfer up to the deadline date for transfers of August 15th.

**GRADUATION**

From Honours B.Sc. and B.Sc. Programs

To graduate from a program, students must meet the course requirements stated in the Calendar in force when they enter that program, with the exception that a later Calendar may explicitly modify such requirements.

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 the first three levels of any Honours B.Sc. degree may request permission from the Associate Dean of Science Office to transfer to graduate with a three-level B.Sc. Science degree.

**SECOND BACHELOR’S DEGREE PROGRAMS**

In addition to the regulations in the General Academic Regulations section in this Calendar, the following Faculty regulations apply.

For many of the four-level Honours degrees in science, a Cumulative Average of at least 7.0 (overall average of B-) will be required for admission. For three-level Honours programs, a Cumulative Average of at least 5.0 (overall average of C) will be required for admission.

Students will be admitted to Second Degree studies only if their studies involve a significant additional component of work in the subject of concentration of a program. Certain subject combinations are not permitted for Second Degrees. Courses for the Second Degree may not be completed on a Letter of Permission. Advanced credit is not given; however, if deemed appropriate, exemptions may be given. Students interested in applying for a Second Degree program should consult the Office of the Associate Dean of Science for further details.

**DEPARTMENT OF BIOCHEMISTRY AND BIOMEDICAL SCIENCES**

WEB ADDRESS: http://www.thesis.mcmaster.ca/biochem/

Honours Arts & Science and Biochemistry (B.Arts.Sc; See Arts & Science Program)

Honours Biochemistry

**NOTES**

1. The Honours Biochemistry program consists of four options: a core and three specializations. In the core, this program has a specified set of basic requirements, but otherwise allows a wide choice of other courses (including those from outside the Faculty of Science). The opportunity is therefore available for interdisciplinary studies possibly leading to a Minor in another subject. Alternatively, students may wish to select one of the specializations which are strongly recommended for students intending to pursue graduate studies.

2. The Honours Biochemistry Core program can also be combined with the Origins Research Specialization. The section on the Origins Research Specialization in this section of the Calendar is for Honours Level II. Students wishing to combine the Origins Research Specialization with the Biochemistry Core must satisfy all the Biochemistry Core requirements as well as the courses specified by the Origins Research Specialization. Students may do this by selecting Origins courses for Biochemistry Core electives. In addition to the courses specified for the Biochemistry Core, students must complete three units from ASTRON 1FO3, PHYSICS 1BA3 or 1BB3 by the end of Level II.

3. Transfer between options is possible at any time subject to satisfying the specific option requirements and enrolment limits. Registration in a specialization will be noted on the student's transcript.

4. Students in the Molecular Biology Specialization, the Biotechnology and Genetic Engineering Specialization and the Computational and Physical Biochemistry Specialization are normally required to take a course involving a research project or a thesis. Enrolment in any of these courses is limited and admission is dependent on academic performance. Students who fail to achieve the minimum C.A. to register in the required course may request special permission from the department to remain in the specialization or transfer to the core option.

5. Students may apply for admission to Honours Biochemistry Co-op regardless of the core.

**ADMISSION**

Completion of the Science I requirements, including:

- 6 units MATH 1A03, 1AA3
- BIOLOGY 1A03, 1AA3
- 6 units CHEM 1A03, 1A3
- 3 units PHYSICS 1B03
- 3 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00
- While STATS 1C03 is strongly recommended, students will also be considered for admission if they have completed MATH 1A03 and 1AA3 instead of STATS 1C03. Students with other backgrounds such as Health Sciences I may also be admissible and are encouraged to contact Chair of the Department of Biochemistry and Biomedical Sciences. Students wishing to take CHEM 2P03 and 2PB3 in Level II must complete MATH 1AA3.

**MINIMUM AVERAGES/GRADERS:**

A Cumulative Average of 6.0 and a grade of C+ in each of four of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1A3, and MATH 1A03.

**NOTES**

1. There are Level III (and IV) prerequisites for many Level III and IV courses. The prerequisites should be considered when choosing Level II and III courses.

2. Although required by Level III in the Core option, completion of CHEM 2N03 in Level II is recommended.

3. Students planning to apply for admission to a Biochemistry Co-op program must take both BIOLOGY 2B03 and CHEM 2N03 in Level II.

4. A minor in Biology or Chemistry is not permitted in the Honours Biochemistry program.

5. Students are reminded that biochemical laboratory experience is highly valuable in many careers. The laboratory course BIOCHEM 3L03 which is required for all Honours Biochemistry students may not, by itself, be sufficient for many purposes. Consequently, students who are not taking a research project or thesis course should consider BIOCHEM 4L03.

6. Students who wish to enrol in the Computational and Physical Biochemistry Specialization must complete MATH 1A03, 1AA3, 1B03 and PHYSICS 1BA3 or 1BB3 by the end of Level II. PHYSICS 2A03 and 2C03 must be completed by the end of Level III.

7. Students who have obtained appropriate research experience may request permission from the Department to take three units of Level III, IV Biochemistry instead of BIOCHEM 3P03.
5. 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.

6. Students who have obtained appropriate research experience may request permission from the Department to take three units of Level III, IV Biochemistry instead of BIOCHEM 3P03.

7. Students who have received exemption from BIOCHEM 3P03 have the option of registering in BIOCHEM 4P03 in Term 2 of Year 5.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units from the Science I requirements

LEVEL II
30 units from Honours Biochemistry (BIOLOGY 2B03 and CHEM 2N03 must be completed) or Honours Molecular Biology

Biotechnology and Genetic Engineering Specialization {2046}

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orientation course, and completion of the first eight-month work term, Term 2 and Summer Term.

TERM 1
12 units BIOCHEM 3D03, 3L03, BIOLOGY 3E03, 3003
0-3 units Electives
If not completed: CHEM ENG 2B03 → Work Orientation Course

TERM 2 AND SUMMER
Work Term

YEAR 4
30-31 units from Academic Level IV, Term 1, and Academic Level III, Term 2, and beginning of the second eight-month work term, Summer Term.

TERMS 1 AND 2
12 units BIOCHEM 3P03, 3E03, 4H03, CHEM 3F03. (See Note 6 above.)
0-6 units BIOCHEM 4B06 (See Notes 6 and 7 above.)
6-12 units from Level III, IV Biochemistry, Biology, Chemistry (BIOCHEM 4EE3 is recommended.)
6 units Electives

SUMMER
Work Term

YEAR 5
15 units from Academic Level IV, Term 2, and completion of the second eight-month work term, Term 1.

TERM 1
Work Term

TERM 2
3 units BIOCHEM 4K03
0-3 units BIOCHEM 4P03 (required if BIOCHEM 4B06 not completed in Year 4)
3-6 units from Level III, IV Biochemistry, Biology, Chemistry
3 units BIOCHEM 4EE3
3 units Electives

DEPARTMENT OF BIOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/biology/

Honours Arts & Science and Biology
(B.A.Sc.; See Arts & Science Program)

Honours Philosophy and Biology
(B.A.; See Faculty of Humanities, Department of Philosophy)

Honours Molecular Biology
(See Molecular Biology)

Honours Biology
The Honours Biology program consists of three options: a core and two specializations. At the end of Level I, students enter the core option with a wide choice of courses, including courses in other disciplines, or may register for a specialization which reflects the department's research strengths. All options are suitable for students wishing to pursue graduate studies in Biology.
OPTIONS

Core {20408022}

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL II: 30 UNITS
12 units BIOCHEM 2B03, 2BB3, BIOLOGY 2B03*, 2C03, CHEM 2R03, 2N03
6 units from either CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3

LEVEL III: 30 UNITS
15 units BIOCHEM 3D03, 3L03, 3P03, 3Y03, PHYSICS 3S03.
6 units from Level III, IV Biochemistry, Biology, Chemistry, Math, Physics. (BIOCHEM 3D03 and CHEM 3F03 may be of interest.)
6 units Electives

LEVEL IV: 30 UNITS
12 units BIOCHEM 4E03, 4K03, 4Y03, PHYSICS 4S03
9-9 units from BIOCHEM 4B06, 4P03, 4L03, 4P03
6 units from Level III, IV Biochemistry, Biology, Chemistry, Math, Physics, BIOCHEM 4H03
6 units Electives

Molecular Biology Specialization {20408041}

(Enrolment is limited. See Note 7 in Honours Biochemistry above.)

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I: 30 UNITS
6 units BIOCHEM 3D03, 3L03
6 units Electives

LEVEL II: 30 UNITS
18 units BIOCHEM 2B03, 2BB3, BIOLOGY 2B03*, 2C03, CHEM 2R03, 2N03
6 units from either CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3

LEVEL III: 30 UNITS
18 units BIOCHEM 3D03, 3L03, 3P03, BIOLOGY 3E03, 3003, CHEM 3F03. (See Note 7 above.)
6-7 units from Level III, IV Biochemistry, Biology, Chemistry, CHEM ENG 3K04, 3BK3
6 units Electives

LEVEL IV: 30 UNITS
12 units BIOCHEM 4E03, 4H03, 4K03, 4L3
6-6 units from BIOCHEM 4B06, 4P03
6 units from Level III, IV Biochemistry, Biology, Chemistry, Chemical Engineering
6 units Electives

Honours Biochemistry Co-op

ADMISSION
Enrolment in this program is limited to a maximum of 25 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, a Cumulative Average of at least 7.0 and completion of either Level II Honours Biochemistry or Honours Molecular Biology. Information about the program and the selection procedure may be obtained from Science Cooperative Education and the Chair and will be explained in the month of February in an Information Session.

NOTES
1. This is a five-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.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students who are entering Level III Honours Biochemistry Co-op have a choice between two specializations:
   • Molecular Biology Specialization
   • Biotechnology and Genetic Engineering Specialization
The options currently available are:
- Biology (Core)
- Biodiversity Specialization
- Genetics Specialization

The Honours Biology Core program can also be combined with the Origins Research Specialization. See the section on the Origins Research Specialization in this section of the Calendar for more information. Students wishing to combine the Origins Research Specialization with the Biology Core must satisfy all the Biology Core requirements as well as the courses specified by the Origins Research Specialization. Students may do this by selecting Origins courses for Biology Core electives. In addition to the courses specified for the Biology Core, students must complete three units from ASTRON 1F03, PHYSICS 1B03 or 1BB3 by the end of Level II. Origins students will complete ORIGINS 4A09, the Origins Research Thesis as their Capstone Course. Students may apply to transfer between options, subject to satisfying the requirements for that option or by permission of the Chair of Biology. Students who do not meet all the requirements of a specialization will be transferred to the core option unless they obtain special permission from the Chair of Biology to remain in the specialization. Registration in a specialization will be noted on the student's transcript.

ADMISSION
Completion of Science I requirements, including:
- 3 units MATH 1A03
- 3 units from MATH 1AA3, 1B03, STATS 1C03 (See Note 2 below under Notes For All Honours Biology Programs)
- 6 units BIOLOGY 1A03, 1AA3
- 6 units CHEM 1A03, 1AA3
- 3 units PHYSICS 1B03
- 3 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

Students with other backgrounds such as Health Sciences may be admitted and are encouraged to contact the Chair of the Department of Biology.

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 6.0 and an average of 6.0 in BIOLOGY 1A03, 1AA3, and a grade of C+ in each of three of CHEM 1A03, 1AA3, MATH 1A03, PHYSICS 1B03, STATS 1CC3.

NOTES FOR ALL HONOURS BIOLOGY PROGRAMS
1. Because the required Level II courses are prerequisites and corequisites for other courses, students are encouraged to complete all their required Level II courses while registered in Level II. However, students may defer one or two of these courses until Level III or IV. All students, particularly those who complete the courses in a different Level from those suggested below, are encouraged to obtain a degree audit through MUSG to ensure that they are fulfilling the requirements of their program.
2. Students interested in registering in more statistics courses are encouraged to complete STATS 2MA3 in addition to STATS 1CC3. Those students wishing to include more mathematical statistics may replace STATS 1CC3 with STATS 2D03, 2MB3. In this case, students are advised to register in MATH 1B03 in Level I.
3. Admission to Honours Biology and Pharmacology (Co-op) requires completion of CHEM 2A03 and 2B03. Students are strongly recommended to register in BIOLOGY 2A03 while registered in Level I.
4. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or 4F06.

BIOLOGY COURSE LIST
BIOLOGY 2G03, 2I03, all Biology Level III and IV courses except BIOLOGY 3Q03, 3QQ3; BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 4E03, 4E3, 4J03, 4K03, 4Q03; CHEM ENG 2B03; GEO 2A03, 2B03, 2C03, 2E03, 2I03, 2H03, 2003, 2A03, 3I03, 3J03, 3S03, 4A03, 4B03, 4G03, 4P03, 4Q03; HTH SCI 3G03, 4GH3, MED PHYS 3T03, MOL BIOL 4H03, 4I03, 4J03; PSYCH 2F03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 3R03

Biology (Core) {2050808}

NOTES
1. The Biology core option allows students to choose Biology courses which reflect their own interests, or to develop an interdisciplinary approach to Biology which may include obtaining a minor. Students registered in the Biology core option are encouraged to discuss their interests and course selections with a Biology undergraduate counsellor.
2. Students interested in applying to graduate or professional schools are encouraged to complete a Biology Thesis or Project and to choose their Level III and IV elective courses from the Faculty of Science.
3. Students are encouraged to take PHILOS 2D03 or 2G03 as an elective.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
15 units from BIOCHEM 2E03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03
9-12 units Electives

LEVEL III: 30 UNITS
3 units from BIOCHEM 2E03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03 (whichever is not completed)
6 units from Levels III, IV Biology
6 units from Biology Course List
9 units Level III, IV courses
6 units Electives

LEVEL IV: 30 UNITS
6 units from Levels III, IV Biology
6 units from Biology Course List
9 units 3 units from Biology Course List, BIOLOGY 4F06 or 4G03
6 units from the Science Capstone Course List, 3 units from Biology Course List
BIOLOGY 4C09
9 units from Level III, IV courses

Biodiversity Specialization {2050812}

NOTES
1. Students interested in the Biodiversity Specialization are recommended to register in at least one of ENVIR SC 1A03, 1B03 or 1G03 in Level I or II.
2. Students registered in the Biodiversity Specialization are encouraged to complete PHILOS 2G03 as an elective.
3. Students are encouraged to complete more Statistics. (See Note 2 under Notes for All Honours Biology Programs in this section of the Calendar.)
4. BIOLOGY 4E03 may be completed in Level III or IV. If it is completed in Level III, students must take 12 units from the Biodiversity Course List in Level III. If it is completed in Level IV, students must take nine units from the Biodiversity Course List in Level IV.
5. Students must complete 24 units from the Biodiversity Course List by the end of Level IV.

BIODIVERSITY COURSE LIST
BIOLOGY 3B03, 3BB3, 3E03, 3MM3, 3R03, 3S03, 3S3, 3T3, 3J03, 3L03, 3S03, 3U03, 4A03, 4D03, 4EE3, 4I03, 4J03, 4P03, 4Q03, 4R03, GEO 2A03, 2B03, 2C03, 2E03, 2I03, 2H03, 2003, 2A03, 3I03, 3J03, 3L03, 3S03, 4B03, 4C03, 4FF3, 4I03, 4S03; PSYCH 2F03, 2TT3, 3A03, 3F03, 3FA3, 3S03, 3T03, 3Y03, 4R03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
3-6 units CHEM 2E03 or both CHEM 2A03, 2B03
21 units BIOCHEM 2E03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03, 2G03
3-6 units Electives
LEVEL III: 30 UNITS
6 units BIOLOGY 3F03, 3G03
3 units BIOLOGY 4E03 (See Note 4 above.)
12-15 units from Biodiversity Course List, including at least six units from Biology courses. (See Note 5 above.)
3 units from Biology Course List
6 units Electives

LEVEL IV: 30 UNITS
3 units BIOLOGY 4A03
3 units BIOLOGY 4E03 (See Note 4 above.)
9-12 units from Biodiversity Course List, including at least six units from Biology courses. (See Note 5 above.)
9 units BIOLOGY 4C03; or BIOLOGY 4F06 and three units from Biology Course List
6 units Electives

Genetics Specialization  {2050814}

NOTES
1. Students registered in the Genetics Specialization are encouraged to complete PHILOS 2D03 or 2G03 as an elective.
2. Students with mathematical interests are encouraged to register in Mathematical Statistics. (See Note 2 under Notes for all Honours Biology Programs in this section of the Calendar.)
3. Students in the Genetics Specialization must complete BIOLOGY 2B03, 2C03 and BIOCHEM 2EE3 in Level II.
4. BIOLOGY 2A03 and 2F03 are strongly recommended.

GENETICS COURSE LIST
BIOCHEM 3G03, 4E03, 4E3; BIOLOGY 3E03, 3H03, 3J03, 3M03, 3S03, 3V03, 4B03, 4D03, 4E03, 4F03, 4G03, 4XX3; MOL BIOL 4H03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level II courses and at least 36 units must be Level III, IV courses.

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
6 units CHEM 20A3, 20B3
12 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, 2D03
12 units Electives

LEVEL III: 30 UNITS
12 units from BIOLOGY 3F03, 3H03, 3I03, 3O03, 3S03
9 units from Genetics Course List
9 units Electives

LEVEL IV: 30 UNITS
12 units from BIOLOGY 4C03, 4F03
3 units from BIOLOGY 3F03, 3H03, 3I03, 3O03, 3S03 (whichever is not completed)
9 units from Genetics Course List
6 units Electives

Honours Biology Genetics  {2053}

Specialization Co-op

ADMISSION
Enrolment in this program is limited to a maximum of eight students per year. Selection is based on academic and other achievement (see below) but requires, as a minimum, completion of Level II of the Honours Biology Genetics Specialization program with a cumulative average of at least 7.0.

Information about this program and the selection procedure can be obtained from Science Cooperative Education and the Chair and will be explained in the month of February in an Information Session.

NOTES
1. This is a five-year co-op program, which includes one eight-month Industry work term, and one four-month academic research work term that must be spent in Genetics related placements.
2. Students must be registered full-time and take a full academic workload.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students should seek academic counselling for this program in the Department of Biology.
5. Students in the Genetics Specialization are encouraged to take PHILOS 2D03 or 2G03 as an elective.
6. Students in the Genetics Specialization must take BIOLOGY 2B03, 2C03 and BIOCHEM 2EE3 in Level II.
7. Students are strongly recommended to take BIOLOGY 2A03, 2F03.
8. Alternate arrangements for the BIOLOGY 4GG9 thesis will be considered by the Program Coordinator.
9. Students may complete the program in December of the year prior to Spring convocation.

GENETICS COURSE LIST
BIOCHEM 3G03, 4E03; BIOLOGY 3H03, 3J03, 3M03, 3S03, 4B03, 4D03, 4E03, 4EE3, 4K03, 4P03, 4V03, MOL BIOL 4H03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level II courses and at least 36 units must be Level III, IV courses.

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
6 units CHEM 20A3, 20B3
12 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, 2D03 (See Note 8 above.)
12 units Electives

YEAR 3
33 units from Academic Level III, Terms 1 and 2, plus Work Orientation course, and completion of first four-month work term, Summer Term

TERMS 1 AND 2
18 units BIOLOGY 3E03, 3FF3, 3H03, 3I03, 3O03, 3V03
8 units from Genetics Course List
6 units Electives
→ Work Orientation Course

SUMMER
3 units BIOLOGY 4XX3 (first two weeks of May)
Work Term

YEAR 4
15 units from Academic Level IV, Term 2, completion of second four-month work term, Term 1, and Academic work term, Summer Term

TERM 1
Work term

TERM 2
3 units BIOLOGY 4R03
6 units from Genetics Course List
6 units Electives

SUMMER
Work Term (in an Academic Lab) and preparation for BIOLOGY 4GG9

YEAR 5
12 units from Academic Level IV, Term 1

TERM 1
3 units Completion of BIOLOGY 4GG9

TERM 2
3 units from Genetics Course List
Honours Biology and Mathematics {2050320}

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A3
6 units BIOLOGY 1A03, 1A3
6 units CHEM 1A03, 1A3
3 units MATH 1B03
3 units from Science I Course List
6 units Level I electives
2 courses: SCIENCE 1A00, 1B00

MINIMUM AVERAGES/GRADERS:
A cumulative Average of 6.0 and an average of 6.0 in BIOLOGY 1A03, 1A3 and an average of 6.0 in MATH 1A03, 1A3, 1B03

NOTES
1. Students should seek counselling for this program in either the Department of Mathematics and Statistics or in the Department of Biology.
2. Students are advised to carefully note graduate program requirements.
3. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or BIOLOGY 4F06.
4. Students considering graduate studies in Mathematics are recommended to complete MATH 2A03, 2F03 and either 2S03 or 2T03 in Level II, MATH 3A03 and 3X03 in Level III, and MATH 3A03 and 4X03 in Level IV. MATH 3E03 is recommended.
5. Students must complete at least nine units from Level IV Biology courses.
6. A minor in Statistics is not permitted in the Honours Biology and Mathematics program.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses. Of these 36 units, at least nine must be Level IV.

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
12 units BIOLOGY 2A03, 2B03, 2C03, 2F03
15 units MATH 2A03, 2AB3, 2C03, 2E03, 2R03
3 units Electives

LEVEL III: 30 UNITS
12 units from Levels III, IV Biology (See Note 5 above.)
6 units MATH 3F03, 3N03
3 units from MATH 2S03, 2T03, 3A03
3-6 units STAT 2D03, 2MB3
3-6 units Electives

LEVEL IV: 30 UNITS
18 units from Levels III, IV Biology, Mathematics, Statistics, PSYCH 4103 which must include at least 9 units of Level IV Biology (See Note 5 above.)
3-6 units from MATH 3A03, 3E03, 3FF3, 3X03, STAT 3D03, 3DD3, 33D3, 3U03
6-9 units Electives

Honours Biology and Pharmacology (Co-op) {2050419}

ADMISSION
Enrollment in this program is limited to a maximum of 25 students per year. Selection is based on academic and other achievement (see below) but requires, as a minimum, completion of Level II of an Honours Biology, Honours Biochemistry or Molecular Biology program (including CHEM 20A3 and 20B3) with a cumulative average of at least 6.0.

Information about this program and the selection procedure can be obtained from Science Cooperative Education and the Chair of the Committee of Instruction and will also be explained in the month of February in an Information Session. It is recommended that students interested in enrolling in the program attend the Information Session in Level II.

NOTES
1. This is a five-year co-op program, three terms of which must be spent in work related to pharmacology, toxicology or pharmacapeutics.
2. A senior thesis, PHARMAC 4F09, will be completed in Year 4, Summer Term. Work terms must be completed in Year 4, Term 2 and Year 5, Term 1.
3. PHARMAC 3A03, 3B06, 4A03, 4A3, 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.
5. Students are required to complete a Work Orientation Course before the first work placement.
6. Students are required to complete a Work Orientation Course before the first work placement.
7. BIOLOGY 1J03 or 1K03 should not be taken.
8. If BIOCHEM 2EE3 was taken, BIOCHEM 3G03 must be taken in Year III.

COURSE LIST
BIOCHEM 2B03, 2BB3, 3D03, 3G03, 3H03, 3N03; all Level III and IV Biology and Pharmacology courses except BIOCHEM 3G03, 3Q03; CHEM 3F03, 4DP3; GEO 3J03, 4A03, 4B03; HTH SCI 3I03, 4I03; MOL BIOL 4H03, 4J03

REQUIREMENTS
129 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units from the Science I requirements

LEVEL II: 30 UNITS
6 units BIOLOGY 2A03, 2C03
3-6 units BIOCHEM 2EE3 or both BIOCHEM 2B03, 2BB3 (See Note 8 above.)
6-9 units from BIOLOGY 2B03, 2D03, 2F03, CHEM 2N03, 2R03
6 units CHEM 2A03, 2B03
3-9 units Electives

YEAR 3
30 units from Academic Level III, Terms 1 and 2, plus Work Orientation course, and completion of first four-month work term, Summer Term.

TERMS 1 AND 2
3 units PSYCH 2RR3
6 units 3 units from BIOCHEM 3G03, 3 units from Course List (see Note 8 above.)
or
6 units from Course List
9 units BIOLOGY 3P03, 3U03, 3U03
12 units PHARMAC 3A06, 3B06
Work Orientation Course

SUMMER
Work Term

YEAR 4
15 units from Academic Level IV, Term 1, completion of second four-month work term, Term 2, completion of senior thesis, Summer Term.

TERM 1
3 units from PHARMAC 4A03, 4C03
9 units from Course List
3 units Electives

TERM 2
Work Term

SUMMER
9 units PHARMAC 4F09 (See Note 2 above.)

YEAR 5
15 units from Academic Level IV, Term 2, and completion of third four-month work term, Term 1.

TERM 1
Work Term

TERM 2
6 units from PHARMAC 4AA3, 4D03, 4E03
3 units from Course List
6 units Electives
Honours Biology and Psychology {2050460}

ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Science I prerequisites, including:

- 3 units MATH 1A03
- 3 units STATS 1CC3 (see Note 7 below.)
- 6 units BIOLOGY 1A03, 1A03
- 6 units CHEM 1A03, 1A03
- 3 units PHYSICS 1B03
- 3 units PSYCH 1A03
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

PSYCH 1AA3 must be completed by the end of Level II and is strongly recommended in Level I.

MINIMUM AVERAGES/GRADUES:
A Cumulative Average of 6.0 and an average of 6.0 in BIOLOGY 1A03, 1A03, a grade of C+ in PSYCH 1A03, and an average of 6.0 in CHEM 1A03, 1A03.

NOTES
1. Counselling for this program is shared by the Departments of Biology and Psychology and alternates each year.
2. MATH 1B03 and PHYSICS 1B03 are strongly recommended for students intending to pursue graduate work in Experimental Psychology or Neuroscience.
3. In Level III or IV students must complete at least one laboratory course in Psychology (see Course List 1). Enrolment is limited to the laboratory courses. (See Note 8 below.)
4. Students who wish to complete LLI and III in the fall and winter terms.
5. A minor in Biochemistry is not permitted in the Honours Biology and Psychology program.
6. Students who have completed KINESIOL 3E03 may use it as a substitute for three units of Level III Physiology. Students who have completed KINESIOL 4P03 may use it as a substitute for three units of Level IV Psychology.
7. Students wishing to have more mathematical statistics may substitute STATS 1C3 and 2R3 with STATS 2D03 and 2M03. In this case, students are advised to take MATH 1B03 in Level I and consult with a departmental advisor.
8. For Psychology Courses with limited enrolment which require permission by preregistration ballot, students must complete and submit a ballot by April 20, 2005. Ballots can be obtained on the Psychology Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology and Combined Honours Psychology programs.

COURSE LIST 1
BIOCHEM 3F03, 3N03, 4F03, 4E03, 4E03, 4K03, 4Q03; BIOLOGY 2A03, 2D03, 2F03, 2G03, 2H03, 2I03, all Level III and IV Biology courses except BIOLOGY 3Q03, 3QQ3; HTH SCI 2J03; 3J03; 41J3; MED PHYS 3T03; MOL BIOL 4H03

COURSE LIST 2
PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3, all Level III and IV Psychology courses (PSYCH 2AA3, 2B03, and 2C03 may only be used as elective credit.)

COURSE LIST 3
PSYCH 3B13, 3E03, 3L03, 3LL3, 3Q03, 3S03, 3V03, 4Q03 (All Psychology lab courses have limited enrolment. See Note 8 above.)

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
15 units BIOCHEM 2E03, BIOLOGY 2B03, 2C03, CHEM 2A03, 2B03
6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units PSYCH 2R03 (See Note 7 above.)
6 units Electives
If not completed: PSYCH 1AA3

LEVEL III: 30 UNITS
3 units BIOCHEM 3G03
9 units from Course List 1, which may not include more than three units from Level II courses
3 units from Course List 2 which must include at least three units of Level III or IV Psychology
3 units from Course List 2, which may not include more than three units of Level II or Level III Psychology
3 units from Level III or IV courses from Course List 1 or 2
6 units Electives

LEVEL IV: 30 UNITS
24 units from Level III or IV courses from Course Lists 1 and 2, including at least nine units from Course List 1 and nine units from Course List 2. One of BIOLOGY 4C09, 4F06, PSYCH 4D06 or 4D09 must be included.
6 units Electives

B.Sc. Three-Level Degree
A three-level program with a general Life Science orientation is available through the B.S.c. Life Science program which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Biology
REQUIREMENTS
24 units total
6 units BIOLOGY 1A03, 1A03
18 units from Levels II, III, IV Biology, including at least six units from Levels III, IV Biology

DEPARTMENT OF CHEMISTRY

WEB ADDRESS: http://www.chemistry.mcmaster.ca

Honours Arts & Science and Chemistry (B.Arts.Sc.; See Arts & Science Program)

NOTES
1. Students in all Chemistry programs are expected to have basic skills in the use of personal computers, word processing software and spreadsheet software. COMP SCI 1A03 or MATH 1J03 are recommended for students without those skills.
2. Students are encouraged to seek academic counselling from the Undergraduate Advisor for Chemistry programs (email advisor@chemistry.mcmaster.ca)
3. Students who wish to transfer from Level II or III to an Honours Chemistry program must have a C.A. of at least 6.0 and must have completed the equivalent of Science I, including all the courses required for Admission to an Honours Chemistry program.
4. MATH 1B03 and PHYSICS 1B03 (or 1BB3) must be completed by the end of Level II and are strongly recommended in Level I.

Honours Chemistry

NOTES
1. The Honours Chemistry program consists of four options: a core and three specializations. The core option consists of a specified set of basic requirements but otherwise allows a wide choice of other courses (including those from outside the Faculty of Science). The opportunity is therefore available for interdisciplinary studies, possibly leading to a Minor in another subject. Alternatively, students may wish to follow one of several specializations which are more appropriate for graduate studies in Chemistry or Biochemistry. The options currently available are:
- Chemistry (Core)
- Biological Specialization
- Physical and Analytical Specialization
- Synthesis and Structure Specialization

2. Students receive a grade average for the Undergraduate course.
2. The Honours Chemistry Core program can also be combined with the Origins Research Specialization. See the section on the Origins Research Specialization in this section of the Calendar for more information. Students wishing to combine the Origins Research Specialization with the Chemistry Core must satisfy all the Chemistry Core requirements as well as the courses specified by the Origins Research Specialization. Students may do this by selecting Origins courses for Chemistry Core electives. In addition to the courses specified for the Chemistry Core, students must complete BIOLOGY 1A03 and 1A13 by the end of Level II.

3. Students will be registered in Honours Chemistry (Core) until they elect otherwise. Students may transfer to a specialization at any time, subject to satisfying its requirements. Registration in a specialization will be noted on the student's transcript.

**ADMISSION**
Completion of the Science I requirements, including:
- 6 units CHEM 1A03, 1A3
- 6 units MATH 1A03, 1A3
- 3 units PHYSICS 1B03
- 9 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

MATH 1B03 must be completed by the end of Level II and is strongly recommended in Level I.

PHYSICS 1B1A3 (or 1B3) must be completed by the end of Level II and is very strongly recommended in Level I, as Physics laboratories are very difficult to schedule in the Level II program.

**MINIMUM AVERAGES/GRADUES:**
- A Cumulative Average of 6.0 and an average of 6.0 in CHEM 1A03, 1A3.

**NOTES**
1. All options in Honours Chemistry fulfill the academic requirements of the Canadian Society for Chemistry.
2. MATH 1J03, 2C03, PHYSICS 2A03 or 2B06 are recommended electives.
3. 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 4G06 is strongly recommended, since it is a Capstone course. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)
4. In some cases there are Level II (and III) prerequisites for Level III (and Level IV) courses. The prerequisites should be considered when choosing your Level II (III) courses.
5. Students must take BIOCHEM 2E03 or 3G03; BIOCHEM 3G03 is recommended. Other Biochemistry courses that have Biology prerequisites are permitted; see the Biological Specialization below.
6. CHEM 3L13 and 4G06 are considered inquiry courses. If both courses are taken, it is recommended that CHEM 3L13 be taken prior to CHEM 4G06.

**REQUIREMENTS**
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

**Chemistry (Core)**

**LEVEL I**
- 30 units (See Admission above.)

**LEVEL II: 30 UNITS**
- 18 units CHEM 2A03, 2B03, 2BB3, 2I03, 2PA3, 2PB3
- 12 units Electives

If not completed: MATH 1B03, PHYSICS 1A03 (or 1B1A3)

**LEVEL III: 30 UNITS**
- 15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03
- 3 units from CHEM 3D03, 3F03
- 12 units Electives

If not completed: BIOCHEM 2E03 or 3G03 (See Note 5 above.)

**LEVEL IV: 30 UNITS**
- 6 units Level IV Chemistry
- 12 units from Levels III, IV
- 12 units Electives

**Biological Specialization**

**NOTES**
1. This specialization is recommended for students interested in pursuing the joint Biochemistry Chemistry graduate program at McMaster University.
2. A minor in Biochemistry is not permitted in the Biological Chemistry Specialization.
3. The program requires BIOCHEM 2E03 and 3G03. However, students are encouraged to replace these courses with BIOCHEM 2B03 and either or both BIOCHEM 2BB3 and 3D03.

**LEVEL I: 30 UNITS**
- 6 units BIOLOGY 1A03, 1A3
- 6 units CHEM 1A03, 1A3
- 6 units MATH 1A03, 1A3
- 3 units PHYSICS 1B03
- 6 units from Science I Course List
- 3 units Level I electives,
- 2 courses SCIENCE 1A00, 1B00

**LEVEL II: 30 UNITS**
- 15 units CHEM 2A03, 2B03, 2BB3, 2I03, 2PA3, 2PB3
- 3 units BIOLOGY 2B03
- 9 units Electives

If not completed: MATH 1B03, PHYSICS 1A03 (or 1B1A3)

**LEVEL III: 30 UNITS**
- 15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03
- 3 units from CHEM 3D03, 3F03
- 6 units BIOCHEM 2E03, 3G03; or from BIOCHEM 2BB3, 2BB3, 3D03 (See Note 3 above.)
- 3 units BIOLOGY 2C03
- 9 units Electives

**LEVEL IV: 30 UNITS**
- 6 units CHEM 4G06
- 6 units CHEM 4D03, 4DD3
- 3 units from BIOCHEM 3D03, 4K03
- 3 units from BIOCHEM 3L03 or Level IV Biochemistry
- 9 units Electives

**Physical and Analytical Specialization**

**NOTES**
1. CHEM 3BB3 and 3ZZ3 require completion of Level I Mathematics and Physics courses. Therefore, students are strongly recommended to take MATH 1B03 and PHYSICS 1B1A3 (or 1B3) in Level I and MATH 2A03 and PHYSICS 2A03 in Level II.
2. Recommended electives include MATH 2C03, STATS 2D03, 2MB3.

**LEVEL I**
- 30 units (See Admission above.)

**LEVEL II: 30 UNITS**
- 18 units CHEM 2A03, 2B03, 2BB3, 2I03, 2PA3, 2PB3
- 6 units MATH 2A03; PHYSICS 2A03 (See Note 1 above.)
- 6 units Electives (See Note 2 above.)

If not completed: MATH 1B03, PHYSICS 1A03 (or 1B1A3)

**LEVEL III: 30 UNITS**
- 15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03
- 6 units CHEM 3BB3, 3ZZ3
- 3 units from CHEM 3D03, 3F03
- 6 units Electives

If not completed: BIOCHEM 2E03 or 3G03

**LEVEL IV: 30 UNITS**
- 6 units CHEM 4G06
- 6 units from Levels III, IV Chemistry
- 6 units from Levels III, IV
- 12 units Electives

**Synthesis and Structure Specialization**

**NOTE**
- Additional Biochemistry is recommended from either BIOCHEM 2E03, 3G03 or from BIOCHEM 2B03, 2BB3 and 3D03. Note that the latter three courses have Biology prerequisites.
LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
18 units CHEM 2A03, 2BA3, 2BB3, 2I03, 2PA3, 2PB3
12 units Electives (See Note above.)
If not completed: MATH 1B03, PHYSICS 1BA3 (or 1BB3)

LEVEL III: 30 UNITS
15 units CHEM 3A03, 3BA3, 3L13, 3P03, 3Q03
3 units from CHEM 3D03, 3F03
6 units from CHEM 3I03, 3A03, 4C03, 4D03, 4DD3, 4PP3, 4R03, 4S03
6 units Electives
If not completed: BIOCHEM 2EE3 or 3G03

LEVEL IV: 30 UNITS
6 units CHEM 4G06
6 units from Levels III, IV Chemistry
6 units from Levels IV
12 units Electives

Honours Chemistry Co-op (2073)

ADMISSION
Enrollment in this program is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview, but requires, as a minimum, completion of Level II Honours Chemistry with a Cumulative Average of at least 6.0. Information about the program and the selection procedure may be obtained from Science Cooperative Education and will be explained in the month of February in an Information Session.

NOTES
1. This is a five-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.
3. Students are required to complete a Work Orientation Course 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. Students should, in particular, note the Mathematics and Physics prerequisites for CHEM 3B03 and 3Z3.
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. Students who complete CHEM 4G06 are not required to complete courses from the Science Inquiry Course List. CHEM 3L13 and 4G06 can be taken in either order, but it is recommended that CHEM 3L13 be completed before CHEM 4G06.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units from the Science I requirements

LEVEL II
30 units from Level II of Honours Chemistry, including any of the specialization streams, or Honours Biochemistry and Chemistry
If not completed: MATH 1B03, PHYSICS 1BA3 (or 1BB3)

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orientation course and first eight-month work term, Term 2 and Summer Term

TERM 1
6 units CHEM 3B03, 3Q03
9 units Electives, Students who wish to register in CHEM 4G06 in Year 4 must complete CHEM 3L13 in Year 3 (See Note 6 above.)
Work Orientation Course.

TERM 2 AND SUMMER
Work Term

YEAR 4
30 units from Academic Level IV, Term 1, and Academic Level III, Term 2, plus beginning of second eight-month work term, Summer Term

B.Sc. Three-Level Degree
A three-level program with a Chemistry orientation is available through the B.Sc. in Physical Science which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Chemistry

NOTE
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.

REQUIREMENTS
24 units total
6 units from CHEM 1A03, 1A04
18 units Level II, III, IV Chemistry courses, including at least six units from Levels III, IV Chemistry courses

DEPARTMENT OF
COMPUTING AND SOFTWARE

WEB ADDRESS: http://www.cas.mcmaster.ca

Honours Arts & Science and Computer Science
(B.A.Sc.; See Arts & Science Program)

Honours Economics and Computer Science
(B.A.; See Faculty of Social Sciences, Department of Economics)

Honours Computer Science

NOTES
1. The Honours Computer Science program consists of two options: a core and a specialized option. This program consists of a specific set of basic requirements and allows a wide choice of other courses.
The options currently available are:

- Computer Science (Core)
- Specialized option

Students who intend to pursue graduate studies in Computer Science should elect the Specialized option.

2. Students will be registered in the Computer Science Core option until they elect otherwise. Transfer to the other option is possible at any time, subject to satisfying the requirements for that option. Registration in the Specialized option will be noted on the student's transcript.

3. A minor in Mathematics or Statistics is not permitted in the Honours Computer Science program.

4. COMP SCI 4ZP6 is the Capstone course of the program. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)

ADMISSION

2005-2006 ONLY:
Completion of the Science I requirements, including:
9 units MATH 1A03, 1A33, 1B03
6 units COMP SCI 1MC3, 1MD3

EFFECTIVE 2006-2007:
Completion of the Science I requirements, including:
9 units MATH 1A03, 1A33, 1B03
9 units COMP SCI 1MA3, 1MD3, 1FC3

NOTES

1. 2005-2006 Only: Students may also be admitted upon successful completion of Mathematics and Statistics I, with the inclusion of COMP SCI 1MC3, 1MD3. Six additional units from Science I Course List (CHEM 1A03 and PHYSICS 1B03 are recommended) must be completed prior to entry to Level IV. (Completion prior to entry to Level II is strongly recommended.)

2. Effective 2006-2007: Students may also be admitted upon successful completion of Mathematics and Statistics I, with the inclusion of COMP SCI 1MA3, 1MD3, 1FC3. Six additional units from Science I Course List (CHEM 1A03 and PHYSICS 1B03 are recommended) must be completed prior to entry to Level IV. (Completion prior to entry to Level II is strongly recommended.)

MINIMUM AVERAGES/GRADERS:

2005-2006 Only: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3.
Effective 2006-2007: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MA3, 1MD3, 1FC3.

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I

18 units COMP SCI 1MD3, 1ME3, 1MF3, 1MJ3, 2SC3, MATH 2A03
12 units from the option requirements (see below)

LEVEL II: 30 UNITS

15 units COMP SCI 3EA3, 3MG3, 3MH3, 3MI3, 3TA3
3 units COMP SCI 3CB3, 3IA3
3 units Electives, excluding Computer Engineering, Computer Science, Software Engineering
9 units from the option requirements (see below)

LEVEL IV: 30 UNITS

9 units COMP SCI 4EB3, 4MN3, 4TB3
3 units from Level IV Computer Science
3 units Electives
15 units from option requirements (see below)

OPTIONS

Core

LEVEL II: 12 UNITS
12 units Electives of which three units must be Computer Engineering, Computer Science or Software Engineering

LEVEL III: 9 UNITS
9 units Electives, of which three units must be Computer Engineering, Computer Science, Software Engineering, and at least six units must be from Levels III, IV

LEVEL IV: 15 UNITS
6 units COMP SCI 4ZP6
9 units Electives of which at least six units must be from Levels III, IV

Specialized Option

COURSE LIST

All Level III and IV Computer Science, Mathematics, Statistics or Physics courses

LEVEL II: 12 UNITS
12 units Electives

LEVEL III: 9 UNITS
6 units from Levels III, IV Mathematics, Statistics
3 units Electives, excluding Computer Engineering, Computer Science, Mathematics, Software Engineering, Statistics

LEVEL IV: 15 UNITS
6 units COMP SCI 4ZP6
9 units from Course List which must include at least three units of Level IV Computer Science

Honours Computer Science and Mathematics

ADMISSION

2005-2006 ONLY:
Completion of any Level I program, including:
6 units MATH 1A03, 1A33
6 units COMP SCI 1MC3, 1MD3
3 units MATH 1B03
15 units Level I courses to complete a Level I program

EFFECTIVE 2006-2007:
Completion of any Level I program, including:
6 units MATH 1A03, 1A33
9 units COMP SCI 1MA3, 1MD3, 1FC3
3 units MATH 1B03
12 units Level I courses to complete a Level I program

MINIMUM AVERAGES/GRADERS:

2005-2006 Only: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3, MATH 1AA3, 1B03.
Effective 2006-2007: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MA3, 1MD3, 1FC3, MATH 1AA3, 1B03.

NOTES

1. A minor in Statistics or Mathematics and Statistics is not permitted in the Honours Computer Science and Mathematics program.
2. COMP SCI 4ZP6 is the Capstone course of the program. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)

COURSE LIST

All Level III and IV Computer Science, Mathematics and Statistics courses; MATH 2E03; PHYSICS 2C03, 2D03, 2K03, 2L03; STATS 2D03, 2MA3, 2MB3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

12 units COMP SCI 2MD3, 2ME3, 2MF3, 2MJ3, 2SC3, MATH 2A03
12 units from the option requirements (see below)

LEVEL III: 30 UNITS

15 units COMP SCI 3EA3, 3MG3, 3MH3, 3MI3, 3TA3
3 units from COMP SCI 3CB3, 3IA3
3 units Electives, excluding Computer Engineering, Computer Science, Software Engineering
9 units from the option requirements (see below)

LEVEL IV: 30 UNITS

9 units COMP SCI 4EB3, 4MN3, 4TB3
3 units from Level IV Computer Science
3 units Electives
15 units from option requirements (see below)

OPTIONS

Core

LEVEL II: 12 UNITS
12 units Electives of which three units must be Computer Engineering, Computer Science or Software Engineering

LEVEL III: 9 UNITS
9 units Electives, of which three units must be Computer Engineering, Computer Science, Software Engineering, and at least six units must be from Levels III, IV

LEVEL IV: 15 UNITS
6 units COMP SCI 4ZP6
9 units Electives of which at least six units must be from Levels III, IV

Specialized Option

COURSE LIST

All Level III and IV Computer Science, Mathematics, Statistics or Physics courses

LEVEL II: 12 UNITS
12 units Electives

LEVEL III: 9 UNITS
6 units from Levels III, IV Mathematics, Statistics
3 units Electives, excluding Computer Engineering, Computer Science, Mathematics, Software Engineering, Statistics

LEVEL IV: 15 UNITS
6 units COMP SCI 4ZP6
9 units from Course List which must include at least three units of Level IV Computer Science

Honours Computer Science and Mathematics

ADMISSION

2005-2006 ONLY:
Completion of any Level I program, including:
6 units MATH 1A03, 1A33
6 units COMP SCI 1MC3, 1MD3
3 units MATH 1B03
15 units Level I courses to complete a Level I program

EFFECTIVE 2006-2007:
Completion of any Level I program, including:
6 units MATH 1A03, 1A33
9 units COMP SCI 1MA3, 1MD3, 1FC3
3 units MATH 1B03
12 units Level I courses to complete a Level I program

MINIMUM AVERAGES/GRADERS:

2005-2006 Only: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3, MATH 1AA3, 1B03.
Effective 2006-2007: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MA3, 1MD3, 1FC3, MATH 1AA3, 1B03.

NOTES

1. A minor in Statistics or Mathematics and Statistics is not permitted in the Honours Computer Science and Mathematics program.
2. COMP SCI 4ZP6 is the Capstone course of the program. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)

COURSE LIST

All Level III and IV Computer Science, Mathematics and Statistics courses; MATH 2E03; PHYSICS 2C03, 2D03, 2K03, 2L03; STATS 2D03, 2MA3, 2MB3

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

12 units COMP SCI 2MD3, 2ME3, 2MF3, 2MJ3, 2SC3, MATH 2A03
12 units from the option requirements (see below)

LEVEL III: 30 UNITS

15 units COMP SCI 3EA3, 3MG3, 3MH3, 3MI3, 3TA3
3 units from COMP SCI 3CB3, 3IA3
3 units Electives, excluding Computer Engineering, Computer Science, Software Engineering
9 units from the option requirements (see below)

LEVEL IV: 30 UNITS

9 units COMP SCI 4EB3, 4MN3, 4TB3
3 units from Level IV Computer Science
3 units Electives
15 units from option requirements (see below)

OPTIONS

Core

LEVEL II: 12 UNITS
12 units Electives of which three units must be Computer Engineering, Computer Science or Software Engineering

LEVEL III: 9 UNITS
9 units Electives, of which three units must be Computer Engineering, Computer Science, Software Engineering, and at least six units must be from Levels III, IV
Honours Computer Science B.Sc. {2145542}

and Statistics

ADMISSION

2005-2006 ONLY:

Completion of any Level I program, including:
6 units MATH 1A03, 1AA3
6 units COMP SCI 1MC3, 1MD3
3 units MATH 1B03
15 units from Level I courses to complete a Level I program

EFFECTIVE 2006-2007:

Completion of any Level I program, including:
6 units MATH 1A03, 1AA3
9 units COMP SCI 1MA3, 1MD3, 1FC3
3 units MATH 1B03
12 units from Level I courses to complete a Level I program

MINIMUM AVERAGES/GRADES:

2005-2006 Only: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MC3, 1MD3, MATH 1AA3, 1B03.

Effective 2006-2007: A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MA3, 1MD3, 1FC3, MATH 1AA3, 1B03.

NOTES

1. A minor in Mathematics or Mathematics and Statistics is not permitted in the Honours Computer Science and Program.
2. COMP SCI 4ZP is the Capstone course of the program. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level II, IV courses.

LEVEL I

30 units (See Admission above.)

LEVEL II: 30 UNITS

12 units COMP SCI 2MD3, 2MF3, 2MJ3, 2SC3
15 units MATH 2A03, 2AB3, 2R03, 2S03, STATS 2D03
3 units Electives

If not completed: SCIENCE 1A00

LEVEL III: 30 UNITS

15 units COMP SCI 2ME3, 3MG3, 3MH3, 3M13, 3TA3
3 units MATH 2C03
9 units STATS 2MB3, 3D03, 3D3
3 units Electives, excluding Computer Science, Mathematics, Statistics

LEVEL IV: 30 UNITS

3 units from COMP SCI 3CB3, 3EA3, 3IA3
9 units COMP SCI 4MN3, 4ZP6
6 units from Levels III, IV Mathematics
9 units from Levels III, IV Statistics
3 units from Levels III, IV Computer Science, Mathematics, Statistics

Honours Computer Science B.Sc. {2149}

as a Second Degree

ADMISSION

2005-2006 ONLY:

Completion of a Bachelor’s degree in a discipline other than computer science with a Cumulative Average of at least 7.0 from a recognized university; completion of MATH 1A03, 1AA3, 1B03, and a grade of at least C+ in each of COMP SCI 1MC3, 1MD3 or equivalent.

EFFECTIVE 2006-2007:

Completion of a Bachelor’s degree in a discipline other than computer science with a Cumulative Average of at least 7.0 from a recognized university; completion of MATH 1A03, 1AA3, 1B03 and a grade of at least C+ in each of COMP SCI 1MA3, 1MD3, 1FC3 or equivalent.

NOTES

1. As Second Degree candidates, applicants must first apply for admission to the University, through the Office of the Registrar (Admissions) indicating they wish to apply for the Honours Computer Science B.Sc. as a Second Degree program.

2. If a student in the program has previously taken a required course (or its equivalent), he/she does not have to re-take the course. However, if the credit from that course has been used for a previous degree, the student will be required to take another course with the required number of units. A student is admitted to Level III of this program.

COURSE LIST

All Level III, IV Computer Science courses (excluding 4ZP6), Mathematics and Statistics and Physics courses; MATH 2T03

REQUIREMENTS

60 units total

LEVEL III: 30 UNITS

18 units COMP SCI 2MD3, 2MF3, 2MJ3, 2SC3, MATH 2A03
3 units COMP SCI 3TA3
9 units from Course List
1 course SCIENCE 1A00

LEVEL IV: 30 UNITS

15 units COMP SCI 3EA3, 3MG3, 3MH3, 3M13, 4MN3
3 units from COMP SCI 3CB3, 3IA3, Level IV Computer Science
6 units Level IV Computer Science
6 units from COMP SCI 4ZP6, Level IV Computer Science

B.Sc. Three-Level Degree

A three-level program with a Computer Science orientation is available through the B.Sc. in Mathematical Science which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Computer Science

NOTE

Students currently working towards a minor in Computer Science may follow the requirements as outlined in the 2004-2005 Undergraduate Calendar.

REQUIREMENTS

24 units total

9 units COMP SCI 1MA3, 1MD3, 1FC3
9 units COMP SCI 2MD3, 2MF3, 2MJ3
6 units from COMP SCI 2MF3, 3EA3, 3MG3, 3M13, 3TA3, 3T4, 4EB3, 4IB3

SCHOOL OF GEOGRAPHY

AND EARTH SCIENCES

WEB ADDRESS: http://www.science.mcmaster.ca/geo/

Honours Arts & Science and Geography and Environmental Sciences (B.A.; See Arts & Science Program)

Honours Geography (B.A.), B.A. in Geography and Environmental Studies (B.A.) (See B.A. programs, Faculty of Social Sciences, School of Geography and Earth Sciences)

Honours Earth and Environmental Sciences (B.Sc.) {2211820}

ADMISSION

Completion of the Science I requirements, including:
3 units MATH 1A03
9 units COMP SCI 1A03, 1AA3, 1B03, STATS 1C3
3 units CHEM 1A03
6 units from BIOLOGY 1A03, 1AA3, CHEM 1A3, PHYSICS 1B03, 1BA3
6 units from ENVIR SCI 1A03, 1B03, 1G03
2 courses SCIENCE 1A00, 1B00
Both ENVIR SCI 1A03 and 1G03 must be completed by the end of Level II and are recommended in Level I.
MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0 and a grade of C+ in two of ENVIR SC 1A03, 1B03, 1G03

NOTES
1. At the end of Level II, students in this program may choose to follow one of three specializations:
   • Geochemistry Specialization
   • Geosciences Specialization
   • Hydrosciences Specialization
   Alternatively, students may choose to remain in the core program.
2. The specializations of this program aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Please consult with the academic advisor in the School of Geography and Earth Sciences during the March counseling period to ensure proper selection of courses for professional registration. The core program does not aim to fulfill professional registration requirements.
3. Students may elect one of the three specializations at the completion of Level II. If students choose not to specialize, they follow the requirements below for Earth and Environmental Sciences (Core). If students choose to specialize, they follow the Level III and IV requirements listed under their appropriate specialization listing (see below). Students who choose not to specialize may not fulfill the academic requirements required for professional registration.
4. All students are strongly encouraged to meet with the academic advisor in the School of Geography and Earth Sciences to discuss program requirements and course selections.
5. There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
6. The field component of GEO 3FE3 and 4FE3 are normally taken outside of term time. Details are announced in March.
7. A minor in Geography, Earth Science or Environmental Science is not permitted in the Honours Earth and Environmental Sciences program. However, a minor in Geographical Information Systems is permitted.
8. Registration in a specialization will be noted on the student’s transcript.

COURSE LIST 1
BIOLOGY 2D03, 2F03, 2G03, 2E03; 2C03, 2G03, 2K03, 2KK3; one of ENVIR SC 1B03 or GEO 2A03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units GEO 2B03, 2E03; CHEM 2A03, 2E03; 2G03, 2K03, 2KK3; one of ENVIR SC 1B03 or GEO 2A03
12 units GEO 2B03, 2E03, 2I03, 2W03
6 units from Course List 1
9 units Electives
If not completed: ENVIR SC 1A03, 1B03

Earth and Environmental Sciences (Core)

COURSE LIST 2
ASTRON 2E03, BIOLOGY 2F03, 3SS3, 3TT3; CHEM 2A03, 2E03; GEO 2C03, 2G03, 2K03, 2KK3, 3B03, 3C03, 3E03, 3I03, 3J03, 3L03, 3P03, 3Q03, 3U03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FE3, 4FF3, 4G03, 4H03, 4K03, 4L03, 4Q03, 4T03, 4W03, 4WW3, 4Z03
3 units GEO 3FE3
6 units GEO 3R03, 3Y03
6 units from Course List 2
15 units Electives

LEVEL III: 30 UNITS
3 units GEO 3FE3
6 units GEO 3R03, 3Y03
6 units from Course List 2
15 units Electives

LEVEL IV: 30 UNITS
3 units GEO 4A03
6 units from Course List 2
9 units from Course List 2
15 units Electives

Honours Earth and Environmental Sciences Co-op (B.Sc.)

ADMISSION
Enrolment in this program is limited to a maximum of 15 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Earth and Environmental Sciences with a Cumulative Average of at least 6.0.
Information about the program and the selection procedure may be obtained from Science Cooperative Education and the Coordinator of the Co-op program in the School of Geography and Earth Sciences and will be explained during an Information Session in February.
NOTES
1. This is a five-year co-op program which includes two eight-month work terms which must be spent in placements related to Earth and Environmental Sciences.
2. Students must be registered full-time and take a full academic program.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students in this program must choose to follow one of the three specializations:
   • Geochemistry Specialization
   • Geosciences Specialization
   • Hydrosciences Specialization

The specializations aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Please consult with the academic advisor in the School of Geography and Earth Sciences and the March counseling period to ensure proper selection of courses for professional registration.

5. There are Level III prerequisites for many Level IV courses. The prerequisites should be considered when selecting your courses.
6. The field component of GEO 3FE3 and 4FE3 is normally taken outside of term time. Details are announced in March.
7. A minor in Geography, Earth Science or Environmental Science is not permitted in the Honours Earth and Environmental Sciences Co-op program. However, a minor in Geographical Information Systems is permitted.

REQUIREMENTS
120 units total (Levels I to IV) of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)

LEVEL II
30 units from Level II Honours Earth and Environmental Sciences (B.Sc.)

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orientation course, and completion of first eight-month work term, Term 2 and Summer Term

TERM 1
3 units GEO 3FE3
3 units GEO 3R03
6 units from Specialization Course Lists (see below)
3 units Electives

TERM 2 AND SUMMER

Work Term

YEAR 4
30 units from Academic Level IV, Term 1 and Academic Level III, Term 2, plus beginning of second eight-month work term, Summer Term.

TERMS 1 AND 2
3 units GEO 4Y03
3 units GEO 4A03
3-6 units from GEO 4C03, 4R06
12-15 units from Specialization Course Lists (see below)
6 units Electives

SUMMER

Work Term

YEAR 5
15 units from Academic Level IV, Term 2 and completion of second eight-month work term, Term 1.

TERM 1

Work Term

TERM 2

12 units from Specialization Course Lists (see below)
3 units Electives

Geochemistry Specialization

GEoCHEMISTRY Course List 1: BIOLOGY 2F03; GEO 2C03, 2G03, 2B03, 3J03, 3L03, 3O03, 3Q03

GEoCHEMISTRY Course List 2: ASTRON 2E03, BIOLOGY 2F03, 3S03, 3T03, CHEM 2A03 or 2E03, one Level III Chemistry course; GEO 2R03, 2O03, 3B03, 3J03, 3L03, 3O03, 3Q03, 3U03, 3W03, 4F03, 4FF3, 4G03, 4H03, 4003, 4Q03

YEAR 3
6 units from Geochemistry Course List 1

YEAR 4
6 units from Geochemistry Course List 1

YEAR 5
3 units from Geochemistry Course List 1

Geosciences Specialization

GEOSCIENCES Course List 1: GEO 2G03, 2K03, 2KK3, 3E03, 3O03, 3V03, 3Z03

GEOSCIENCES Course List 2: ASTRON 2E03, GEO 2G03, 2K03, 2KK3, 3E03, 3I03, 3K03, 3P03, 3Q03, 3V03, 3Z03, 4E03, 4F03, 4FF3, 4G03, 4K03, 4Q03, 4T03, 4Z03, 4ZZ3

YEAR 3
6 units from Geosciences Course List 1

YEAR 4
6 units from Geosciences Course List 1

YEAR 5
3 units from Geosciences Course List 1

Hydrosciences Specialization

HYDROSCIENCEs Course List 1: GEO 2C03, 2G03, 3C03, 3J03, 3W03, 3Z03

HYDROSCIENCEs Course List 2: GEO 2C03, 2G03, 2K03, 3B03, 3C03, 3I03, 3J03, 3L03, 3O03, 3Q03, 3V03, 3Z03, 4B03, 4C03, 4F03, 4FF3, 4G03, 4Q03, 4W03, 4WW3

YEAR 3
6 units from Hydrosciences Course List 1

YEAR 4
6 units from Hydrosciences Course List 1

YEAR 5
3 units from Hydrosciences Course List 1

B.Sc. Three-Level Degree

A three-level program with a Geography/Earth Sciences orientation is available through the B.Sc. in Geoscience which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Geography

Please see Minor in Geography in the School of Geography and Earth Sciences in the Faculty of Social Sciences section of this Calendar.

Minor in Earth Science

REQUIREMENTS
24 units total
3 units from ENVHR SC 1G03
3 units from ENVIR SC 1A03, 1B03
Minor in Environmental Science

REQUIREMENTS
24 units total
6 units from ENVR SC 1A03, 1B03, 1G03
18 units from BIOLOGY 2F03, 3R03, 3S03, 3T03, 4J03, 4Y03, CHEM 2A03, 2E03, 2K03, GEO 2A03, 2B03, 2C03, 2E03, 2G03, 2O03, 2W03, 3A03, 3B03, 3C03, 3J03, 3Q03, 3U03, 3V03, 3W03, 4A03, 4B03, 4C03, 4G03, 4Q03, 4W03, 4WW3, including at least six units from Level III, IV GEO courses and at least three units from Level II, III, or IV Biology or Chemistry courses

Minor in Geographical Information Systems (GIS)

AND CERTIFICATE IN G.I.S.

(DIGITAL INFORMATION SYSTEMS)

For further information see the Certificate and Diploma Programs section of this Calendar.

DEPARTMENT OF KINESIOLOGY

WEB ADDRESS: www.mcmaster.ca/kinesiology

Honours Bachelor of Kinesiology (B.Kin.) and Bachelor of Kinesiology Major (B.Kin Major)

(See Faculty of Social Sciences, Department of Kinesiology)

NOTE
All students admitted to Kinesiology I register in the Faculty of Social Sciences in Level I. (See Department of Kinesiology listing in Faculty of Social Sciences section of this Calendar.)

The Department of Kinesiology offers two Honours program options beyond Level I: an Honours Bachelor of Kinesiology and an Honours Bachelor of Science. The required Kinesiology courses are identical for both programs and are differentiated only by the elective courses. Both programs allow for the completion of prerequisites for various professional degree programs.

For further information and program requirements for Honours Bachelor of Kinesiology, see Department of Kinesiology listing in Faculty of Social Sciences section of this Calendar.

Students interested in pursuing the Honours Kinesiology (B.Sc.) program, must be registered in Kinesiology I and complete the required Kinesiology and Science courses as outlined below.

Honours Kinesiology (B.Sc.) {2671}

ADMISSION
Completion of the Kinesiology I requirements, including:
12 units KINESIOL 1A06, 1E03, 1H03
3 units MATH 1A03
3 units STATS 1CC3
6 units from BIOLOGY 1A03, 1A03, CHEM 1A03, 1AA3, PHYSICS 1B03, 1B03, PSYCH 1A03
6 units Level I electives (See Note 3 below)
2 courses KINESIOL 1K01 (See Note 4 below), SCIENCE 1A00

MINIMUM AVERAGES/rades:
A Cumulative Average of 6.0 and an average of 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES
1. KINESIOL 1K01 (Introduction to Kinesiology) is a non-credit requirement and must be completed in Level I.
2. Students who do not meet the admission criteria for the Honours Kinesiology program, whose Cumulative Average is between 3.0 and 3.9 may register in a three-level degree program for which they qualify.
3. BIOLOGY 1A03, 1AA3 and CHEM 1A03, 1AA3 are required for students wishing to take upper level Biology courses. PSYCH 1A03, 1AA3 are required for students wishing to take upper level Psychology courses.
4. Students wishing to complete a minor in Science must carefully choose their Level I and II electives keeping in mind the various prerequisite requirements for Level III and IV courses.

COURSE LIST
KINESIOL 3A03, 3B03, 3C03, 3D03, 3E03, 3K03, 3Y03, 4A06, 4B03, 4C03, 4CC3, 4EE3, 4F03, 4I03, 4J03, 4K03, 4KK3, 4Q03, 4T03, 4X03, 4Z03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
15 units KINESIOL 2A03, 2C06, 2G03, 2H03
9 units from the Faculty of Science
3 units HUMAN 2C03
3 units Electives

LEVELS III AND IV: 60 UNITS
30 units Level III or IV Kinesiology, including at least 18 units from Course List
6 units from Levels III, IV Faculty of Science courses
12 units from Levels III, IV courses from the Faculty of Science
6 units from the Faculties of Business, Humanities, Social Sciences
6 units Electives

MATERIALS SCIENCE AND ENGINEERING

WEB ADDRESS: http://mse.eng.mcmaster.ca

Honours Materials Science

NOTE
The Honours Materials Science program consists of three specializations as follows:
- Materials Properties and Processing
- Computational Materials Science
- Nanomaterials

ADMISSION
Completion of the Science I requirements, including:
9 units MATH 1A03, 1AA3, 1B03
6 units CHEM 1A03, 1AA3
6 units PHYSICS 1B03, 1BA3 (or 1BB3)
3 units MATHS 1M03
6 units from Science I course electives
2 courses SCIENCE 1A00, 1B00
COMP SCI 1MC3 or 1MA3 is strongly recommended for the Computational Materials Science Specialization.

MINIMUM AVERAGES/Grades:
A Cumulative Average of 6.0 and a grade of at least C+ in each of CHEM 1A03, 1AA3, 1B03

OR
Completion of Engineering I requirements. (See Faculty of Engineering section of this Calendar under the heading Level I Program)

MINIMUM AVERAGES/Grades:
A Cumulative Average of at least 4.0

Computational Materials

{2518}

Science Specialization

COMPUTATIONAL MATERIALS SCIENCE COURSE LIST
CHEM ENG 3BC4, 3Q03; all Level III and IV Materials courses; PHYSICS 3S03, 4S03

REQUIREMENTS
120-121 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)
LEVEL II: 30 UNITS
5 units  CHEM 2E03, 2WW2
6 units  MATH 2A03, 2C03
13 units  MATLS 2B03, 2D03, 2H04, 2X03
6 units  PHYSICS 2B06
LEVEL III: 30-31 UNITS
11 units  MATLS 3A03, 3E04, 3T04
6 units  MATH 2P03, 3FF3
3 units  PHYSICS 2G03
4 units  CHEM ENG 3004 or MECH ENG 3004
6-7 units from Computational Materials Science Course List. MATLS 3C04 is recommended.
LEVEL IV: 30 UNITS
11 units  MATLS 3M03, 4E04, 4K04
3 units  PHYSICS 3M03
4 units  STATS 3J04
12 units from Computational Materials Course List

Materials Properties and Processing Specialization {2517}

MATERIALS PROPERTIES AND PROCESSING COURSE LIST
CHEM ENG 3004; CHEM 3Q03; ENGINEER 4J03; ENG PHYS 3E03, 3F03, 4P03; all Level III and IV Materials courses; MECH ENG 3004; PHYSICS 3M03, 4K03

REQUIREMENTS
120-121 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units  (See Admission above.)

LEVEL II: 30 UNITS
5 units  CHEM 2E03, 2WW2
6 units  MATH 2A03, 2C03
13 units  MATLS 2B03, 2D03, 2H04, 2X03
6 units  PHYSICS 2B06
LEVEL III: 31 UNITS
4 units  CHEM ENG 2A04
15 units  MATLS 3C04, 3E04, 3M03, 3T04
3 units  MATH 3I03
6 units from STATS 3N03, 3Y03
6 units from Materials Properties and Processing Course List
LEVEL IV: 29-30 UNITS
8 units  MATLS 4A02, 4K04, 4L02
15-16 units from Materials Properties and Processing Course List
6 units  Electives

Nanomaterials Specialization  {2523}

NANOMATERIALS COURSE LIST
CHEM ENG 4203; CHEM 3ZZ3, 4F03; ENG PHYS 3F03, 3G03; 4E03, 4F03, 4S04; all Level III and IV Materials courses; PHYSICS 3M03, 3N03, 3S03

REQUIREMENTS
120-121 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units  (See Admission above.)

LEVEL II: 30 UNITS
5 units  CHEM 2E03, 2WW2
6 units  MATH 2A03, 2C03
13 units  MATLS 2B03, 2D03, 2H04, 2X03
6 units  PHYSICS 2B06
LEVEL III: 29-30 UNITS
11 units  MATLS 3E04, 3Q03, 3T04
3 units  CHEM ENG 3Q03
6 units  MATH 2P03, 3FF3
3 units  PHYSICS 3M03
6-7 units from Nanomaterials Course List. MATLS 3C04 is recommended.
LEVEL IV: 30-31 UNITS
13 units  MATLS 4F04, 4G02, 4H03, 4K04
4 units  STATS 3J04
13-14 units from Nanomaterials Course List

Minor in Materials Processing
NOTES
1. In order to meet prerequisite requirements, at least six units of appropriate Level II Mathematics must be taken.
2. Students currently working towards a minor in Materials Processing may follow the requirements as outlined in the 2003-2004 Undergraduate Calendar.

REQUIREMENTS
24 units total
3 units  from ENGINEER 2003, MATLS 1M03
4 units  CHEM ENG 2A04
17 units  from MATLS 2B03, 2D03, 3B03, 3E04, 3F03, 3G03, 3H03

Minor in Materials Properties
NOTES
1. In order to meet prerequisite requirements, at least six units of appropriate Level II Mathematics must be taken.
2. Students currently working towards a minor in Materials Properties may follow the requirements as outlined in the 2003-2004 Undergraduate Calendar.

REQUIREMENTS
24 units total
3 units  from ENGINEER 2003, MATLS 1M03
4 units  CHEM ENG 2A04
17 units  from MATLS 2B03, 2D03, 3B03, 3C04, 3T04

DEPARTMENT OF MATHEMATICS AND STATISTICS

WEB ADDRESS: http://www.math.mcmaster.ca

Honours Arts & Science and Mathematics (B.A.; See Arts & Science Program)

Honours Biology and Mathematics (See Department of Biology)

Honours Computer Science and Mathematics (See Department of Computing and Software)

Honours Computer Science and Statistics (See Department of Computing and Software)

Honours Economics and Mathematics (B.A.; See Faculty of Social Sciences, Department of Economics)

Honours Philosophy and Mathematics (B.A.; See Faculty of Humanities, Department of Philosophy)

Honours Mathematics and Statistics

NOTES
1. The Honours Mathematics and Statistics programs consist of four options: a core and three specializations. The core option of this program consists of a specified set of basic requirements but otherwise allows a wide choice of other courses (including those from outside the Faculty of Science). The opportunity is therefore available for interdisciplinary studies possibly leading to a minor in another subject. Alternatively, students may choose one of several specializations which are more appropriate for graduate studies in Mathematics or Statistics. The options currently available are:
   • Mathematics and Statistics (Core)
   • Mathematics Specialization
   • Statistics Specialization
   • Applied Mathematics Specialization

2. The Honours Mathematics and Statistics Core program can also be combined with the Origins Research Specialization. See the section on the Origins Research Specialization in this section of the Calendar for more information. Students wishing to combine the Origins Research Specialization with the Mathematics and Statistics Core must satisfy all the Mathematics and Statistics Core requirements as well as the courses...
LEVEL I:
30 units (See Admission above.)

LEVEL II: 30 UNITS
12 units MATH 2A03, 2B03, 2C03, 2R03
3 units STATS 2D03
15 units from the option requirements (see below)

LEVEL III: 30 UNITS
6 units MATH 3A03, 3X03
6 units from Course List
3 units from Levels III, IV Mathematics and Statistics
15 units from the option requirements (see below)

LEVEL IV: 30 UNITS
15 units from Levels III, IV Mathematics and Statistics
15 units from the option requirements (see below)

OPTIONS
Core {2320832}

LEVELS II, III, IV: 45 UNITS
15 units from Level III, IV courses
3 units from Capstone Course List
27 units Electives
If not completed: three units from the Science Capstone Course List

Applied Mathematics Specialization {2320838}

NOTE
Students registered in the Applied Mathematics Specialization may substitute certain courses offered by the Faculty of Engineering and the Department of Physics and Astronomy for up to 12 units of the Level III and IV Mathematics and Statistics course requirements, subject to approval by the Department of Mathematics and Statistics. Please consult with an advisor in the Department of Mathematics and Statistics for further information.

LEVEL II: 15 UNITS
3 units MATH 2T03
12 units Electives
MATH 1J03 (may be taken in Level I or Level II) and MATH 2E03 are recommended.

LEVEL III: 15 UNITS
3 units MATH 3AA3
6 units from MATH 3F03, 3FF3, 3Q03
6 units Electives

LEVEL IV: 15 UNITS
3 units from MATH 4G03, 4QQ3, 4V03, 4X03
12 units Electives

Mathematics Specialization

LEVEL II: 15 UNITS
3 units MATH 2S03
12 units Electives

LEVEL III: 15 UNITS
9 units MATH 3A03, 3E03, 3EE3
6 units Electives

LEVEL IV: 15 UNITS
3 units from MATH 4B03, 4E03; 4G03, 4X03
12 units Electives

Statistics Specialization

LEVEL II: 15 UNITS
3 units MATH 2S03
12 units Electives

LEVEL III: 15 UNITS
9 units MATH 3A03, 3E03, 3EE3
6 units Electives

LEVEL IV: 15 UNITS
3 units from MATH 4B03, 4E03; 4G03, 4X03
12 units Electives

Honours Mathematics and Physics

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A3
6 units CHEM 1A03, 1A3
6 units PHYSICS 1B03, 1B3 (or 1BB3)
3 units MATH 2B03
3 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, 1B00
MATH 1J03 is recommended in Level I.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0 and a grade of C+ in each of MATH 1A03, 1B03.

NOTE
STATS 3A03 is required for the Statistics Specialization but may be included as part of the 15 unit Level III and IV Mathematics and Statistics requirement.

LEVEL II: 15 UNITS
3 units STATS 2MB3
3 units from MATH 2S03, 2T03
9 units Electives

LEVEL III: 15 UNITS
3 units MATH 3A03
6 units STATS 3D03, 3DD3
3 units STATS 3A03 (See Note above.)
3-6 units Electives

LEVEL IV: 15 UNITS
6 units STATS 4D03, 4M03
9 units Electives

Honours Mathematics and Physics

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A3
6 units CHEM 1A03, 1A3
6 units PHYSICS 1B03, 1B3 (or 1BB3)
3 units MATH 2B03
3 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, 1B00
MATH 1J03 is recommended in Level I.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0 and a grade of C+ in each of MATH 1A03, 1B03, PHYSICS 1B03, 1A3, 1BB3.

NOTE
1. Students who complete Level II of Honours Mathematics and Physics are eligible to proceed to Level III of Honours Mathematics and Statistics or Level III of Honours Physics.
2. PHYSICS 3C03 is listed in Level III but is offered in alternate years, and may be taken in Level IV.
3. A minor in Astronomy or Statistics is not permitted in the Honours Mathematics and Physics program.

COURSE LIST
All Level III and IV Astronomy courses; COMP SCI 2MD3, 2SC3; MATH 2B03, 2S03, 2MB3; all Level III and IV Mathematics and Statistics courses; PHYSICS 4J03, all Level III and IV Physics courses except PHYSICS 3T03, 4R06

REQUIREMENTS
121 units total (Levels I to IV), of which no more than 46 units may be Level I courses and at least 36 units must be Level III, IV courses
LEVEL II: 31 UNITS
12 units MATH 2A03, 2AB3, 2C03, 2R03
3 units from MATH 2S03, 2T03
13 units PHYSICS 2B06, 2H04, 2C03
3 units Electives

LEVEL III: 30 UNITS
9 units MATH 3A03, 3F03, 3X03
9 units PHYSICS 3C03, 3K03, 3MM3
3 units from Course List
9 units Electives

LEVEL IV: 30 UNITS
6 units MATH 3AA3, 4X03
3 units PHYSICS 4B03
15 units from Course List
6 units Electives

Honours Mathematics and Statistics Co-op

ADMISSION
Enrolment in this program is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Mathematics and Statistics with a Cumulative Average of at least 6.0. Information about the program and the selection procedure may be obtained from Science Co-operative Education and will be explained in the month of March in an Information Session.

NOTES
1. This is a five-year co-op program which includes two eight-month work terms which must be spent in mathematics or statistics related placements.
2. Students must be registered full-time and take a full academic program.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students must register in one of the following specializations:
   • Mathematics Specialization
   • Statistics Specialization
   • Applied Mathematics Specialization
5. Admission to Honours Mathematics and Statistics Co-op is in Level III.

COURSE LIST
MATH 2E03, 2S03, 2T03, 3B03, 3E03, 3F03, 3FF3, 3S03, STATS 2MB3, 3D03, 3DD3, 3S03, 3U03

REQUIREMENTS
120 units total (Levels I to IV) of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL 1
Completion of a Level I program in any Faculty, including:
9 units MATH 1A03, 1AA3, 1B03
21 units Level I courses to complete a Level I program

Applied Mathematics Co-op Specialization

NOTE
Students registered in the Applied Mathematics Co-op Specialization may substitute certain courses offered by the Faculty of Engineering and the Department of Physics and Astronomy for up to 12 units of the Level III and IV Mathematics and Statistics course requirements, subject to approval by the Department of Mathematics and Statistics. Please consult with an advisor in the Department of Mathematics and Statistics for further information.

LEVEL II
30 units from Level II Honours Mathematics and Statistics (Applied Mathematics Specialization). Students who have completed Level II of any Mathematics or Statistics program as of September 2003 and who wish to enter the Mathematics and Statistics Co-op program, should consult with the Undergraduate Advisor for the Department of Mathematics and Statistics.

YEAR 3
15 units from Academic Level III, Term 1, plus Work Orientation course, and completion of the first eight-month work term, Term 2 and Summer Term.

TERM 1
6 units MATH 3A03, 3F03
6 units from Levels III, IV Mathematics and Statistics
3 units Electives
→ Work Orientation Course

TERM 2 AND SUMMER
Work Term

YEAR 4
30 units from Academic Levels III, IV, Term 1, and Academic Levels III, IV, Term 2, plus beginning of second eight-month work term, Summer Term.

TERM 1 AND 2
9 units MATH 3AA3, 3FF3, 3X03
12 units from Levels III, IV Mathematics and Statistics
9 units Electives

SUMMER
Work Term

YEAR 5
15 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.

TERM 1
Work term

TERM 2
6 units from Levels III, IV Mathematics and Statistics
3 units from Level IV Mathematics
6 units Electives

Statistics Co-op Specialization

LEVEL II
30 units from Level II Honours Mathematics and Statistics (Statistics Specialization). Students who have completed Level II of any Mathematics or Statistics program as
MEDICAL PHYSICS AND APPLIED RADIATION SCIENCES

WEB ADDRESS: http://www.science.mcmaster.ca/medphys/index.php

NOTE
Students in Medical and Health Physics programs are expected to have basic skills in the use of personal computers, word processing and spreadsheet software and some familiarity with a programing language. MATH 1A03 is strongly recommended.

Honours Medical and Health Physics {2443}

ADMISSION
Completion of the Science I requirements, including:
9 units MATH 1A03, 1AA3, 1B03
3 units BIOLOGY 1A03
6 units CHEM 1A03, 1AA3
3 units PHYSICS 1B03
3 units from BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3)
6 units Level I electives
2 courses SCIENCE 1A00, 1B00
BIOLOGY 1A03 and PHYSICS 1B03 (or 1BB3) must be completed by the end of Level I. PHYSICS 1BA3 (or 1BB3) is strongly recommended in Level I.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0, an average of 7.0 in MATH 1A03, 1AA3, 1B03, PHYSICS 1B03.

NOTE
A minor in Astronomy or Mathematics or Mathematics and Statistics is not permitted in the Honours Medical and Health Physics program.

REQUIREMENTS
121 units total (Levels I to IV), of which no more than 48 units may be from Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units (See Admission above.)

LEVEL II: 31 UNITS
3 units MED PHYS 2A03
3-6 units CHEM 2E03; or both CHEM 2A03 and 2B03
9 units MATH 2A03, 2C03, 2E03
13 units PHYSICS 2B03, 2E03, 2H04
6 units Electives.
If not completed: BIOLOGY 1AA3, PHYSICS 1BA3 (or 1BB3)

LEVEL III: 30 UNITS
9 units BIOLOGY 2B03, MATH 3C03, 3D03
6 units MED PHYS 3R03, 3T03
12 units PHYSICS 2C03, 3H03, 3M03, 3N03
3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3AA3, 3BN3, 3J03. (Psychology courses require permission of the Departmental Academic Advisor or instructor.)

LEVEL IV: 30 UNITS
3 units BIOLOGY 4U03
15 units MED PHYS 4A03, 4R06, 4T03, 4XX3
9 units PHYSICS 4D06, 4E03
3 units Electives

Honours Medical and Health Physics Co-op

ADMISSION
Enrolment in this program is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Medical and Health Physics with a Cumulative Average of at least 6.0.

Information about the program and the selection procedure may be obtained from Science Cooperative Education and the Chair of the Committee of Instruction and will be explained in the month of March in an Information Session.

B.Sc. Three-Level Degree
A three-level program with a Mathematics or Statistics orientation is available through the B.Sc. in Mathematical Science which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Mathematics and Statistics
NOTES
1. It is possible for a student to complete this Minor through evening and summer study.
2. MATH 2L03 should not be taken by students wishing to complete this minor.

REQUIREMENTS
27 units total:
9 units MATH 1A03, 1AA3, 1B03
18 units from Level II, III, IV Mathematics and Statistics, including at least six units from Levels III, IV Mathematics and Statistics

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### MEDICAL RADIATION SCIENCES

**WEB ADDRESS:** [http://www.science.mcmaster.ca/MedRadSci](http://www.science.mcmaster.ca/MedRadSci)

**NOTES**

1. This program is offered jointly in partnership by Mohawk College of Applied Arts and Technology and McMaster University. Students pursue two qualifications simultaneously, and graduates receive the Mohawk Advanced Diploma and the McMaster Bachelor of Science in Medical Radiation Sciences.

2. The overall program comprises ten semesters within four academic years. Three full semesters are spent in clinical placement.

3. At the end of Level I, each student will be streamed into one of three available specializations, Radiography Ultrasonography or Radiation Therapy. Students may indicate their option preference; however, since enrolment is limited by number of available clinical placements, students may be streamed into a specialization that is not of their choosing.

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 practice 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 in Radiography or Ultrasonography will be required to attend full-time clinical practice 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 - Level C prior to commencing their first clinical practicum.

7. **Immunization and Health Screening:** The Ontario Public Hospitals Act requires that all persons working or on educational placement in a hospital setting meet 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. Further information will be sent to successful applicants.

8. The University reserves the right to require the withdrawal of a student should his or her conduct so warrant. The Medical Radiation Science program 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.

9. 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.

**ADMISSION**

Completion of Medical Radiation Sciences I:

<table>
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<th>Level I</th>
<th>Level II</th>
<th>Level III</th>
<th>Level IV</th>
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<tr>
<td>3 units BIOL 1A03</td>
<td>3 units CHEM 1A03</td>
<td>6 units KINESIOL 1Y03, 1YY3</td>
<td>3 units MATH 1A03</td>
<td>2 courses SCI 1A00, 1B00</td>
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<td>3 units</td>
<td>3 units</td>
<td>9 units MEDRADSC 1A03, 1B03, 1C03</td>
<td>3 units STAT 1C03</td>
<td>If Grade 12 Physics U (or OAC Physics) not completed with a minimum average of 60%: PHYSICS 1P03</td>
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<td>6 units</td>
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<td>13 units from Academic Level IV</td>
<td>13 units from Academic Level IV</td>
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**NOTES**

1. This is a five-year co-op program which includes two eight-week work terms which must be spent in Medical or Health Physics related placements.

2. Students must be registered full-time and take a full academic program.

3. Students are required to complete a Work Orientation Course before the first work placement.

**REQUIREMENTS**

121 units total (Levels I to IV) of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

- **Level I**
  - 30 units from the Science I requirements
  - 31 units from Level II Honours Medical and Health Physics

- **Level II**
  - 3 units MATH 3C03
  - 3 units MED PHYS 3T03
  - 7 units PHYSICS 2C03, 3HC1, 3N03

- **Level III**
  - 3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3A01, 3B11, 3J03. (Psychology courses require permission of the Departmental Academic Advisor or instructor.)

- **Level IV**
  - 3 units from Academic Level III, Term 1, plus Work Orientation course, and completion of the first eight-month work term, Term 2 and Summer Term

**TERM 1**

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<th>Work Term</th>
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<td>5 units MATH PHYS 3R03, 4AB2</td>
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<td>5 units PHYSICS 3H02, 4E03</td>
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<td>3 units Electives</td>
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**TERM 2**

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<td>13 units from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1.</td>
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**YEAR 1**

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<td>16 units from Academic Level III</td>
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**YEAR 2**

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<tr>
<td>13 units from Academic Levels III, IV</td>
<td>18 units from Academic Levels III, IV</td>
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**YEAR 3**

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**Year 4**

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<tr>
<td>13 units from Academic Level IV</td>
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MINIMUM AVERAGES/GRADRES:

Completion of Medical Radiation Sciences I with a Cumulative Average of 5.0 or permission of the Reviewing Committee (Chair Medical Radiation Sciences, Coordinator Radiography Specialization, Coordinator Ultrasonography Specialization, Coordinator Radiation Therapy Specialization, Coordinator Medical Radiation Sciences).

NOTES
1. 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.
2. For entry to Levels III and IV, students are required to have completed the previous Level successfully with a Cumulative Average of 5.0 or to have permission of the Specialization Coordinator.
3. A student with any units incomplete at any Level may not proceed to the next Level except with the permission of the Specialization Coordinator.

REQUIREMENTS

165 units total (Levels I to IV), 50 units of clinical practicum are interspersed with 85 units of academic courses in Levels II to IV.

Radiation Therapy Specialization [1415]

Subject to final approval, the Medical Radiation Sciences program will offer a Radiation Therapy Specialization in 2005-2006.

LEVEL II: 50 UNITS

3 units HUMAN 2C03
18 units MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03
9 units MEDRADSC 2G03, 2H03, 2I03
17 units MEDRADSC 2J17 (Clinical Practicum I)
3 units PSYCH 1AA3

LEVEL III: 49 UNITS

4 units HTH SCI 3C04
3 units MED PHYS 3T03
18 units MEDRADSC 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3J03
15 units MEDRADSC 3S03, 3T03, 3U03, 3V03, 3W03
3 units PHILOS 2D03
6 units Electives*

LEVEL IV: 36 UNITS

3 units HTH SCI 3B03
16 units MEDRADSC 4E16 (Clinical Practicum II)
17 units MEDRADSC 4F17 (Clinical Practicum III)

LEVEL IV: 36 UNITS

3 units HTH SCI 3C04
15 units MEDRADSC 3A03, 3B03, 3C03, 3D03, 3E03
18 units MEDRADSC 3G03, 3H03, 3I03, 3P03, 3Q03, 3R03
3 units PHILOS 2D03
6 units Electives

LEVEL IV: 36 UNITS

3 units HTH SCI 3B03
16 units MEDRADSC 4G16 (Clinical Practicum II)
17 units MEDRADSC 4J17 (Clinical Practicum III)

Radiography Specialization [1405]

LEVEL II: 50 UNITS

3 units HUMAN 2C03
18 units MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03,
9 units MEDRADSC 2G03, 2H03, 2I03
17 units MEDRADSC 2J17 (Clinical Practicum I)
3 units PSYCH 1AA3

LEVEL III: 49 UNITS

4 units HTH SCI 3C04
21 units MEDRADSC 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3J03
15 units MEDRADSC 3G03, 3H03, 3J03, 3K03, 3L03
3 units PHILOS 2D03
6 units Electives

LEVEL IV: 36 UNITS

3 units HTH SCI 3B03
16 units MEDRADSC 4A16 (Clinical Practicum II)
17 units MEDRADSC 4B17 (Clinical Practicum III)

LEVEL IV: 36 UNITS

3 units HTH SCI 3B03
16 units MEDRADSC 4C16 (Clinical Practicum II)
17 units MEDRADSC 4D17 (Clinical Practicum III)

Molecular Biology

Honours Molecular Biology [2365]

ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Level I requirements, including:

6 units MATH 1A03, STATS 1CC3
6 units BIOLOGY 1A03, 1AA3
6 units CHEM 1A03, 1AA3
ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement and an application but students must also be admissible to an Honours program in Biochemistry, Biology, Chemistry, Mathematics, Statistics, Physics, Psychology, or Honours Science. Eligible students must submit an application for admission by March 31 of the academic year prior to registration. Information about the specialization and admission and selection procedures may be obtained from the Origins Institute web site at http://origins.mcmaster.ca or by contacting the Associate Director (Jean Stone, Life Sciences Building, Room 327, 905-525-9140 ext. 26136 or email jstoner@mcmaster.ca.

Completion of Science I requirements, including:
1. Level I courses and at least 36 units must be Level II, IV courses
2. Information and counselling may be obtained through the Office of the Dean of Science.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units

LEVEL II: 30 UNITS
21 units BIOLCHEM 2B03, 2B03, BIOLCHEM 2B03, 2C03, CHEM 2A03, 2B03, 2R03
3 units from BIOLCHEM 2A03, 2D03, CHEM 2N03
6 units Electives. BIOLOGY 2A03, 2D03, CHEM 2N03 are recommended.

LEVEL III: 30 UNITS
18 units BIOLCHEM 3D03, 3L03, BIOLCHEM 3E03, 3H03, 3C03, 3V03
9 units from BIOLCHEM 3H03, BIOLCHEM 3AA3, 3B03, 3FF3, 3H03, 3M03, 3P03, 3S03, HTH SC 3I03
3 units Electives

LEVEL IV: 3-5 UNITS
6-9 units from BIOLCHEM 4L03, 4P03, BIOLCHEM 4L03, 4R09
6 units BIOLCHEM 4E03, 4K03
9-12 units from BIOLCHEM 4EE3, 4Q03, BIOLCHEM 3S03, 4B03, 4E03, 4P03, 4PP3, 4R03, 4T03, 4V03, HTH SC 4I03, MOBIOL 4H03, 4J03
6 units Electives

ORIGINS RESEARCH SPECIALIZATION

WEB ADDRESS: http://origins.mcmaster.ca

Origins Institute
The Origins Institute is an intellectual enterprise that promotes, maintains, and strengthens interdisciplinary collaboration among researchers who are interested in solving scientific problems concerning six origins themes:
- the origin of our universe
- the origin of elements
- the origin of structure in our universe
- the origin of life
- the origins of species
- the origin of humans

The Origins Research Specialization curriculum is designed to reintroduce students through these themes the 19th century ideal "Natural Science" (i.e. well-rounded comprehension about the natural world) but from a modern perspective. Students graduating from the specialization will possess a comprehensive, multifaceted education in the natural sciences.

NOTE
The Origins Research Specialization curriculum must be taken in conjunction with a Core program in Biochemistry, Biology, Chemistry, Mathematics, Statistics, Physics, Psychology or Honours Science. Students seeking admission to the specialization must choose a department from the above listing and subsequently must complete the requirements for the Core program in that department. Students may fulfill the requirements for the Origins Specialization by selecting Origins courses for their Core electives.
COURSE LIST
ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS
27 units total (Levels II to IV)

LEVEL II: 6 UNITS
3 units from ORIGINS 2B03, 2F03 (See Note 8 above.)
3 units ORIGINS 2S03

LEVEL III: 12 UNITS
3 units from ORIGINS 2B03, 2F03 (See Note 8 above.)
6 units from the ORIGINS Course List
3 units ORIGINS 3S03

LEVEL IV: 9 UNITS
9 units ORIGINS 4A09

DEPARTMENT OF PHYSICS
AND ASTRONOMY

WEB ADDRESS: http://www.physics.mcmaster.ca/

NOTE
Students in all Physics programs are expected to have basic
skills in the use of personal computers, word processing
and spreadsheet software, and some familiarity with a programing
language such as Basic, C, Fortran or Pascal. COMP SCI 1SA3
or MATH 1J03 is recommended for students without those skills.

Honours Arts & Science and Physics
(B.Arts.Sc.; See Arts & Science Program)

Honours Mathematics and Physics
(See Department of Mathematics and Statistics)

Honours Medical and Health Physics
(See Medical Physics and Applied Radiation Sciences)

Honours Medical and Health Physics Co-op
(See Medical Physics and Applied Radiation Sciences)

Honours Physics

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1AA3
6 units CHEM 1A03, 1AA3
6 units PHYSICS 1B03, 1BA3 (or 1B83)
6 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, 1B00

MATH 1B03 must be completed by the end of Level II and is
strongly recommended in Level I. The Biophysics Specialization
requires completion of BIOLOGY 1A03 by the end of Level II and
is strongly recommended in Level I. BIOLOGY 1AA3 is also
strongly recommended for this specialization.

The Astrophysics Specialization requires completion of ASTRON
1F09 by the end of Level II and is strongly recommended in Level I.

MINIMUM AVERAGES/GRADERS:
A Cumulative Average of 6.0, an average of 6.0 in MATH 1A03,
1AA3 and an average of 6.0 in 6 units from PHYSICS 1B03, 1BA3
(or 1B83).

NOTES
1. This program consists of five options: a core and four
specializations. The core of this program consists of a speci-

fied set of basic requirements but otherwise allows a wide
choice of other courses (including those from outside the
Faculty of Science). The opportunity is therefore available for
interdisciplinary studies possibly leading to a Minor in an-
other subject. Alternatively students may wish to follow one of
several specializations which are more appropriate for gradu-
ate studies in Physics or Astronomy.

2. The Honours Physics Core program can also be combined
with the Origins Research Specialization. See the section on the
Origins Research Specialization in this section of the Calendar for
more information. Students wishing to combine the Origins
Research Specialization with the Physics Core must satisfy all
the Physics Core requirements as well as the courses specified
by the Origins Research Specialization. Students may do this by
selecting Origins courses for Physics Core electives. In addition
to the courses specified for the Physics Core, students must
complete BIOLOGY 1A03 and 1AA3 by the end of Level II.

3. Students will be registered in the Physics (Core) until they
elect otherwise. Transfer between options is possible at any
time, subject to satisfying the requirements for that option.
Registration in a specific specialization will be noted on the
student's transcript.

4. Admission to Honours Physics Co-op is in Level III and possi-
ble from any of these options.

5. The Physics Department considers the Astrophysics, Biophysics,
Computation and Theory or Experimental specializations to be more
appropriate for graduate studies in Physics.

6. A minor in Astronomy or Mathematics or Mathematics and Sta-
tistics is not permitted in the Honours Physics program.

7. For the Biophysics Specialization, PHYSICS 4S03 may count
towards the nine units from Levels III, IV Astronomy, Math-
ematics, Physics required in Level IV of the core.

8. Students wishing to take Level III, IV Biology courses must
complete the prerequisites required for these courses. Most
require at least one of BIOLOGY 2B03, 2C03.

9. In the Experimental/ Specialization and the Honours Physics Co-
op program, students may substitute another course for PHYS-
ICS 3BA3 with permission of the Chair of the Department.

REQUIREMENTS
121 units total (Levels I to IV), of which no more than 48 units
may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units (See Admission above.)

LEVEL II: 31 UNITS
16 units PHYSICS 2B06, 2C03, 2E03, 2H04
6 units MATH 2A03, 2C03
9 units from the option requirements (see below)
If not completed: MATH 1B03

LEVEL III: 30 UNITS
6 units PHYSICS 3H03, 3MM3
6 units MATH 3C03, 3D03
18 units from the option requirements (see below)

LEVEL IV: 30 UNITS
3 units PHYSICS 4A03
9 units from Levels III, IV Astronomy, Mathematics, Physics,
GEO 3V03 (See Note 6 above.)
18 units from the option requirements (see below)

OPTIONS

Core

Astrophysics Specialization

LEVEL II: 9 UNITS
3 units ASTRON 2E03
6 units Electives
If not completed: ASTRON 1F03

LEVEL III: 18 UNITS
3 units ASTRON 3X03
3 units PHYSICS 2G03
3 units PHYSICS 3N03
9 units Electives

LEVEL IV: 18 UNITS
3 units ASTRON 3Y03
6 units PHYSICS 4B03, 4F03
9 units Electives. PHYSICS 4G03 is strongly recommended.
Biophysics Specialization  {2440886}

BIOPHYSICS COURSE LIST
BIOCHEM 3C03, 3L03, 3Y03, 4K03; BIOLOGY 3FF3, 3HH3, 3J03, 3S03, 4DD3, 4E03; MATH 2E03, 3N03; PHYSICS 3N03

LEVEL II: 9 UNITS
3 units  CHEM 2E03
6 units  Electives. BIOLOGY 2B03, 2C03 are recommended. (See Note 7 above.)
If not completed: BIOLOGY 1A03, MATH 1B03

LEVEL III: 18 UNITS
3 units  BIOCHEM 3G03
6 units  PHYSICS 3K03, 3N03
9 units  Electives. See Biophysics Course List for recommended courses.

LEVEL IV: 18 UNITS
3 units  BIOCHEM 4Y03
3 units  PHYSICS 4S03 (See Note 6 above.)
1 course  from BIOCHEM 4B03, 4P03, PHYSICS 4P06, 4Q03
6-9 units  Electives. See Biophysics Course List for recommended courses.

Computation and Theory Specialization  {244088}

LEVEL II: 9 UNITS
6 units  MATH 2R03, 2T03
3 units  PHYSICS 2G03

LEVEL III: 18 UNITS
9 units  PHYSICS 3A03, 3K03, 3N03
9 units  Electives. MATH 3G03 is recommended.

LEVEL IV: 18 UNITS
12 units  PHYSICS 3C03, 4B03, 4F03, 4G03
6 units  Electives

Experimental Specialization  {2440810}

LEVEL II: 9 UNITS
9 units  Electives

LEVEL III: 18 UNITS
3 units  PHYSICS 3B03 (See Note 8 above.)
6 units  PHYSICS 3K03, 3N03
9 units  Electives

LEVEL IV: 18 UNITS
15 units  PHYSICS 4B03, 4F03, 4J03, 4P06
3 units  Electives

Honours Physics Co-op  {2445}

ADMISSION
Enrolment in this program is limited to a maximum of 10 students per year. Selection is based on academic achievement and an interview but requires, as a minimum, completion of Level II Honours Physics with a Cumulative Average of at least 6.0. Information about the program and the selection procedure may be obtained from Science Cooperative Education and the Chair of the Committee of Instruction and will be explained in the month of March in an Information Session.

NOTES
1. This is a five-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 program.
3. Students are required to complete a Work Orientation Course before the first work placement.
4. Students considering postgraduate studies in Physics should take PHYSICS 4F03 as one of the electives in Year 5.

REQUIREMENTS
121 units total (Levels I to IV) of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

LEVEL I
30 units  from the Science I requirements

LEVEL II
31 units  from Honours Physics

YEAR 3
16 units  from Academic Level III, Term 1, plus Work Orientation course, and completion of the first eight-month work term, Term 2 and Summer Term.

TERM 1
3 units  MATH 3C03
3 units  PHYSICS 3BA3 (See Note 8 above.)
4 units  PHYSICS 3HC1, 3N03
6 units  Electives
Work Orientation Course

TERM 2 AND SUMMER
Work Term

YEAR 4
31 units  from Academic Level IV, Term 1, and Academic Level III, Term 2, plus beginning of second eight-month work term, Summer Term.

TERMS 1 AND 2
3 units  MATH 3D03
6 units  PHYSICS 3K03, 3MM3
13 units  PHYSICS 4AA1, 4B03, 4J03, 4P06
9 units  Electives

SUMMER
Work Term

YEAR 5
13 units  from Academic Level IV, Term 2, plus completion of second eight-month work term, Term 1

TERM 1
Work term

TERM 2
2 units  PHYSICS 3HD2
2 units  PHYSICS 4AB2
3 units  from PHYSICS 4E03, 4K03
6 units  Electives. PHYSICS 4F03 is strongly recommended (See Note 4 above.)

B.Sc. Three-Level Degree

A three-level program with a Physics orientation is available through the B.Sc. in Physical Science which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Astronomy

REQUIREMENTS
27-30 units total
3 units  from ASTRON 1F03, 2E03
6 units  MATH 2A03, 2C03
3-6 units  from PHYSICS 2A03, 2B06
3-6 units  from either CHEM 2P03 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3
3 units  from PHYSICS 2D03, 2E03, 2K03
6 units  ASTRON 3X03, 3Y03
3 units  from PHYSICS 2G03, 3M03, 3O03, CHEM 5B03
Minor in Physics

NOTE
MATH 2A03 is the minimum mathematics required in order to complete a Minor in Physics. However, more flexibility is possible if MATH 2C03 is also completed.

REQUIREMENTS
24 units total
- 6 units from PHYSICS 1B03, 1BA3 (or 1BB3)
- 18 units from GEO 3V03, 3Z23, Levels II, III, IV Astronomy, Physics, including at least six units from Levels III, IV Astronomy, Physics

DEPARTMENT OF PSYCHOLOGY

WEB ADDRESS: http://www.mcmaster.ca/psychology

Honours Arts & Science and Psychology
(B.Arts.Sc.; See Arts & Science Program)

Honours Biology and Psychology
(B.Sc.; See Department of Biology)

Honours Psychology (B.A.) and B.A. in Psychology
(See Faculty of Social Sciences, Department of Psychology)

Honours Psychology (B.Sc.)

ADMISSION
2005-2006 ONLY:
Completion of the Science I requirements, including:
- 6 units MATH 1A03, STATS 1CC3 (See Note 7 below)
- 3 units from BIOLOGY 1A03, 1AA3
- 3 units from CHEM 1A03, PHYSICS 1B03 (See Note 8 below)
- 6 units PSYCH 1A03, 1AA3
- 6 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

EFFECTIVE 2006-2007:
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Science I requirements, as listed above.

Students will also be considered for admission if they have completed MATH 1AA3 or 1B03 instead of STATS 1CC3. However, STATS 1CC3 (or STATS 2D03, see Note 7 below) is strongly recommended and must be completed by the end of Term 1 in Level II.

MINIMUM AVERAGES/GRADES:
2005-2006 Only: A Cumulative Average of 6.0 and an average of 7.0 in PSYCH 1A03, 1AA3.
Effective 2006-2007: A Cumulative Average of 6.0 and a grade of B- in each of PSYCH 1A03, 1AA3.

NOTES
1. The Honours Psychology program consists of five options: a core and four specializations. At the completion of Level I or Level II, students may choose one of the following four specializations:
   - Behavioural Neuroscience Specialization
   - Cognition and Perception Specialization
   - Developmental Specialization
   - Evolution and Social Behavior Specialization

2. The Honours Psychology Core program can also be combined with the Origins Research Specialization. See the section on the Origins Research Specialization in this section of the Calendar for more information. Students wishing to combine the Origins Research Specialization with the Psychology Core must satisfy all the Psychology Core requirements as well as the course requirements of the Origins Research Specialization. Students may do this by selecting Origins Research Specialization courses for Psychology Core electives. In addition to the courses specified for the Psychology Core, students must complete the following courses by the end of Level II:
   - 6 units CHEM 1A03, PHYSICS 1B03
   - 3 units from ASTRON 1F03, PHYSICS 1B03
   - 3 units from CHEM 1A03, ENVIR SC 1G03

3. Registration in a specialization will be noted on the student's transcript.

4. Students considering applying for graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, PSYCH 4D06, 4D09.

5. In many cases there are Level II (and III) prerequisites for Level III (and IV) courses. These should be considered when choosing Level II (and III) courses.

6. MATH 1B03 (Linear Algebra I) is strongly recommended for students intending to pursue graduate work in Psychology. One of MATH 1J03 (Mathematical Computing), COMP SCI 1MA3 (Computer Science I) or COMP SCI 1SA3 (Computation Fundamentals) is highly recommended for students in the Behavioural Neuroscience and Cognition and Perception Specializations, and for students intending to pursue graduate work in Psychology.

7. Students wishing to have more mathematical statistics may replace STATS 1CC3 and PSYCH 2RR3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 in Level I and consult with a departmental advisor.

8. It is recommended that students complete both CHEM 1A03 and PHYSICS 1B03. Chemistry is particularly useful for neuro-science and biological aspects of psychology. Physics is particularly useful for perception, electrophysiology, and mathematical modelling of psychological processes.

9. Students may substitute three units from the Science Capstone Course List.

10. For Psychology Courses with limited enrollment which require permission by preregistration ballot, students must complete and submit a ballot by April 20, 2005. Ballots can be obtained on the Psychology Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology and Combined Honours Psychology programs.

LAB COURSE LIST A
PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QQ3, 3S03, 3V03, 4QQ3

CAPSTONE COURSE LIST B
PSYCH 3IO3, 4BN3, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4QQ3, 4R03

PSYCHOLOGY COURSE LIST C
BIOLOGY 4T03; KINESIO 3E03; all Level III and IV Psychology courses.

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses

OPTIONS

Psychology (Core) {2461856}

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
- 3 units PSYCH 2RR3 (See Note 7 above.)
- 9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T3
- 3 units from any courses in the Faculty of Science
- 15 units Electives

LEVEL III: 30 UNITS
- 12 units from Psychology Course List C, PSYCH 2D03, 2E03, 2F03, 2H03, 2T3
- 3 units from Lab Course List A
- 15 units Electives

LEVEL IV: 30 UNITS
- 9 units from Psychology Course List C
- 6 units from Capstone Course List B (See Note 9 above.)
- 15 units Electives

Behavioural Neuroscience {2461858}

Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
- 3 units PSYCH 2RR3 (See Note 7 above.)
- 3 units PSYCH 2F03
- 6 units from PSYCH 2D03, 2E03, 2H03, 2T3
- 6 units from any courses in the Faculty of Science
- 12 units Electives
LEVEL III: 30 UNITS
9 units from PSYCH 3A03, 3BN3, 3FA3, 3J03, 3Y03
6 units from Psychology Course List C, PSYCH 2D03, 2E03, 2H03, 2TT3
3 units from Lab Course List A, PSYCH 3BL3, 3EE3, 3L03, or 3V03 is recommended.
6 units from any courses in the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
6 units from BIOLOGY 4T03, PSYCH 3A03, 3BN3, 3FA3, 3J03, 3Y03, 4BN3, 4F03
6 units from Psychology Course List C
6 units from Capstone Course List B (See Note 9 above.)
12 units Electives

Cognition and Perception {2461890}

Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 7 above.)
6 units PSYCH 2E03, 2H03
3 units from PSYCH 2D03, 2F03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
12 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3H3, 3I3, 3J03, 3U03, 3U3, 3V3
3 units from Psychology Course List C, PSYCH 2D03, 2F03, 2TT3
3 units from Lab Course List A, PSYCH 3EE3, 3LL3 or 3V03 is recommended.
6 units from any courses in the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
6 units from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3H3, 3I3, 3J03, 3U03, 3U3, 3V3, 4BN3, 4C03, 4Z03
6 units from Psychology Course List C
6 units from Capstone Course List B (See Note 9 above.)
12 units Electives

Developmental Specialization {2461862}

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 7 above.)
9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
3 units PSYCH 3G53
6 units from PSYCH 3H3, 3I3, 3J3. (Three units may be taken in Level IV.)
6-9 units from Psychology Course List C, PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units from Lab Course List A, PSYCH 3EE3, 3LL3 or 3V03 is recommended.
6 units from any courses in the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
6 units from PSYCH 3HH3, 3II3, 3JJ3. (If not completed in Level III, 3BB3, 3Z03, 4C03 is recommended.)
6 units from Psychology Course List C
6 units from Capstone Course List B (See Note 9 above.)
12 units Electives

Evolution and Social {2461864}

Behaviour Specialization

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
3 units PSYCH 2RR3 (See Note 7 above.)
3 units PSYCH 2TT3
6 units from PSYCH 2D03, 2E03, 2F03, 2H03
6 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
9 units PSYCH 2C03, 3A03, 3F03, 3J3, 3M03, 3T03, 3Y03
6 units from Psychology Course List C, PSYCH 2D03, 2E03, 2F03, 2H03
3 units from Lab Course List A, PSYCH 3LL3 or 3S03 is recommended.
6 units from any courses in the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
6 units PSYCH 2C03, 3A03, 3F03, 3J3, 3M03, 3T03, 3Y03, 4F03
6 units from Psychology Course List C
6 units from Capstone Course List B (See Note 9 above.)
12 units Electives

B.Sc. Three-Level Degree

A three-level program with a general Life Science orientation is available through the B.Sc. in Life Science which is listed under the heading Three-Level B.Sc. Programs in this section.

Minor in Psychology

NOTES
1. It is possible for a student to complete this Minor through evening and summer study.
2. When choosing Level II courses students should consider the prerequisite requirements for the various Level III courses.

REQUIREMENTS
24 units total
6 units from PSYCH 1A03, 1AA3
18 units from Level II, III Psychology courses, including at least six units from Level III Psychology courses

HONOURS SCIENCE

AREAS OF STUDY

Geoscience {2513}
(Includes Environmental Science and Geography and Earth Sciences)

Life Science {2514}
(Includes Biochemistry, Biology and Psychology)

Mathematical Science {2515}
(Includes Mathematics and Statistics and Computer Science)

Physical Science {2516}
(Includes Chemistry, Materials Science and Physics)

NOTES
1. All areas of study may be combined with the Origins Research Specialization. (See requirements below.)
2. Any minor other than a minor from the area of study may be completed.

ADMISSION
Completion of the Science I requirements, including:
3 units MATH 1A03
3 units MATH 1A3, 1B03, STATS 1CC3
*18 units from Science I Course List
6 units Electives
2 courses SCIENCE 1A00, 1B00

*SPECIFIC LEVEL I COURSES FOR EACH AREA OF STUDY
To meet admission requirements, at least six units of the specific Level I courses for the desired area of study must be completed in Level I and the remaining units must be completed before entry to Level III. It is highly recommended that all courses required for the area of study be completed in Level I.

GEOSCIENCE
9 units ENVIR SC 1A03, 1B03, 1G03

LIFE SCIENCE
12 units BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1A3

Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology courses, must complete a total of 18 units as follows: BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3, PSYCH 1A03, 1A3,
MATHEMATICAL SCIENCE
6 units MATH 1AA3, 1B03
3-9 units COMP SCI 1MA3, 1MD3, 1FC3
Students who intend to complete Level II, III or IV Computer Science courses must complete a total of 15 units from the requirements listed above for the Mathematical Science Area of Study.

PHYSICAL SCIENCE
15 units from CHEM 1A03, 1AA3, MATH 1A03, 1B03, PHYSICS 1B03, 1BA3, 1BB3
MATHS 1M03 is recommended as an introduction to Materials Science.

MINIMUM AVERAGES/GRDES FOR ADMISSION:
A Cumulative Average of 5.0 and a grade of C+ in three courses from the Science I Course List.

MINIMUM AVERAGE FOR CONTINUATION:
A Cumulative Average of at least 6.0 is required to continue in an Honours Science program or to transfer to one of the Honours Science programs from Level II or III of another program.

NOTES
1. Students are restricted to a total of 36 units of Level II, III, IV Biology of which no more than 12 units may be taken in each of Level II, III or IV.
2. Students are responsible for ensuring that the prerequisites for anticipated courses for Level III are completed in Level II before registering for the course.
3. To assist with course selections, students may refer to the courses listed for the corresponding Core Program of their area of study and may seek academic counselling with the departmental advisor.

AREAS OF STUDY COURSE LISTS
GEOSCIENCE COURSE LIST
All Level II, III and IV Geo courses except GEO 2GG3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3NN3, and non-science Geo courses (Non-science Geo courses contain the letter H in the course code.)

LIFE SCIENCE COURSE LIST
BIOCHEM 2EE3, 2B03, 2BB3, 2C03, 3G03, 3H03, 3N03, 4C03, 4E03, 4K03, 4Q03; all Level II, III and IV Biology courses except BIOLOGY 3003, 3Q03; HTH SCI 1B03, 4113, MOL BIOI 4H03; PSYCH 2AA3, 2BB3, 2DD3, 2EE3, 2F03, 2H03, 2TT3, 3AA3, 3BB3, 3BB3, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3M03, 3NN3, 3Q03, 3S03, 3T03, 3UU3, 3VV3, 3Y03, 4Z03

MATHEMATICAL SCIENCE COURSE LIST
All Level II, III and IV Computer Science, Mathematics and Statistics courses.

PHYSICAL SCIENCE COURSE LIST
All Level II and III Astronomy, Chemistry, Materials Science and Physics courses; MATH 3C03, 3D03; MED PHYS 3T03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units (See Admission above.)

LEVEL II
12 units from Level II courses from the chosen Area of Study Course List
6 units from courses outside the Faculty of Science
6 units from courses offered by the Faculty of Science excluding the chosen Area of Study Course List
6 units Electives. Level I courses required for the area of study must be completed if not completed in Level I. No more than 12 units from Level II, III, IV Biology may be taken in Level II. (See Note 1 above.)

LEVEL III
12 units from Level III, IV courses from the chosen Area of Study Course List
3 units from courses offered by the Faculty of Science excluding the chosen Area of Study Course List
9 units from Level II, III, IV courses outside the Faculty of Science
6 units Electives. No more than 12 units from Level II, III, IV Biology may be taken in Level III. (See Note 1 above.)

LEVEL IV
30 units from INQUIRY 3S03, 3SB3, 3SC3, 3SF3, 3SG3, 3SH3, 4S13; MATH 3Z03
12 units from Level III, IV courses from the chosen Area of Study Course List
6 units from courses offered by the Faculty of Science excluding the chosen Area of Study Course List
6 units Electives. No more than 12 units from Level II, III, IV Biology may be taken in Level IV. (See Note 1 above.)

Origins Research Specialization

ADMISSION
Enrolment in this specialization is limited. Selection is based on academic achievement and an application. Eligible students must submit an application for admission by March 31 of the academic year prior to registration. Information about the specialization and the admission and selection procedures may be obtained from the Origins Institute web site at http://origins.mcmaster.ca. To meet admission requirements, the specific Level I courses for the chosen area of study must be completed and at least 12 units of the following specific Level I courses required for the Origins Research Specialization must be completed in Level I:
12 units BIOLOGY 1A03, 1AA3, CHEM 1A03, PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1G03
All Level I courses required for the area of study and the Origins Research Specialization must be completed before entry to Level III.

MINIMUM AVERAGES/GRDES:
A cumulative average of 6.0.

NOTE
Both ORIGINS 2B03 and 2FF3 must be completed by the end of Level III.

ORIGINS COURSE LIST
ORIGINS 3A03, 3B03, 3C03, 3D03, 3E03, 3F03

REQUIREMENTS
120 units total (Levels I to IV), of which no more than 48 units may be Level I courses and at least 36 units must be Level III, IV courses.

LEVEL I
30 units (See Admission above.)

LEVEL II
12 units from Level II courses from the chosen Area of Study Course List
6 units from courses outside the Faculty of Science
3 units from ORIGINS 2B03, 2FF3 (See Note above.)
3 units ORIGINS 2G03
6 units Electives. Level I courses required for the area of study and the Origins Research Specialization must be completed if not completed in Level I.

LEVEL III
30 units
12 units from Level III, IV courses from the chosen Area of Study Course List
3 units from ORIGINS 2B03, 2FF3 (See Note above.)
6 units from ORIGINS Course List
3 units ORIGINS 3S03
6 units Electives

LEVEL IV
30 units
9 units ORIGINS 4A03
12 units from Level III, IV courses from the chosen Area of Study Course List
9 units Electives

THREE-LEVEL B.S.C. PROGRAMS

AREAS OF STUDY

Geoscience

(1149)
(Includes Environmental Science and Geography and Earth Sciences)

Life Science

(1312)
(Includes Biochemistry, Biology and Psychology)
### Areas of Study Course Lists

#### Geoscience Course List

- All Level II and III Geo courses except GEO 2GG3, 2HA3, 2HB3, 2HC3, 2HD3, 2HG3, 2HR3, 2HU3, 2HY3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3NN3, and non-science Geo courses. (Non-science Geo courses contain the letter H in the course code.)

#### Life Science Course List

- BIOCHEM 2EE3, 3G03, 3H03, 3N03; BIOLOGY 2A03, 2B03, 2D03, 2F03, all Level III Biology courses except BIOLOGY 3CQ3, 3Q03; PSYCH 2AA3, 2B03, 2C03, 2D03, 2E03, 2F03, 2H03, 2TT3, 3A03, 3AA3, 3BB3, 3F03, 3FA3, 3GG3, 3HH3, 3I03, 3J03, 3JK3, 3K03, 3M03, 3N03, 3NN3, 3Q03, 3QQ3, 3T03, 3U03, 3VV3; STATS 2MA3

#### Mathematical Science Course List

- COMP SCI 2MD3, 2ME3, 2MF3, 2MJ3, 2SC3, all Level III Computer Science courses; MATH 2A03, 2AB3, 2CG3, 2E03; 2K03, 2R03, 2S03, 2T03; STATS 2D03, 2MB3, all Level III, IV Mathematics and Statistics courses

#### Physical Science Course List

- All Level II, III and IV Astronomy, Chemistry, Materials Science and Physics courses; MATH 3C03, 3D03; MED PHYS 3T03

#### Requirements

- 90 units total (Levels I to III), of which no more than 42 units may be Level I courses.

#### Level I

- 30 units (See Admission above.)

#### Level II: 30 Units

- 12 units from Level II courses from the chosen Area of Study Course List
- 6 units from courses outside the Faculty of Science
- 6 units from courses offered by the Faculty of Science excluding the chosen Area of Study Course List. (Level I courses required for the area of study must be completed if not completed in Level I.)

#### Level III: 30 Units

- 12 units from Level III, IV courses from the chosen Area of Study Course List
- 3 units from Level II, III, IV courses from courses offered by the Faculty of Science excluding the chosen Area of Study Course List
- 9 units from Level II, III, IV courses outside the Faculty of Science
- 6 units Electives, excluding Biology and Psychology. No more than six units of Level II, III Biology may be taken in Level II. (See Note 1 above.)

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### Notes

1. Students are restricted to a total of 12 units of Level II, III Biology of which no more than six units may be taken in each of Level II or III.
2. Students registered in any Three-Level B.Sc. Program are not eligible to register for any Level IV Biology, Computer Science or Psychology courses.
3. Students are responsible for ensuring that the prerequisites for anticipated courses for Level III are completed in Level II before registering for the course.
4. To assist with course selections, students may refer to the courses listed for the corresponding Core Program of their area of study and may seek academic counselling with the departmental advisor.
### A. Level I Programs

#### Social Sciences I

**PROGRAM NOTE**

Students registered in Honours B.A. or B.A. programs in the Faculty of Social Sciences, with the exception of Honours Psychology, are required to complete six units of courses chosen from the Faculty of Humanities and/or the Department of Religious Studies. Students enrolled in Religious Studies programs are required to complete six units from the Faculty of Humanities. It is recommended this requirement be completed in Level I.

<table>
<thead>
<tr>
<th>COURSE LIST 1</th>
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<tbody>
<tr>
<td>ANTHRO 1A03, 1B03, 1Z03</td>
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<td>CMST 1A03, 1B03</td>
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<td>ECON 1B03, 1BB3</td>
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<td>GEOL 1HS3, 1HU3</td>
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<td>GERONTOL 1A03</td>
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<td>LABR ST 1A03, 1203</td>
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<td>POL SCI 1G06</td>
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<td>PSYCH 1A03, 1A03</td>
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<td>RELIG ST 1B06, 1D06, 1E03, 1I03</td>
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<tr>
<td>SOC WORK 1A03</td>
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<tr>
<td>SOCIOL 1A06</td>
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**REQUIREMENTS: 30 UNITS**

- 12 units from Course List 1
- 18 units Electives, which may include courses from Course List 1. (See Note above.)

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**Kinesiology I**

**ENROLMENT IN THIS PROGRAM IS LIMITED.**

**PROGRAM NOTES**

1. Application is made to the Kinesiology I Program.
2. The Department of Kinesiology offers two Honours program options beyond Level I: The Honours Bachelor of Science in Kinesiology (Hons. B.Kin.) and the Honours Bachelor of Science (Hons. B.Sc.). The required Kinesiology courses are identical for both programs. Students who intend to register in the Honours Bachelor of Kinesiology program may take any courses for which they have the prerequisite as their electives. Students who intend to register in the Honours B.Sc. program must successfully complete MATH 1A03; STATISTICS 1CC3; two of BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3, PHYSICS 1B03, 1BB3, PSYCH 1A03 as part of their Level I electives. (See Faculty of Science, Programs and Degrees, Level I Program section of this Calendar.) Both programs provide students the opportunity to complete courses required for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.
3. Upon completion of Kinesiology I, students who do not qualify for an Honours Kinesiology program but whose G.P.A. is at least 3.5 may register in Level II Kinesiology (General). During this time students will have the opportunity to complete the Honours Kinesiology program requirements in an attempt to qualify for Honours Kinesiology at their next review. Such students are strongly encouraged to seek academic counselling prior to registration.

**REQUIREMENTS: 30 UNITS**

- 12 units KINESIOL 1A06, 1E03, 1H03
- 1 course KINESIOL 1KL0
- 18 units Electives (See Note 2 above.)

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**B. Degree Programs**

#### HONOURS PROGRAMS (HONOURS BACHELOR OF ARTS AND HONOURS BACHELOR OF KINESIOLOGY)

Honours Bachelor of Arts programs and the Honours Bachelor of Kinesiology degree program 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. Kinesiology students who successfully complete all requirements of the first three levels of the Honours degree may request permission of the Office of the Associate Dean of Social Sciences to transfer to graduate with a three-level Bachelor of Kinesiology degree.

Students enrolled in an Honours program in the Faculty of Social Sciences, with the exception of Honours Psychology, in addition to meeting the University requirements for an Honours degree (see the General Academic Regulations section in this Calendar) must also fulfill the following breadth and skills requirements prescribed by the Faculty:

- six units from the Faculty of Humanities and/or the Department of Religious Studies. (Students enrolled in Religious Studies programs are required to complete six units from the Faculty of Humanities)
- research methods/statistics as prescribed by the Department(s)
- a course in critical thinking (HUMAN 2C03).

**Eligibility for Honours Kinesiology:** Admission to Level II of the Honours Kinesiology program requires completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03. Kinesiology students who fail to meet these minimum requirements but have a G.P.A. of at least 3.5 may register in Level II Kinesiology (General) and will be given the opportunity to complete the Level II Honours Kinesiology program requirements in an attempt to qualify for Honours Kinesiology at their next review. Such students are strongly encouraged to seek academic counselling prior to registration.

**Honours Bachelor of Arts (Specialist Option):** Economics, offers an Honours (Specialist Option) program which involves greater concentration of work in Economics.

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**Dean of Social Sciences**

S. Elliott/M.A., Ph.D.

**Associate Dean (Acting)**

S. Mestelman/B.A., M.S., Ph.D.

**Assistant Dean (Studies)**

E. Frank/M.A.

**Manager, Experiential Education**

J. Smith/B.A.

**Student Advisors**

K. Cale/B.A.

S. Hunt

E. Moore

W. Spencer/B.A.

The social sciences are concerned with the systematic study of activities and human relationships in societies which range from the pre-industrial to the post-industrial. Social scientists examine social, economic and political problems as well as the interaction between people and their natural and artificial environments. Developments in theory and refinements of method have, in recent years, given great impetus to social science study and research.

The Faculty of Social Sciences offers degrees in the following: Anthropology, Communication Studies, Economics, Geography, Geom­ontology, Health Studies, Kinesiology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work and Sociology.

The Faculty offers Honours Bachelor of Arts, Honours Bachelor of Kinesiology, Bachelor of Kinesiology Major (which is currently being phased out), Bachelor of Social Work and Bachelor of Arts Degrees. 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.
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) 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.S.W. degree is not available in combination with another subject.

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. With approval, up to six units taken to satisfy program requirements may also be used toward the requirements of a minor. 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. For further information see Minors in the General Academic Regulations section of this calendar.

Combined B.A./B.S.W.: The School of Social Work offers a Combined B.A./B.S.W. program of studies leading to a B.A. and B.S.W. degree. (See the program description in this section.) The B.S.W. degree may be attained separately as a subsequent degree by those students who have already received one or more undergraduate degrees.

Bachelor of Kinesiology (Major): The Department of Kinesiology is phasing out its program of studies leading to the B.Kin. Major degree. (See the program description in this section.) The B.Kin. Major Program consists of a total of 120 units of work, normally completed over four years. The last entry into Level IV of the program for qualified students is September 2005.

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 in Indigenous Studies and Another Subject. The other subject may be from the Faculty of Social Sciences or the Faculty of Humanities. These programs may also be combined with the B.S.W. as a four-level program.

Internship Options: Internships allow students to explore careers, to develop employability skills and to make important contacts for job searches after graduation. The Faculty of Social Sciences offers both part-time and full-time, non-credit, paid work opportunities of 4, 8, or 12 months duration. Part-time and summer internships are open to all students and provide valuable workplace experience without extending their degree. Full-time internships of 8 months or more, require registration in an Honours program and there is a nominal administrative fee. Only those students who have successfully completed all of their Level 1 program requirements and SOC SCI 2EL0 may apply for posted opportunities. Internships must be undertaken before a student has completed all requirements for the degree. A brief notation describing the Internship is placed on the student’s transcript upon receipt of a job report from the student and a performance evaluation by the employer.

Further details of internship options may be obtained from:

Internship Coordinator,
Kenneth Taylor Hall, Room 102
(905) 525-9140, extension 23228
email: exp.ed@mcmaster.ca

PART-TIME STUDIES

Subject to limitations of course offerings, a student may pursue on a part-time basis any program in the Faculty of Social Sciences, except for the Kinesiology programs.
DEADLINES
The Faculty of Social Sciences will not consider applications for admission, admission to a second degree or continuing studies, 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.

HUMANITIES/RELIGIOUS STUDIES REQUIREMENT
Students registered in the Faculty of Social Sciences except for those in B.Kin.(Major), Honours Psychology and those completing a B.A. with a B.S.W., are required to complete six units of courses chosen from the Faculty of Humanities and/or the Department of Religious Studies.

Students enrolled in Religious Studies programs are required to complete six units from the Faculty of Humanities.

Students in the B. A. Psychology programs should note the additional Humanities or Science requirements.

ACADEMIC ADVISING
The aim of academic advising is to help students tailor a program of study 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 of the Associate Dean of Social Sciences and the departments or academic units in the Faculty of Social Sciences. It is recommended that students consult with a Departmental Undergraduate Advisor during March in conjunction with the distribution of the new Undergraduate Calendar.

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.

OVERLOAD
Normally students may not register in more than 30 units during the Fall/Winter Session (36 units for students in a B.A./B.S.W. program). In the following circumstances an overload of up to six units may be taken:
1. If a student has a Sessional Average of at least 7.0 in the immediately preceding review period.
2. 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 Session, or more than six units in either term of that Session may do so only with the permission of the Office of the Associate Dean, Social Sciences.

WITHDRAWAL
Students who wish to withdraw from the University are required to advise the Office of the Associate Dean in writing. Students must surrender their McMaster Identification Cards to the Office of the Associate Dean to ensure the processing of any fee refund. 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 university to take courses for credit toward a McMaster degree, must first request a Letter of Permission from the Office of the Associate Dean. Students should take note of any conditions on the Letter of Permission that might apply, including any requirement of a grade of at least C- in order to transfer the credit. Course taken at another university cannot be used to satisfy the university’s minimum residence requirements, will not be included in the calculation of the McMaster average, and therefore cannot be used to raise standing. The transcript designations will read COM, indicating complete, when a grade of C- or better is attained.

STUDENT EXCHANGE PROGRAMS
McMaster University has agreements with institutions in Canada and abroad 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. In addition, 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 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 in any exchange program must discuss their plans with their department and with the Office of the Associate Dean if they intend to transfer credit to their McMaster degree program. Such discussions should begin about one year before they plan to enrol elsewhere.

For further information please see International Study in the General Academic Regulations section in this Calendar. Information concerning Canadian Scholars Exchange Program (CANEX), can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Student Exchanges.

Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

Student Exchanges
Gilmour Hall, Room 104
Phone: (905) 525-9140, extension 24748

DEPARTMENT OF ANTHROPOLOGY

WEB ADDRESS: http://www.socsci.mcmaster.ca/anthro/  

Honours Arts & Science and Anthropology (B.Arts.Sc.; See Arts & Science Program)

ANTHROPOLOGY SUBFIELDS
(Applicable to All Anthropology Programs)

Anthropology includes the four major subfields of Social/Cultural Anthropology, Physical/Biological Anthropology, Archaeology, and Linguistics. Students may specialize in any one of these subfields though it is not necessary to do so. It should be noted, however, that each subfield has its own sequence of courses and prerequisites. (See the Course Listings section in this Calendar.)

CULTURAL/SOCIAL ANTHROPOLOGY
ANTHROP 2B03, 2F03, 2G03, 2GG3, 2H03, 2P03, 2R03, 2X03, 2XX3, 2Z03, 3B03, 3G03, 3L03, 3P03, 3Q03, 3R03, 3T03, 3V03, 3Y03, 3Z23, 4AE3, 4D03, 4I03, 4N03, 4Q03

PHYSICAL/BIOLOGICAL ANTHROPOLOGY
ANTHROP 2AN3, 2DD3, 2D03, 2E03, 2FA3, 2FF3, 2U03, 3C03, 3H03, 3N03, 3PP3, 3R03, 3Z03, 3Z23, 4H03, 4J03, 4R03, 4S03 (Relevant courses are also offered by Biology and Kinesiology.)

ARCHAEOLOGY
ANTHROP 2C03, 2PA3, 2V03, 3W03, 3AS3, 3CC6, 3DD3, 3EE3, 3K03, 3O03, 3EE3, 4F03, 4G03, 4H03, 4I03, 4J03, 4K03, 4R03, 4S03 (Relevant courses are also offered by the School of Geography and Earth Sciences, History and Classics.)

LINGUISTICS
ANTHROP 2LC3, 2LO3, 2LL3, 2LF3, 3A03, 3IO3, 3I03, 4LB3, 4LC3, 4XX3

OTHER COURSES
Courses not distinguished by subfield include the independent study course ANTHROP 3I03; topic courses ANTHROP 3W03, 3WW3, 4Q03, 4G03, as well as the seminar courses ANTHROP 4B03 and 4BB3.

In planning a program, it is important for students to take note of the prerequisites of certain upper-level courses.

Honours Anthropology {2010}

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03.

NOTE
Students who have completed ANTHROP 2103 are not required to take ANTHROP 3L03.
**INTERDISCIPLINARY MINOR IN ARCHAEOLOGY**

See the Interdisciplinary Minors and Thematic Areas section of this Calendar.

**COMMUNICATION STUDIES**

WEB ADDRESS: [http://www.humanities.mcmaster.ca/~cmst](http://www.humanities.mcmaster.ca/~cmst)

Honours Communication Studies

(See Faculty of Humanities, Communication Studies section)

Combined Honours in Communication Studies and Another Subject

Students who registered in this program prior to September 2004 should contact a Student Advisor in the Office of the Associate Dean, Faculty of Social Sciences to discuss their individual program requirements.

**ADMISSION**

Completion of any Level I program and a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from ANTHROP 1A03, 1B03, 1Z03. Satisfaction of the admission requirements for the Honours program in the other B.A. subject.

**NOTES**

1. Students wishing to combine Communication Studies with a subject in the Faculty of Humanities should follow the requirements as outlined below. Those students wishing to combine Communication Studies with a subject in the Faculty of Humanities should follow the requirements as outlined in Combined Honours in Communication Studies and Another Subject in the Faculty of Humanities section of this Calendar. (See Faculty of Humanities section of this Calendar.)

2. Communication Studies is an academic discipline which 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. Students in this program must complete one of the following Streams:

- The Language and Social Life Stream involves the study and discovery of patterns in human language and society. Focus is placed on the art and science of persuasion, linguistic method and the importance of language in political and social life.

- The Cultural Studies Stream focuses on the critical analysis of popular culture through film, the visual arts and a variety of other forms. Unique to the Communication approach to Cultural Studies is a focus on empirical analysis as well as theoretical skills necessary to pursue careers in the field of communications. Students in this program must complete one of the following Streams:

  - The Mass Communication Stream focuses on the organization and functioning of information media such as television, radio, the Internet and the press as major institutions and sources of knowledge and understanding about society.
3. It is strongly recommended that students in the Language and Social Life Stream takeLINGUIST 1A03 and 1A43 in Level 1 or II in order to take upper level linguistics courses.

4. It is recommended that students, especially those in the Language and Social Life Stream, take six units of a language other than English.

COURSE LIST 1 - LANGUAGE AND SOCIAL LIFE STREAM
6 units CMST 2E03, 3G03
3 units from CMST 4J03, 4L03
9 units from CMST 2F03, 2G03, 2V03, 2W03, 3C03, 3D03, 3E03, 3W03, 3Y03, 4D03, 4G03, 4I03, 4L03, 4R03, 4S03, 4T03, PSYCH 2C03, 2H03, 3U03

COURSE LIST 2 - CULTURAL STUDIES STREAM
3 units CMST 2BB3
3 units from CMST 4C03, 4M03
12 units from CMST 2F03, 2I03, 2J03, 2M03, 2MM3, 2N03, 2O03, 2S03, 2T03, 2X03, 2Y03, 3BB3, 3C03, 3F03, 3P03, 3SS3, 3TT3, 3U03, 3WW3, 3X03, 4F03

COURSE LIST 3 - PERFORMANCE STUDIES STREAM
6 units CMST 2G03, 4C03
6 units from CMST 2H03, 2P03, 2R03, 2R3, 2S03, 3U03
6 units from CMST 2F03, 2Q03, 3H03, 3L03, 3M03, KINESIOL 3JJ3, 3T03, 4JJ3

COURSE LIST 4 - MASS COMMUNICATION STUDIES
6 units CMST 2K03, 4E03
3 units from CMST 2L03, 2Z03
3 units from CMST 3C03, 3D03
6 units from CMST 2F03, 2L03, 2Z03, 3C03, 3D03, 3I03, 3K03, 3M03, 4D03

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 Admission above.)
9 units CMST 2B03, 2C03, 2D03
3 units CMST 2A03 or, with permission of Communication Studies Undergraduate Counsellor, an equivalent research methods/statistics course as prescribed by other Social Sciences programs
3 units from CMST 3K03, 3M03, 3Q03
3 units from CMST 4C03, 4N03, 4Q03
18 units from one of the Course Lists (See Note 2 above.)
36 units Courses specified for the other subject
3-6 units from SOC SCI 2J03 or STATS 1CC3* or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject
3 units HUMAN 2C03 (If CMST 2W03 is completed to satisfy above requirements of the Language and Social Life Stream these units will be taken as electives.)
9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

DEPARTMENT OF ECONOMICS

WEB ADDRESS: http://www.socsci.mcmaster.ca/econ/

Honours Arts & Science and Economics (B.Arts.Sc.; See Arts & Science Program)

Honours Economics (Specialist Option) {2151}

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2F03 may be substituted for ECON 2103.
2. ECON 2C03 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.
3. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the Course Listings section of this Calendar for equivalencies.

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.)
24 units ECON 2G03, 2GG3, 2H03, 2H3, 3F03, 3G03, 3LL3, 4A03
6 units from ECON 3A03, 3AA3, 4T03, 4TT3
21 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2K03, 2P03, 2T03 (See Notes 1 and 2 above.)
6 units ECON 2B03 and 3U03 (See Note 3 above.)
3 units* from MATH 1A03 or 1M03
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U or OAC Finite Mathematics)
3 units HUMAN 2C03
24 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 60.

*If requirement completed in Level I, these units will be taken as electives.
**If requirement completed in Level I or with Grade 12 U or M (or OAC) courses, these units will be taken as electives.

Honours Economics {2150}

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2F03 may be substituted for ECON 2103.
2. ECON 2C03 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.
3. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the Course Listings section of this Calendar for equivalencies.

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.)
21 units ECON 2G03, 2GG3, 2H03, 2H3, 3F03, 3G03, 3LL3, 4A03
21 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2K03, 2P03, 2T03 (See Notes 1 and 2 above.)
6 units ECON 2B03 and 3U03 (See Note 3 above.)
3 units* from MATH 1A03 or 1M03
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U or OAC Finite Mathematics)
3 units HUMAN 2C03
33 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2B03 and 3U03) must not exceed 60.

*If requirement completed in Level I, these units will be taken as electives.
**If requirement completed in Level I or with Grade 12 U or M (or OAC) courses, these units will be taken as electives.

Combined Honours in Economics and Another Subject

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of B- in ECON 1A06 or an average of at least 7.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or MATH 1K03 or equivalent. Satisfaction of admission requirements for the Honours program in the other B.A. subject.
NOTES
1. 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.
2. One of Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics), STAT 1L03 is a prerequisite for the research methods courses offered by the Department of Economics (ECON 2B03).
3. Students registered in Combined Honours programs within the Faculty of Social Sciences who wish to satisfy the Inquiry and Honours Seminar requirements specified by the other department may replace ECON 3F03 and 4A03 with another six units Economics.
4. COMMERCE 2F3A may be substituted for ECON 2103.
5. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.

REQUIREMENTS

120 units total (Levels 1 to 4), 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.)
21 units ECON 2G03, 2G93, 2H03, 2H93, 3F03, 3LL3, 4A03
15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Notes 2 and 3 above.)
12 units COMP SCI 2D03, 2E03, 2F03, 2H03, 2M93, 2M9J
15 units from COMP SCI 3E03, 3M03, 3M93, 3M9J, 3T03, 4EB3, 4MN3, 4TB3
3 units Level III or IV Computer Science
6-9 units STAT 2D03 and either STATS 2M03, or 3D03 and 3D93 (or 3D96); or ECON 2B03 and 3U03 (See Note 4 above.)
3 units HUMAN 2C03
12-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the department of Religious Studies.

Honours Economics and Mathematics

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in ECON 1A06 and 1B03 (or a grade of at least B- in ECON 1A06), and a weighted average of at least 7.0 in ECON 1B03, 1BB3 (or 1A06), COMP SCI 1M03, 1M03, MATH 1A03, 1A93 and 1B03. MATH 1B03 may be postponed until Level II.

NOTES
1. Beginning in 2006-2007 admission to the program will require: Completion of any Level I program with a Cumulative Average of at least 6.0, including an average of at least 7.0 in ECON 1B03 and 1BB3 (or a grade of at least B- in ECON 1A06), and a weighted average of at least 7.0 in ECON 1B03, 1BB3 (or 1A06), COMP SCI 1M03, 1M03, MATH 1A03, 1A93 and 1B03. MATH 1B03 may be postponed until Level II.
2. COMMERCE 2F3A may be substituted for ECON 2103.
3. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.
4. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the Course Listings section of this Calendar for equivalencies.

REQUIREMENTS

120 units total (Levels 1 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.)
21 units ECON 2G03, 2G93, 2H03, 2H93, 3F03, 3LL3, 4A03
15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Notes 2 and 3 above.)
12 units COMP SCI 2D03, 2E03, 2F03, 2H03, 2M93, 2M9J
15 units from COMP SCI 3E03, 3M03, 3M93, 3M9J, 3T03, 4EB3, 4MN3, 4TB3
3 units Level III or IV Computer Science
6-9 units STAT 2D03 and either STATS 2M03, or 3D03 and 3D93 (or 3D96); or ECON 2B03 and 3U03 (See Note 4 above.)
3 units HUMAN 2C03
12-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the department of Religious Studies.

Honours Economics and Computer Science

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0, including an average of at least 7.0 in ECON 1A06 and 1B03 (or a grade of at least B- in ECON 1A06), and a weighted average of at least 7.0 in ECON 1B03, 1BB3 (or 1A06), COMP SCI 1M03, 1M03, MATH 1A03, 1A93 and 1B03. MATH 1B03 may be postponed until Level II.

NOTES
1. Beginning in 2006-2007 admission to the program will require: Completion of any Level I program with a Cumulative Average of at least 6.0, including an average of at least 7.0 in ECON 1B03 and 1BB3 (or a grade of at least B- in ECON 1A06), and a weighted average of at least 7.0 in ECON 1B03, 1BB3 (or 1A06), COMP SCI 1M03, 1M03, MATH 1A03, 1A93 and 1B03. MATH 1B03 may be postponed until Level II.
2. COMMERCE 2F3A may be substituted for ECON 2103.
3. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.
4. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the Course Listings section of this Calendar for equivalencies.

REQUIREMENTS

120 units total (Levels 1 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.)
21 units ECON 2G03, 2G93, 2H03, 2H93, 3F03, 3LL3, 4A03
15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Notes 2 and 3 above.)
12 units COMP SCI 2D03, 2E03, 2F03, 2H03, 2M93, 2M9J
15 units from COMP SCI 3E03, 3M03, 3M93, 3M9J, 3T03, 4EB3, 4MN3, 4TB3
3 units Level III or IV Computer Science
6-9 units STAT 2D03 and either STATS 2M03, or 3D03 and 3D93 (or 3D96); or ECON 2B03 and 3U03 (See Note 4 above.)
3 units HUMAN 2C03
12-15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

B.A. in Economics

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 3.5 and a grade of at least C- in ECON 1A06 or an average of at least 4.0 in ECON 1B03 and 1BB3. Credit in Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2F3A may be substituted for ECON 2103.
2. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements, but may be used as electives.
3. Students with prior credit in a course equivalent to ECON 2B03 are exempt from this requirement. See ECON 2B03 in the Course Listings section of this Calendar for equivalencies.

REQUIREMENTS

90 units total (Levels 1 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 2B03, 2G03, 2P03 (See Note 3 above.)
15 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03 (See Notes 1 and 2 above.)
3 units* from MATH 1A03 or 1M03
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U or OAC Finite Mathematics)

30 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. The number of units of Economics courses above Level I (excluding ECON 2R03 and 3U03) must not exceed 36.

*If requirement completed in Level I, these units will be taken as electives.

**If requirement completed in Level I or with Grade 12 U or M (or OAC) courses, these units will be taken as electives.

Minor in Economics

NOTES 1. Although ECON 2G03 and 2H03 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.

2. COMMERCE 2F03 may be substituted for ECON 2J03.

3. ECON 2CC3 and ECON 2L03 may not be used to satisfy economics unit requirements.

REQUIREMENTS 24 units total

6 units ECON 1A06

18 units Level II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2N03, 2P03, 2T03. (See Notes above.)

SCHOOL OF GEOGRAPHY AND EARTH SCIENCES

WEB ADDRESS: http://www.science.mcmaster.ca/geo/

Honours Arts & Science and Geography

(B.Arts.Sc.; See Arts & Science Program)

Honours Geography {2240}

ADMISSION Completion of any Level I program with a Cumulative Average of at least 8.0 including an average of at least 6.0 in six units from GEO 1H33, 1HJ3, ENVIR SC 1A03, 1B03, 1G03.

NOTES 1. One of SOSC SCI 2J03 or STATS 1C03 must be completed by the end of 60 units.

2. Students are encouraged to check prerequisites of upper-level GEO courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.

3. Students who entered the program prior to September 2001, need only complete 12 units of Level IV GEO, including one of GEO 3C03 or 4R06 and will increase their electives by three units.

4. Upon completion of 60 units, including satisfactory completion of admission requirements, Honours Geography students may choose to register in one of the three following specializations:

- Environment and Health
- Geographic Information Systems (G.I.S.) and Spatial Analysis
- Urban Social Geography

These specializations are intended to provide students with opportunities to select courses from recognized areas of geographic inquiry and to acquire knowledge and skills for employment and/or graduate study in these areas. Program codes and requirements for Levels III and IV of each specialization are outlined below. Honours Geography students are not required to complete a specialization. Those who decide not to specialize will remain registered in the Honours Geography program.

5. Students interested in completing a specialization should review admission requirements below.

6. A Minor in Environmental Studies is not permitted for students who are registered in the Honours Geography/Environment and Health Specialization.

7. A Minor in Geographic Information Systems (G.I.S.) is not permitted for students who are registered in the Honours Geography/G.I.S. and Spatial Analysis Specialization Program.

8. Students considering the Geographic Information Systems (G.I.S.) and Spatial Analysis specialization are strongly encouraged to complete MATH 1K03 if a Grade 12 Mathematics U (or OAC Mathematics) was not completed.

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

3 units GEO 2I03

3 units from GEO 2E03, 2HR3

12 units from Level II or III Geo, excluding GEO 2GG3, 2HC3, 2HG3, 2JH3, 2TR6, 2W33, 3A03, 3CC3, 3D03, 3HJ3, 3HR3, 3N03 (See Note 5 above.)

3 units from SOC SCI 2J03 or STATS 1C03 (See Note 1 above.)

3 units HUMAN 2C03

6 units Electives

LEVELS III AND IV: 60 UNITS

(See below for the Levels III and IV requirements for specializations)

3 units GEO 3R03

3 units from GEO 3FE3, 3HJ3

15 units Level IV GEO, including one of GEO 4CC3 or 4R06 (See Note 3 above.)

12 units Level III GEO, excluding GEO 3CC3, 3D03, 3HJ3, 3HR3, 3N03

27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I or II, these units will be taken as electives.

Environment and Health Specialization

{2240868}

ADMISSION Completion of Level II Honours Geography, including GEO 2A03. (See Note 6 above.)

REQUIREMENTS LEVELS III AND IV: 60 UNITS

3 units GEO 3R03

3 units from GEO 3FE3, 3HJ3

12 units from GEO 3A03, 3HJ3, 3HJ3, 3HR3, 3N03

9 units GEO 4A03, 4HR3, 4HY3

6 units Level IV GEO, including one of GEO 4CC3 or 4R06

27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

G.I.S. and Spatial Analysis Specialization

{2240870}

ADMISSION Completion of Level II Honours Geography, including a grade of at least 60% in GEO 2I03 and completion of GEO 2HA3. (See Note 7 above.)

NOTE Students considering this specialization are strongly encouraged to complete MATH 1K03 if a Grade 12 Math U (or OAC Math) was not completed.

REQUIREMENTS LEVELS III AND IV: 60 UNITS

3 units GEO 3R03

3 units from GEO 3FE3, 3HJ3

18 units from GEO 3H33, 3HJ3, 3I03, 3P03, 3Y03, 4D03, 4I03, 4S03

6 units Level IV GEO, including one of GEO 4CC3 or 4R06

30 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.
### Urban Social

#### Geography Specialization

**ADMISSION**
Completion of a Level II Honours Geography program, including one of GEO 2HB3, 2HD3, 2HY3.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Levels III and IV: 60 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 units GEO 3RQ3</td>
</tr>
<tr>
<td>3 units from GEO 3FE3, 3HF3</td>
</tr>
<tr>
<td>12 units from GEO 2HB3, 2HD3, 2HY3 (if not completed in Level II), 3HH3, 3HJ3, 3HT3, 3HJ3, 3HH3</td>
</tr>
<tr>
<td>9 units GEO 4HT3, 4HY3, 4HJ3</td>
</tr>
<tr>
<td>6 units Level IV GEO, including one of GEO 4CC3 or 4R06</td>
</tr>
<tr>
<td>27 units Electives. If not already completed, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.</td>
</tr>
</tbody>
</table>

#### Honours Geography and Environmental Studies

**ADMISSION**
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1HS3, 1HU3, ENVI R SC 1A03, 1B03, 1G03. (See Note 1 below.)

**NOTES**
1. GEO 1HS3, 1HU3 and one of ENVI R SC 1A03, 1B03, 1G03 must be completed by the end of Level II.
2. One of SOC SCI 2J03 or STAT 1CC3 must be completed by the end of Level II.
3. Students are encouraged to check prerequisites of upper-level GEO courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Levels I to IV, which of 48 units may be Level I</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 units from the Level I program completed prior to admission to the program. (See Admission above.)</td>
</tr>
<tr>
<td>18 units GEO 2A03, 2B03, 3A03, 3E03, 3R03, 4A03</td>
</tr>
<tr>
<td>3 units from GEO 2E03, 2HR3</td>
</tr>
<tr>
<td>3 units from GEO 3FE3, 3HF3</td>
</tr>
<tr>
<td>15 units Level I GEO, including one of GEO 4CC3 or 4R06</td>
</tr>
<tr>
<td>12 units Level II GEO, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3</td>
</tr>
<tr>
<td>6 units Level III GEO, excluding GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3</td>
</tr>
<tr>
<td><em>6 units</em> Level I GEO, including one of GEO 4CC3 or 4R06 (See Note 3 above.)</td>
</tr>
<tr>
<td>12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.</td>
</tr>
</tbody>
</table>

*If requirement completed in Level I, these units will be taken as electives.

### Combined Honours in Geography and Another Subject

**ADMISSION**
Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 6.0 in six units from GEO 1HS3, 1HU3, ENVI R SC 1A03, 1B03, 1G03 and satisfaction of admission requirements for the Honours program in the other B.A. subject.

**NOTES**
1. 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 the Arts and Science Program.
2. Students are encouraged to check prerequisites of upper-level GEO courses and to speak with an Undergraduate Advisor in the School of Geography and Earth Sciences regarding course selection.
3. Students who entered the program prior to September 2001, may substitute three units of Level IV GEO with electives.

### B.A. in Geography

**ADMISSION**
Completion of any Level I program with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from GEO 1HS3, 1HU3, ENVI R SC 1A03, 1B03, 1G03.

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Levels I to III, of which 42 units may be Level I</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 units from the Level I program completed prior to admission to the program. (See Admission above.)</td>
</tr>
<tr>
<td>12 units Level II GEO with no more than six units from GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3</td>
</tr>
<tr>
<td>12 units Level III GEO with no more than six units from GEO 3CC3, 3DD3, 3HJ3, 3HR3</td>
</tr>
<tr>
<td>36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.</td>
</tr>
</tbody>
</table>

### Minor in Geography

**REQUIREMENTS**

<table>
<thead>
<tr>
<th>Levels II, III or IV GEO, including at least 6 units of Level III or IV. No more than six units may be from GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 units from GEO 1A03, 1B03, 1G03, 1HB6, 1HS3, 1HU3, ENVI R SC 1A03, 1B03, 1G03, 1H03</td>
</tr>
<tr>
<td>18 units Level II, III or IV GEO, including at least 6 units of Level III or IV. No more than six units may be from GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3</td>
</tr>
</tbody>
</table>

### Minor in Environmental Studies

**NOTES**
1. The Minor in Environmental Studies is not permitted for students who are registered in the Honours Geography/Environment and Health Specialization Program.
2. At least nine of the 12 Course List units must be selected from outside the student's own department or school.
3. At least six Course List units must be outside of GEO.
COURSE LIST

ANTHROP 2A03, 2F03, 2H03, 2U03, 3C03, 3Z03, 4AE3, 4P03
BIOLOGY 2D03, 2E03, 2F03, 3SS3, 3TT3, 4V03
ECON 2J03, 3W03
GEO 2A03, 2GG3, 2HG3, 2WW3, 3A03, 3CC3, 3HE3, 3HH3, 4A03, 4HH3, 4HY3
HEALTHST 4F03
PHILOS 2G03, 2N03
POL SCI 2E06, 3Z03, 3ZZ3, 4D06
RELIG ST 2W03

REQUIREMENTS
24 units total
3 units from GEO 1HS3, 1HU3
3 units from ENVIR SC 1A03, 1B03, 1G03, 1HH3
6 units from GEO 2A03, 3A03, 4A03
12 units from Course List including at least 6 units from Level III or IV. (See Notes 2 and 3 above.)

Minor in Geographic Information Systems (G.I.S.)

NOTES
1. The Minor in Geographic Information Systems (G.I.S.) is not permitted for students who are registered in the Honours Geography/G.I.S. and Spatial Analysis Specialization Program.
2. Students registered in the Honours Geography (B.A.) or any Earth and Environmental Sciences (B.Sc.) program may use six units from GEO 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03, 1HH3; and GEO 2I03 and 3Y03 toward both their program requirements and the G.I.S. Minor.
3. Progression to Level III courses is conditional upon achieving a grade of at least C+ in GEO 2I03. Students who do not meet this requirement may not complete the Minor.

REQUIREMENTS
24 units total
6 units from ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3 (See Note 2 above.)
18 units GEO 2I03, 3I03, 3S03, 3Y03, 4I03, 4S03 (See Notes 2 and 3 above.)

DIPLOMA IN SPATIAL INFORMATION SCIENCE
AND CERTIFICATE IN G.I.S.
(geographical Information Systems)

For further information see the Certificate and Diploma Programs section of this Calendar.

GERONTOLOGICAL STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/gerontology/

Honours Gerontology

{2265}

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 minimum Cumulative Average of 6.0 including a grade of at least B- in GERONTAL 1A03 or 1A06.

NOTES
1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students who have not taken GERONTAL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory gerontology course. Such students must consult the Director regarding equivalency prior to applying.
3. Courses other than those listed in Course List 1 may be substituted with the prior permission of the Director.
4. Students are strongly recommended to complete GERONTAL 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and to complete GERONTAL 3R03 by the end of Level III.
5. Students are strongly recommended to complete GERONTAL 2E03 prior to registration in GERONTAL 3B03.
6. Students are encouraged to complete a professional development course for each year they are in the program.

COURSE LIST

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3D03, 3E03, 3H03, 3P03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2G03, 3C03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOI 3CC3, 3G03, 3HH3

or other designated and approved courses. (See Note 3 above.)

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 minimum Cumulative Average of 6.0 including a grade of at least B- in GERONTAL 1A03 or 1A06 and satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES
1. Students enrolled prior to September 2003 in combined Honours B.A. in Gerontology, Health Studies and another subject should consult an academic advisor in the Office of the Associate Dean, Social Sciences for program requirements.
2. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
3. Students who have not taken GERONTAL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory gerontology course. Such students must consult the Director regarding equivalency prior to applying.
4. Courses other than those listed in Course List 1 may be substituted with the prior permission of the Director.
5. Students are strongly recommended to complete GERONTAL 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and complete GERONTAL 3R03 by the end of Level III.
6. Students who choose to complete a 6 unit, Level IV thesis (Independent study) in the other subject may replace GERONTAL 4A06 with six units of Level III or IV Gerontology or courses from Course List 1. This substitution must be approved by the Director.
7. Students are strongly recommended to complete GERONTAL 2E03 prior to registration in GERONTAL 3B03.
8. Students who entered the program prior to September 2003 do not need to complete GERONTAL 3R03 and will replace these units with electives.
9. Students are encouraged to complete a professional development course for each year they are in the program.

COURSE LIST

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3D03, 3E03, 3H03, 3P03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
FACULTY OF SOCIAL SCIENCES

PHILOS 2D03, 3C03
RELG ST 2C03, 2M03, 2N03, 2W03
SOC WORK 3C03, 4L03, 4R03
SOCIOI 3CC3, 3G03, 3H03
or other designated and approved courses. (See Note 4 above.)

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 GERONTOL 1A03 or 1A06
6 units GERONTOL 4A05 or if available, a thesis in the other subject (See Note 6 above.)
3 units Level IV Gerontology
12 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 4 above.)
35 units Courses as specified for the other subject
6 units GERONTOL 2C03, 3R03 (See Notes 5 and 6 above.)
3-6 units from SOC SCI 2J03, STATS 1CC3* (or GERONTOL 3G03), or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject.
3 units HUMAN 2C03. Students completing Arts and Science with Gerontology are exempt from this requirement.
5-9 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*BIf requirement completed in Level I, these units will be taken as electives.

B.A. in Gerontology {1265}

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 minimum Cumulative Average of 3.5 including a grade of at least C- in GERONTOL 1A03 or 1A06.

NOTES
1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students who have not taken GERONTOL 1A03 or 1A06 in Level I may be considered for admission to the program if they have an equivalent introductory Gerontology course. Such students must consult the Director regarding equivalency prior to applying.
3. Courses other than those listed in Course List 1 may be substituted with the prior permission of the Director.
4. Students in the B.A. in Gerontology and Social Work program should consult with the Director regarding GERONTOL 3B03 (the Gerontology Field Observation requirement) and SOC WORK 3D03.
5. Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.
6. Students are encouraged to complete a professional development course for each year they are in the program.

COURSE LIST 1
ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2H03, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3A03, 3D03, 3E03, 3H03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELG ST 2C03, 2M03, 2N03, 2W03
SOC WORK 3C03, 4L03, 4R03
SOCIOI 3CC3, 3G03, 3H03
or other designated and approved courses. (See Note 3 above.)

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.)
12 units GERONTOL 2B03, 2D03, 3B03, 3D03
3 units GERONTOL 2C03
9 units Level II, III or IV Gerontology or courses from Course List 1 (See Note 3 above.)
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Gerontology

ADMISSION
Enrolment in the Minor is limited. Selection is based on academic achievement but requires, as a minimum, completion of GERONTOL 1A03 with a minimum grade of B- and registration in a four- or five-level program. Gerontological Studies will admit a maximum of 10 students to the Minor each year.

NOTES
1. Application for admission (forms available from the Office of Gerontological Studies) must be made to the Director by April 30.
2. Students may not transfer from the Minor in Gerontology to another Gerontology program except by the normal application process.
3. Kinesiology students completing a Minor in Gerontology may substitute KINESIOL 4SS3 for GERONTOL 2B03.
4. Students completing a Minor in Gerontology must contact the Office of Gerontological Studies to request permission for their Fall/Winter Gerontology courses by May 31.

COURSE LIST 2
ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2H03, 3HH3
GERONTOL 2F03, 3H03, 3J03, 3K03, 3L03, 3M03, 3N03
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3D03, 3E03, 3H03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELG ST 2C03, 2M03, 2N03, 2W03
SOC WORK 3C03, 4L03, 4R03
SOCIOI 3CC3, 3G03, 3H03
or other designated or approved courses. (See Note 3 above.)

REQUIREMENTS
24 units total
3 units GERONTOL 1A03
9 units GERONTOL 2B03, 2D03, 3D03 (See Note 3 above.)
12 units from Course List 2

HEALTH STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/healthst/

Honours Arts & Science and Health Studies
(B.Arts.Sc.; See Arts & Science Program)

Honours Health Studies {2273}

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 minimum Cumulative Average of 6.0 including a grade of at least B- in 3 units from HEALTHST 1A03, 1E03, 1S03 (or SOC SCI 1H03).

NOTES
1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in the Course List may be substituted with the prior permission of the Director of the Health Studies Program. Students wishing to apply for substitutions must contact the Administrative Coordinator of the Health Studies Program.
3. Students who previously completed SCIENCE 2G03 may use these units to fulfill Course List requirements.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who entered the program prior to September 2004 may replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.
FACULTY OF SOCIAL SCIENCES

COURSE LIST

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3
ECON 3203
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3S3S
PHILOS 2D03, 3C03
PSYCH 3B03, 3D03, 3N03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3S03
SOCIOl 3G03, 3HH3
WOMEN ST 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.)
3 units from HEALTHST 2A03, 2AA3
3 units HEALTHST 3A03 (See Note 4 above.)
18 units from Level II, III, IV Health Studies or GERONTOL 4103, of which at least three units must be at Level IV
3 units HEALTHST 4A03
3 units from HEALTHST 4C03, 4D03
12 units from Course List 1 (See Notes 3 and 6 above.)
3 units HEALTHST 2B03
3 units HEALTHST 3G03 (See Note 5 above.)
3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course
3 units HUMAN 2C03
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Combined Honours in Health Studies and Another Subject

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 minimum Cumulative Average of 6.0 including a grade of at least B- in 3 units from HEALTHST 1A03, 1E03, 1503 (or SOC SCI 1H03), and satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES

1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. While students are strongly encouraged to complete HEALTHST 2B03 to satisfy the Research Methods requirement of the degree those who choose to complete the Research Methods course as required by their other component will replace HEALTHST 2B03 with three units of Level II, III or IV Health Studies.
3. Students who previously completed SCIENCE 2G03 may use these units toward Course List 1.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 for 3AA3.
5. Students who entered the program prior to September 2004 or students who have permission of the Director of Health Studies to complete the Research Methods as required by their other component will replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST

(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2FF3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3, 4S03
ECON 3203
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3S3S
PHILOS 2D03, 3C03
PSYCH 3B03, 3D03, 3N03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3S03
SOCIO1 3G03, 3HH3
WOMEN ST 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.)
3 units from HEALTHST 2A03, 2AA3
3 units HEALTHST 3A03 (See Note 4 above.)
18 units from Level II, III, IV Health Studies or GERONTOL 4103, of which at least three units must be at Level IV
9 units from Level II, III or IV Health Studies or GERONTOL 4103, of which at least three units must be at Level IV
3 units HEALTHST 4A03
3 units from HEALTHST 4C03, 4D03
9 units from Course List (See Notes 3 and 6 above.)
36 units courses specified for the other subject
3 units HEALTHST 2B03 or an equivalent research methods course if required by the other subject (See Note 2 above.)
3 units HEALTHST 3G03 (See Note 5 above.)
3-6 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course as prescribed by other Social Sciences programs
3 units HUMAN 2C03
9-12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Health Studies

1273

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 minimum Cumulative Average of 3.5 including a grade of at least C- in 3 units from HEALTHST 1A03, 1E03 or 1503 (or SOC SCI 1H03)

NOTES

1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Courses other than those listed below in Course List 1 may be substituted with the prior permission of the Director of Health Studies Program. Students wishing to apply for substitutions must contact the Administrative Coordinator of the Health Studies Program.
3. Students who previously completed SCIENCE 2G03 may use these units toward Course List 1.
4. Students who entered the program prior to September 2004 may substitute HEALTHST 3A03 or 3AA3.
5. Students who entered the program prior to September 2004 may replace HEALTHST 3G03 with three units of Level II, III or IV Health Studies.
6. Students who completed GERONTOL 2B03 or 3Q03, prior to September 2005, may use these units to fulfill Course List requirements.
COURSE LIST
(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2UO3, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3
ECON 3Z03
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3AO3, 3HH3
KINESIOI 3AO3, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03, 3NN3
RELG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3O03
SOCIOI 3G03, 3HH3
WOMEN ST 2H03, 2HH3

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.)
3 units from HEALTHST 2A03, 2AA3
3 units HEALTHST 3A03 (See Note 4 above.)
3 units HEALTHST 2B03
3 units HEALTHST 3G03 (See Note 5 above.)
6 units Level II or III Health Studies, of which at least three units must be at Level III
6 units from Course List (See Notes 3 and 6 above.)
36 units Electives

Combined B.A. in Health Studies and Another Subject
Level I students who had intended to register in this program or students who were registered prior to September 2003 should see a Student Advisor in the Office of the Associate Dean, Social Sciences for program requirements.

Minor in Health Studies
NOTES
1. Students are responsible for ensuring that course prerequisites are fulfilled.
2. Students who completed HISTORY 3S03 or HTH SCI 3B03 or SOC SCI 1H03 before September 2001 may use these as units toward the minor requirements.
3. Students who completed SCI 2G03 before September 2003 may use these as units toward the minor requirements.
4. KINESIOI 3AO3 and 3SS3 may be used to satisfy Health Studies requirements for Kinesiology students pursuing a Minor in Health Studies.
5. Students who completed GERONTOL 2B03, 3Q03 or HEALTHST 3A03 prior to September 2005, may use these units to fulfill Course List requirements.

COURSE LIST
ANTHROP 2AN3, 2FF3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3, 4S03
ECON 2CC3, 3Z03
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03, 4I03
HEALTHST 2C03, 2D03, 2E03, 2H03, 3C03, 3D03, 3E03, 3F03, 3H03, 3M03, 3Y03
HTH SCI 2G03, 2I03, 2J03, 3Y03
HISTORY 3V03, 3YO3
INDIG ST 3H03, 3HH3
KINESIOI 3SS3
LABS ST 3D03
PHILOS 2D03, 3C03
POL SCI 3M03
PSYCH 3B03, 3N03, 3NN3
RELG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3O03
SOCIOI 3G03, 3HH3, 4G03
WOMEN ST 2H03, 2HH3

REQUIREMENTS
24 units total
3 units from Level I Health Studies (or SOC SCI 1H03)
21 units from the Course List

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT
See the Combined B.A. Indigenous Studies and Another Subject section of this Calendar.

DEPARTMENT OF KINESIOLOGY

WEB ADDRESS: http://www.mcmaster.ca/kinesiology/

Honours Kinesiology (B.Sc.)
(See B.Sc. Program in Kinesiology, Faculty of Science, Department of Kinesiology)

Kinesiology I

ENROLLMENT IN THIS PROGRAM IS LIMITED.

PROGRAM NOTES
1. Qualification is made to the Kinesiology I Program.
2. The Department of Kinesiology offers two Honours program options beyond Level I. The Honours Bachelor of Kinesiology (Hons.B.Kin.) and the Honours Bachelor of Science (Hons. B.Sc.). The required Kinesiology courses are identical for both programs. Students who intend to register in the Honours Bachelor of Kinesiology program may take any courses for which they have the prerequisite as their electives. Students who intend to register in the Honours B.Sc. program must successfully complete MATH 1A03; STATS 1CC3; two of BIOLOGY 1A03, 1A33, CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3, PSYCH 1A03 as part of their Level I electives. (See Faculty of Science, Programs and Degrees, Level I Program section of this Calendar.) Both programs provide students the opportunity to complete courses required for various professional degree programs. Students are strongly encouraged to seek advice in determining which program option is best suited for them.
3. Upon completion of Kinesiology I, students who do not qualify for an Honours Kinesiology program but whose C.A. is at least 3.5 may register in Level II Kinesiology (General). During this time, students will be given the opportunity to complete the Honours Kinesiology program requirements in an attempt to qualify for Honours Kinesiology at their next review. Such students are strongly encouraged to seek academic counselling prior to registration.

REQUIREMENTS: 30 UNITS
12 units KINESIOL 1A06, 1E03, 1H03
1 course KINESIOL 1K03
18 units Electives (See Note 2 above.)

Honours Bachelor of Kinesiology

ADMISSION
Completion of Kinesiology I with a Cumulative Average of at least 6.0 including an average of at least 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES
1. Students may register in a maximum of 15 units of Level III or IV Kinesiology courses in Level III of their program.
2. At some time during their program, students must complete a minimum of six units from the Faculty of Humanities and/or the Department of Religious Studies.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
LEVEL I: 30 UNITS
30 units from Kinesiology I completed prior to admission to the program. (See Admission above.)

LEVEL II: 30 UNITS
15 units KINESIOL 2A03, 2C06, 2G03, 2H03
3 units HUMAN 2C03
3 units from SOC SCI 2J03, STATS 1C3* 9 units Electives

LEVELS III AND IV: 60 UNITS
30 units Level III or IV Kinesiology (See Note 1 above.)
30 units Electives (See Note 2 above.)
* If requirement completed in Level I these units may be taken as electives.
Bachelor of Kinesiology Major
(Formerly Bachelor of Kinesiology)

NOTES
1. The Bachelor of Kinesiology (Major) program is being phased out. Last entry into Level I of the program will be in September 2005.
2. Students may register in a maximum of nine units of Level III or IV Kinesiology courses in Level III of their program.

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

LABOUR STUDIES

WEB ADDRESS: http://socsci.mcmaster.ca/labourstudies/

Honours Labour Studies {2640}

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 Cumulative Average of at least 7.0 in LABR ST 1A03 and 1Z03 (or 1A03). Satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES
1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
3. Students are encouraged to consult the Labour Studies website at: http://socsci.mcmaster.ca/labourstudies/.
4. Students may not transfer to another Labour Studies program except by the normal application process.
5. Students who complete a six unit Research Methods/Statistics course will reduce their elective component by three units.
6. Students combining Labour Studies with a Humanities subject or with Religious Studies must complete LABR ST 4A06 and SOC SCI 2J03 or STATS 1CC3. Students in other Combined Honours Programs may complete the Honours Seminar requirement as specified by the other Department and replace LABR ST 4A06 with six units Level III Labour Studies courses.
7. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2106, will use this course to satisfy six units of Course List 1 and not Course List 2.
8. Students who have completed LABR ST 4D03 need not complete LABR ST 4G03 or 4E03.
9. Students are encouraged to complete LABR ST 3H03 before registering in 4A06.

COURSE LIST 1

COMMERCE 2B3A, 4BC3, 4BD3
LABR ST 2B03, 2B3A, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3W03

COURSE LIST 2

COMMERCE 3BC3
ECON 2C03, 2E03, 2F03, 2K03, 2N03
GERONTOL 3J03
HISTORY 3N03
POL SCI 3D03, 3E03, 3EE3, 3F03
SOCIO 2E06, 2H03, 2Q06, 2R03, 2RR3, 2V06, 3F06, 3LL3

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.)
18 units LABR ST 2A03, 2C03, 2D03, 3H03, 4A06 (See Note 6 above.)
15 units from Course List 1, where at least 9 units must be selected from Level III or IV courses (See Note 5 above.)
3 units from LABR ST 4C03, 4E03
36 units courses specified for the other subject
3 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent Research Methods/Statistics course specified by the other subject. (See Note 5 above.)
3 units HUMAN 2C03
39-42 units Electives.

Combined Honours in Labour Studies and Another Subject

COMMERCE 2B3A, 4BC3, 4BD3
LABR ST 2B03, 2B3A, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3W03

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.)
18 units LABR ST 2A03, 2C03, 2D03, 3H03, 4A06 (See Note 6 above.)
15 units from Course List 1, where at least 9 units must be selected from Level III or IV (See Note 7 above.)
3 units from LABR ST 4C03, 4E03
36 units courses specified for the other subject
3 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent Research Methods/Statistics course specified by the other subject. (See Note 5 above.)
3 units HUMAN 2C03. Students combining Honours Arts & Science with Labour Studies are exempt from this requirement.
12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

B.A. in Labour Studies {1640}

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 Cumulative Average of at least 6.0 including an average of at least 7.0 in LABR ST 1A03 and 1Z03 (or 1A03). Satisfaction of admission requirements for the Honours B.A. program in the other subject.

NOTES
1. Subject to meeting admission requirements, students may combine two subjects and be graduated with a combined B.A. degree. These combinations are available within the Faculty, with programs in the Faculty of Humanities and with the Arts and Science Program.
2. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
3. Students are encouraged to consult the Labour Studies website at: http://socsci.mcmaster.ca/labourstudies/.
4. Students may not transfer to another Labour Studies program except by the normal application process.
5. Students who complete a six unit Research Methods/Statistics course will reduce their elective component by three units.
6. Students combining Labour Studies with a Humanities subject or with Religious Studies must complete LABR ST 4A06 and SOC SCI 2J03 or STATS 1CC3. Students in other Combined Honours Programs may complete the Honours Seminar requirement as specified by the other Department and replace LABR ST 4A06 with six units Level III Labour Studies courses.
7. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2106, will use this course to satisfy six units of Course List 1 and not Course List 2.
8. Students who have completed LABR ST 4D03 need not complete LABR ST 4G03 or 4E03.
9. Students are encouraged to complete LABR ST 3H03 before registering in 4A06.

COURSE LIST 1

COMMERCE 2B3A, 4BC3, 4BD3
LABR ST 2B03, 2B3A, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3W03

COURSE LIST 2

COMMERCE 3BC3
ECON 2C03, 2E03, 2F03, 2K03, 2N03
GERONTOL 3J03
HISTORY 3N03
POL SCI 3D03, 3E03, 3EE3, 3F03
SOCIO 2E06, 2H03, 2Q06, 2R03, 2RR3, 2V06, 3F06, 3LL3

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.)
18 units LABR ST 2A03, 2C03, 2D03, 3H03, 4A06 (See Note 6 above.)
15 units from Course List 1, where at least 9 units must be selected from Level III or IV (See Note 7 above.)
3 units from LABR ST 4C03, 4E03
36 units courses specified for the other subject
3 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent Research Methods/Statistics course specified by the other subject. (See Note 5 above.)
3 units HUMAN 2C03. Students combining Honours Arts & Science with Labour Studies are exempt from this requirement.
12 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.
NOTES
1. Application for admission must be made by April 30. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Students are encouraged to consult the Labour Studies website at: http://socserv.mcmaster.ca/labourstudies/.
3. Students may not transfer to another Labour Studies program except by the normal application process.
4. Students who entered the program prior to September 2003, and who completed LABR ST/SOCIOL 2106 may use this course to satisfy six units of Course List 1.

COURSE LIST 1

COMMERCIAL 2BA3, 4BD3
LABR ST 2B03, 2B03, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3W03

REQUIREMENTS
30 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 LABR ST 2A03, 2C03, 2D03, 3G03, COMMERCIAL 4B03
15 units from Course List 1, where at least nine units must be selected from Level III or IV courses. (See Note 4 above.)
30 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

*If requirement completed in Level I, these units will be taken as electives.

Minor in Labour Studies

ENROLMENT IS LIMITED.
Labour Studies will admit a maximum of 10 students to the Minor each year.

NOTES
1. Application for admission (forms available from Labour Studies Office), must be made to the Chair, Admissions Committee, by April 30.
2. Students working towards a Minor in Labour Studies may take no more than three units of Level IV Labour Studies courses.
3. Students are encouraged to consult the Labour Studies website at: http://socserv.mcmaster.ca/labourstudies/.
4. Students may not transfer from the Minor in Labour Studies to another Labour Studies program except by the normal application process.
5. Students who have completed LABR ST 2A06 may take nine units Level II, III, IV Labour Studies instead of 12 units.

REQUIREMENTS
24 units total
6 units LABR ST 1A03 and 1Z03 (or 1A03)
6 units LABR ST 2A03, (See Note 5 above.) 2C03
12 units Level II, III or IV Labour Studies (See Note 2 above.)

DEPARTMENT OF POLITICAL SCIENCE

WEB ADDRESS: http://www.socscl.mcmaster.ca/polisci/

Honours Arts & Science and Political Science

(B.Arts.Sc.; See Arts & Science Program)

Honours Political Science (2450)

ADMISON
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in POL SCI 1G06 or 1A06.

NOTES
1. Students should be alert 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 fail the necessary prerequisites must obtain the permission of the instructor.
2. POL SCI 3N06 and 2006 are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. 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.)
6 units POL SCI 2006
24 units Level II, III, IV Political Science of which a minimum of 12 units may be Level II
12 units Level IV Political Science
6 units POL SCI 3N06
3 units HUMAN 2C03
39 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. (The maximum Political Science courses to be taken is 60 units.)

Combined Honours in Political Science and Another Subject

ADMISION
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in POL SCI 1G06 or 1A06. Satisfaction of the admission requirements for the Honours program in the other subject.

NOTES
1. 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.
2. Students should be alert 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.
3. POL SCI 2006 and 3N06 are required for students enrolled in Honours Political Science programs and they are recommended for students in the B.A. 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.)
6 units POL SCI 2006
9 units Level III Political Science
9 units Level II, III, IV Political Science
6 units Level IV Political Science
36 units courses specified for the other subject
6 units POL SCI 3N06 or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject.
3 units HUMAN 2C03. Students combining Honours Arts and Science with Political Science are exempt from this requirement.
15 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Political Science with Arts & Science, or with a Humanities subject, are exempt from this requirement. (The maximum Political Science courses to be taken is 54 units.)

B.A. in Political Science

(1450)

ADMISION
Completion of any Level I program with a Cumulative Average of at least 3.5 including a grade of at least C- in POL SCI 1G06 or 1A06.

NOTES
1. Students should be alert 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.
2. POL SCI 2006 and 3N06 are required for students enrolled in Honours Political Science programs and they are recommended for students in B.A. programs.
**FACULTY OF SOCIAL SCIENCES**

**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.)
  - 12 units Level II Political Science
  - 12 units Level III Political Science
  - 36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. (The maximum Political Science courses to be taken is 36 units.)

**Minor in Political Science**

**NOTE**

Level IV courses have limited enrolment with preference given to Honours Political Science students. Students must apply by ballot through the Department.

**REQUIREMENTS**

- 24 units total
  - 6 units Level I Political Science
  - 18 units Level II, III, IV Political Science of which up to 12 units may be Level II

**DEPARTMENT OF PSYCHOLOGY**

**WEB ADDRESS:** http://www.mcmaster.ca/psychology

**Honours Arts & Science and Psychology (B.Arts.Sc.; See Arts & Science Program)**

**Honours Biology and Psychology (B.Sc.)**

(See B.Sc. programs in Biology, Faculty of Science, Department of Biology)

**Honours Psychology (B.Sc.)**

(See B.Sc. programs in Psychology, Faculty of Science, Department of Psychology)

**Honours Psychology (B.A.)**

\{2460\}

**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0; an average of at least 7.0 in PSYCH 1A03 and 1A03 (or a grade of at least B- in each of PSYCH 1A03 and 1A03 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

**NOTES**

1. **Beginning 2006-2007: 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 Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1A03 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

2. **Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.**

3. **STATS 1CC3 and PSYCH 2RR3 must be completed before entrance into Level III of the program.** Students wishing to have more mathematical statistics may replace STATS 1CC3 and PSYCH 2RR3 with STATS 2D03 and 2M33. In this case, students are advised to take MATH 1B03 in Level 1 and consult with a departmental advisor.

4. **Upon satisfactory completion of Level II Honours Psychology and subject to meeting the admission requirements, students may choose to register in one of the following four specializations:**
   - Behavioural Neuroscience Specialization
   - Cognition and Perception Specialization
   - Developmental Specialization
   - Evolution and Social Behaviour Specialization

Admission requirements, program codes and requirements for each specialization are outlined below. Students who choose not to specialize will remain registered in the Honours Psychology program.

5. **Beginning September 2002 for students who entered Level II, one of BIOLOGY 1K03, 1A03, 1A03 must be completed by the end of Level II. Students who entered prior to September 2002, must complete three units from the Faculty of Science, excluding the Math and Statistics courses required for the program.**

6. **Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3QQ3, 4QQ3, 4D06, 4D09.**

7. **In many cases there are Level II (and III) prerequisites for Level III (and IV) courses. These should be considered when choosing Level II (and III) courses.**

8. **Students who previously completed KINESIOL 4P03 (The Brain and Human Movement) may use this course as a substitution for Level IV Psychology.**

9. **Students who previously completed NEURCOMP 3W03 (Neural Computation) may use these units as three units of Course List 1.**

10. **MATH 1B03 (Linear Algebra 1) is strongly recommended for students intending to pursue graduate work in Psychology. One of MATH 1J03 (Mathematical Computing), 1MA3 (Computer Science I) or 1SA3 (Computing Fundamentals) is highly recommended for students in the Behavioural Neuroscience and Cognition and Perception Specializations, and for students intending to pursue graduate work in Psychology.**

11. **Students who entered the program prior to September 2002, may replace six units of courses chosen from the Course List 2 (Capstone Courses) with any six units of Level III or IV Psychology.**

12. **For Psychology courses with limited enrolment which require permission by pre-registration ballot, students must complete and submit a ballot by April 20, 2005. Ballots can be obtained on the Psychology Department web site at: http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology programs.**

**COURSE LIST 1 (LAB COURSES)**

- **PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QO3, 3S03, 3V03, 4QQ3**

**COURSE LIST 2 (CAPSTONE COURSES)**

- **PSYCH 3l06, 4BB3, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4Q03, 4R03**

**COURSE LIST 3 (PSYCHOLOGY COURSE LIST)**

- **BIOLOGY 4T03**
- **KINESIOL 3E03**

All Level III and IV Psychology courses

**REQUIREMENTS**

- 120 units total (Levels I to IV), of which 42 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 **STATS 1CC3**, **PSYCH 2RR3** (See Note 3 above.)
- 9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 (Students interested in completing a specialization should review admission requirements below.)
- 3 units* from BIOLOGY 1A03, 1A03, 1K03 (See Note 6 above.)
- 3 units HUMAN 2C03
- 9 units Electives

*If requirement completed in Level I, these units will be taken as electives.

**LEVELS III AND IV: 60 UNITS**

(See below for the Level III and IV requirements for specializations.)

- 21 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and 18 units from Course List 3
- 3 units from Course List 1 (Completion recommended by the end of 90 units.)
- 6 units from Course List 2 (See Notes 6 and 12 above.)
- 30 units Electives

**Honours Psychology Specializations**

- Upon satisfactory completion of Level II Honours Psychology, and subject to meeting the admission requirements, students may choose to register in one of the following four specializations. Students who choose not to specialize will remain registered in the Honours Psychology program.
Behavioural Neuroscience [2460874]

Specialization

ADMISSION
Completion of Level II Honours Psychology, including PSYCH 2F03.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
15 units from PSYCH 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3V03, 3W03, 3X03, 3Y03, 3Z03;
12 units from Course List 1 or two additional units from Course List 2 and six units from Course List 3;
6 units from Course List 2.
24 units Electives

Cognition and Perception [2460882]

Specialization

ADMISSION
Completion of Level II Honours Psychology, including PSYCH 2E03, 2H03.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
18 units from PSYCH 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3V03, 3W03, 3X03, 3Y03, 3Z03;
6 units from Course List 2.
24 units Electives

Developmental Specialization [2460878]

ADMISSION
Completion of Level II Honours Psychology.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
3 units PSYCH 3G03;
6 units from 3I03, 3J03, 3K03;
6 units from 3I03, 3J03, 3K03 (if not already taken), 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 3S03, 3T03, 3U03, 3V03, 3W03, 3X03, 3Y03, 3Z03 (if not already taken);
3 units from Course List 1 or two additional units from Course List 2 and six units from Course List 3;
6 units from Course List 2;
24 units Electives.

Evolution and Social [2460880]

Behaviour Specialization

ADMISSION
Completion of Level II Honours Psychology, including PSYCH 2TT3.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
15 units from PSYCH 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 2W03, 2X03, 2Y03, 2Z03;
3 units from Course List 1 or two additional units from Course List 2 and six units from Course List 3;
6 units from Course List 2;
24 units Electives.

Combined Honours In Psychology and Another Subject (B.A.)

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0, an average of at least 7.0 in PSYCH 1A03, 1A03, 1A06 or 1M03 or a grade of at least 8.0 in PSYCH 1A03 and credit in MATH 1A03 or a grade of at least C- in MATH 1M03. Satisfaction of the admission requirements for the Honours program in the other subject.

NOTES
1. Beginning 2006-2007: 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 Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1A03 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.
2. 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 the Arts and Social Sciences.
3. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.
4. STATS 1C03 and PSYCH 2R03 must be completed before entrance into Level III of the program. Students wishing to have more mathematical statistics may replace STATS 1C03 and PSYCH 2R03 with STATS 2D03 and 2M03. In this case, students are advised to take MATH 1B03 in Level I and consult with a departmental advisor.
5. Beginning September 2002 for students who entered Level II, one of BIOLOGY 1K03, 1A03, 1A03 must be completed before the end of Level II. Students who entered prior to September 2002, must complete three units from the Faculty of Science, excluding the Math and Statistics courses required for the program.
6. Students considering applying to graduate school should complete a course with a strong research component such as PSYCH 3Q03, 3R03, 4D06, 4D09.
7. In many cases there are Level II (and III) prerequisites for Level III and courses. These should be considered when choosing Level II (and III) courses.
8. Students who previously completed KINESIOL 4P03 (The Brain and Human Movement) may use this course as a substitute for Level IV Psychology.
9. Students who previously completed NEURCOMP 3W03 (Neural Computation) may use these units as three units of Course List 1.
10. MATH 1B03 (Linear Algebra 1) is strongly recommended for students intending to pursue graduate work in Psychology. One of MATH 1J03 (Mathematical Computing), COMP SCI 1MA3 (Computer Science I) or 1SA3 (Computational Fundamentals) is highly recommended for students in the Behavioural Neuroscience and Cognition and Perception Specializations, and for students intending to pursue graduate work in Psychology.
11. Students who entered the program prior to September 2002, may replace six units of courses chosen from the Course List 2 (Capstone Courses) with any six units of Level III or IV Psychology.
12. For Psychology courses with limited enrolment which require permission by pre-registration ballot, students must complete and submit a ballot by April 20, 2006. Ballots can be obtained on the Psychology Department website at: http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology programs.

COURSE LIST 1
PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3QQ3, 3S03, 3V03, 4Q03

COURSE LIST 2 (PSYCHOLOGY COURSE LIST)
BIOLOGY 4T03
KINESIOL 3E03
All Level III and IV Psychology courses.
DEPARTMENT OF RELIGIOUS STUDIES

FACTORIY OF SOCIAL SCIENCES

REQUIREMENTS

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

LEVEL II: 30 UNITS

6 units STAT 1CC*; PSYCH 2RR3 (See Note 4 above.)
6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units* from BIOLOGY 1A03, 1AA3, 1K03 (See Note 5 above.)
12 units courses as specified for the other subject
3 units HUMAN 2C03. Students combining Honours Arts and Science with Psychology are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

LEVEL III: 30 UNITS

3 units Course List 1
9 units Course List 2, or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and six units from Course List 2
12 units courses as specified for the other subject
6 units Electives

LEVEL IV: 30 UNITS

12 units Course List 2
12 units courses as specified for the other subject
6 units Electives

B.A. in Psychology {1460}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in PSYCH 1A03 and 1AA3 or a grade of at least C- in PSYCH 1A06.

NOTES

1. Completion of one of MATH 1A03, 1K03 or 1M03 is required in Level II. Completion in Level I is highly recommended.
2. One of STATS 1A03 or 1CC3 must be completed before entrance into Level III of the program.
3. Beginning September 2002 completion of one of BIOLOGY 1K03, 1A03, 1AA3 by the end of 60 units is required for all Honours B.A. Psychology programs and is strongly recommended for B.A. programs.
4. For Psychology courses with limited enrolment which require permission by pre-registration ballot, students must complete and submit a ballot by April 20, 2005. Ballots can be obtained on the Psychology Department web site at: http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology programs.

REQUIREMENTS

90 units total (Levels I to III), of which 42 units may be Level I

LEVEL II: 30 UNITS

3 units from STATS 1A03, 1CC3. (See Note 2 above.)
6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units Level II Psychology
3 units* from MATH 1A03, 1K03 or 1M03 (See Note 1 above.)
6 units from Humanities or Science, excluding Psychology
6 units Electives, excluding Psychology
3 units Electives

*If requirement completed in Level I, these units will be taken as electives.

LEVEL III: 30 UNITS

12 units Level III Psychology, or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and nine units from Level III Psychology
6 units from Humanities or Science, excluding Psychology
6 units Electives, excluding Psychology
6 units Electives

Minor in Psychology

NOTE

When choosing Level II Psychology courses, students should consider the prerequisite requirements for the various Level III courses as most require completion of a statistics course and three to six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3.

REQUIREMENTS

24 units total
6 units PSYCH 1A03 and 1AA3 or 1A06
12 units Level II or III Psychology
6 units Level III Psychology

Honours Arts & Science and Religious Studies

(B.Arts.Sc.; See Arts & Science Program)

FIELDS OF STUDY

The Department offers courses in four fields of study. Students are encouraged to specialize in any one of these fields. Level II, III and IV courses are allocated to the fields as follows:

I. ASIAN RELIGIONS

REVEL ST 2E03, 2F03, 2D03, 2L03, 2P06, 3AA3, 3E03, 3L03, 3P03, 3S03, 3U03, 3UU3, 3V03

SANSKRIT

3A06, 4B06

II. BIBLICAL STUDIES

REVEL ST 2B03, 2DD3, 2E03, 2G03, 2H03, 2V03, 2YY3, 2ZZ3, 3DD3, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03

HEBREW

2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

REVEL ST 2C03, 2EA3, 2EB3, 2F03, 2J03, 2K03, 2MM3, 2QQ3, 2QQ3, 2U03, 2V03, 2ZZ3, 3A03, 3B03, 3C03, 3KK3, 3L03, 3M03, 3N03, 3O03, 3P03, 3S03, 3ZZ3

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

REVEL ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2W03, 2WW3

NOTE

Students wishing to specialize in Asian Religions should consider beginning language training in Sanskrit or Japanese or both early in their program (see the calendar offerings listed under these headings in the Course Listings section of this Calendar). Students wishing to specialize in Biblical Studies should consider work in Greek (see offerings under Classics, Greek in the Course Listings section of this Calendar) or Hebrew or both.

Honours Religious Studies {2475}

ADMISSION

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

NOTES

1. All honours students are strongly urged to consult a departmental undergraduate advisor in the selection of their Level III and IV courses.
2. Part-time students should note that RELIG ST 3F03 and 4A06 are regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
4. Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2F03 or 2V03 toward the Contemporary and Comparative Fields of Study.

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 from Asian Religions
3 units from Biblical Studies
3 units from Western Religious Thought
3 units from Contemporary and Comparative Religions (See Note 4 above.)
15 units RELIG ST 3F03, 4A06, 4J06
18 units of Level II, III or IV Religious Studies of which at least six units must be from Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
6 units* from Linguistics, a language other than English or Statistics
3 units HUMAN 2C03
33 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities.

*If requirement completed in Level I, these units will be taken as electives.

**Combined Honours in Religious Studies and Another Subject**

**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 6.0 including an average of at least 7.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course. Satisfaction of the admission requirements for the honours program in the other subject.

**NOTES**

1. 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.
2. All honours students are required to consult a departmental undergraduate advisor in the selection of their Level three and four courses.
3. Part-time students should note that RELIG ST 3F03 and 4A06 are regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
4. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
5. Students must consult both departments to determine the manner in which the Research Methods/Statistics requirement is to be satisfied.
6. Students required to complete a thesis in the other subject may replace RELIG ST 4A06 and 4J06 with 12 units of Levels III or IV Religious Studies courses. This substitution must be approved in writing by a departmental undergraduate advisor.
7. Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2C03 or 2V03 toward the Contemporary and Comparative requirement Fields of Study.

**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 from Asian Religions
3 units from Religious Studies
15 units RELIG ST 3F03, 4A06, 4J06 (See Note 6 above.)
12 units Level II, III or IV Religious Studies of which at least six units must be Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
36 units courses specified for the other subject
6 units* from Linguistics, a language other than English, Statistics or in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics course specified for the other subject. (See Note 5 above.)
3 units HUMAN 2C03. Students combining Honour's Arts and Science with Religious Studies are exempt from this requirement.
9 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. Students combining Religious Studies with Arts & Science, or with a Humanities subject are exempt from this requirement.

*If requirement completed in Level I, these units will be taken as electives.

**B.A. in Religious Studies**

**ADMISSION**

Completion of any Level I program with a Cumulative Average of at least 3.5 and an average of at least 4.0 in six units of Religious Studies courses, preferably including one Level I Religious Studies course.

**NOTES**

1. All students should consult the Departmental Handbook and are strongly urged to consult a departmental undergraduate advisor at least once each year.
2. Part-time students should note that RELIG ST 3F03 is regularly offered in the evening. Other courses required for completion of the degree are offered in the evening whenever possible. Students who anticipate difficulty in fulfilling program requirements should consult a departmental undergraduate advisor as early as possible in their program.
3. With the written approval of a departmental undergraduate advisor, courses from other departments may be substituted for Religious Studies.
4. Students who entered the program prior to September 2004 may use RELIG ST 2EA3, 2EB3, 2C03 or 2V03 toward the Contemporary and Comparative requirement Fields of Study.

**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.)
3 units from Asian Religions
6 units three units each from two of Biblical Studies, Western Religious Thought and Contemporary and Comparative Religions (See Note 4 above.)
3 units RELIG ST 3F03
12 units Level II, III or IV Religious Studies of which at least six units must be Level III. Level III courses which have been taken to satisfy the above fields of study requirements may be subtracted from these six units of Level III.
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities. (The maximum Religious Studies courses to be taken is 48 units.)

**Minor in Religious Studies**

**REQUIREMENTS**

24 units total
24 units Religious Studies courses with no more than six units from Level I

**SCHOOL OF SOCIAL WORK**

**WEB ADDRESS:** http://www.socsci.mcmaster.ca/socwork/

**Combined Bachelor of Arts/Bachelor of Social Work (B.A./B.S.W.)**

**ADMISSION**

Completion of any Level I program, including two of PSYCH 1A03 and 1AA3 or 1A06, SOCIO 1A01, SOCIO 1A06, SOCIO 2A01, normally with a CA 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. An applicant must complete Level I (40 units) by April of the year in which application is made.

In choosing Level I courses, the student should take care to include those courses that will allow entry to the B.A. program. Students should consult the relevant sections of the Calendar and/or the Office of the Associate Dean.

Enrolment in the Combined B.A./B.S.W. program is limited. Students who intend to apply for the combined B.A. and B.S.W. program must follow the application instructions as found on the School of Social Work web site: http://www.sccsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must consult the School of Social Work prior to the application deadline.
All applications for admission to the School of Social Work are considered annually and must be made directly to the School well before March 1 for the Fall/Winter term. Aboriginal students (includes First Nations and Métis) may select an alternate application process. Those who wish to do so should consult the School of Social Work for details.

Applicants transferring from other universities (see Two-Tier Applications below) must also apply through the Ontario Universities’ Application Centre (OUAC) and are required to meet the introductory Psychology, Sociology and Social Work prerequisites. Students admitted to the Combined program who have completed B.A. work beyond Level I normally will require three years after admission to complete the program.

**TWO-TIER APPLICATIONS**

If you are transferring from a university other than McMaster, or a college, you must complete two application forms as follows:

1. **General Application (December 1)**
   - If you wish to study full-time, obtain a 10SD application form from the Admissions Office of any Ontario university. Complete the form showing both your interest in the B.A./B.S.W. program, and the subject you wish to take for the B.A. component. The form should be returned to OUAC, with the appropriate fee.
   - If you wish to study part-time, complete a McMaster University Application form which can be obtained from OUAC or directly from McMaster, at the Office of the Registrar, Gilmour Hall, Room 108. Return the form to OUAC with the appropriate fee.
   - To allow adequate time for the processing of the General Application, applicants are advised to submit their applications by December 1.

2. **Supplementary Application (March 1)**
   - Students must follow the application instructions as found on the Social Work web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work prior to March 1. This form is used to decide when applicants are able to write an admissions test, which is scheduled for two dates in March of each year, both on-site and at alternative testing centres outside Hamilton.
   - Adequate time is needed to make these arrangements and to complete the admissions process. Therefore, it is impossible to consider applications whose Supplementary Application arrives after the March 1 deadline. Questions or concerns may be directed to the School of Social Work.

**NOTES**

1. **Course Groupings:** There are two groups of courses in the Social Work program:
   - Foundation for Social Work includes core courses which are required.

**FOUNDATION FOR SOCIAL WORK**

- SOC WORK 2A06, 2B03, 2B03, 2E03, 3A03, 3D06, 3D06, 4D06, 4D06, 4H03, 4I03, 4X03

**SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK**

- SOC WORK 3C03, 3H03, 3K03, 3L03, 4B03, 4C03, 4F03, 4G03, 4J03, 4K03, 4L03, 4M03, 4N03, 4P03, 4R03, 4X03

2. **Progression Within Program:** Students must achieve a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2B03, 2E03, 3A03, 3D06, 4D06, 4J03, 4K03, and 4X03, a Pass in SOC WORK 3D06 and 4D06 and a C of at least 6.0.

3. **Students must complete three units of Social Sciences Research Methods (e.g., SOCIO1 2203, or GERONTOL 2C03). A statistics course may not substitute for a research methods course.**

4. **Graduation:** To qualify for the B.A./B.S.W. degrees, students must complete a total of at least 60 units of Social Work: 48 units towards the B.S.W. degree and 12 units Social and Political Context of Social Work courses including SOC WORK 4J03 as elective for the B.A. program.

The B.S.W. degree component will be granted only if the student has achieved a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2B03, 2E03, 3A03, 3D06, 4D06, 4J03, 4K03, and 4X03, a Pass in SOC WORK 3D06 and 4D06 and a C of at least 6.0.

5. **Students are expected to assume the cost of travelling to and from field practice agencies.**

**REQUIREMENTS**

- **138 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.)
  - 15 units SOC WORK 2A06, 2B03, 2B03, 2E03, 3A03, 3D06, 4D06, 4J03, 4K03, and 4X03, which must be completed prior to enrolling in SOC WORK 3D06 and 3D06.
  - 12 units SOC WORK 3D06, 3D06 (which must be completed prior to enrolling in SOC WORK 4D06 and 4D06)
  - 12 units SOC WORK 4D06, 4D06
  - 9 units SOC WORK 3A03, 4D03, 4X03
  - 12 units SOC WORK 4J03 and nine additional units selected from the Social and Political Context of Social Work courses (See Note 1 above.)
  - 4 units Social Sciences Research Methods. These units will be taken as electives for the B.A. (See Note 3 above.)
  - 24 units courses specified for the B.A. (This may vary according to the B.A. program.)
  - 21 units Electives. (Other requirements may be specified by the B.A. program.)

**Bachelor of Social Work (B.S.W.) [1620]**

**ADMISSION**

Completion of an undergraduate degree from a recognized university, including two of introductory Psychology, Sociology or Social Work (equivalent to the McMaster courses PSYCH 1A03 and 1A04 (or 1A06), SOCIOLOGY 1A06, SOCIOLOGY 1A06) normally with an average of at least 6.0 or its equivalent, and evidence of personal suitability which may be evaluated by one or a combination of written statements, interviews, or tests.

An applicant is required to complete the prerequisite undergraduate degree work by April of the year in which application is made. Aboriginal students (includes First Nations and Métis) 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 web site: http://www.socsci.mcmaster.ca/socwork/ugrdprog/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work well before the March 1 deadline for the Fall/Winter term. 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 March 1 for the Fall/Winter term.

**TWO-TIER APPLICATIONS**

Individuals interested in the B.S.W. program must complete two application forms as follows:

1. **General Application (December 1)**
   - If you wish to study full-time, you must obtain either a 10SD application form from the Admissions Office of any Ontario university or, if you are a McMaster graduate, obtain the McMaster Returning Student Application form from the Office of the Registrar, Gilmour Hall, Room 108. You must return the completed form to the appropriate office (either the Ontario Universities’ Application Centre (OUAC) or to the Office of the Registrar, Gilmour Hall, Room 108) with the appropriate fee.
   - If you wish to study part-time, you must obtain either a McMaster University Part-Time Application form or, if you are a McMaster graduate, a McMaster Returning Student Application form from the Office of the Registrar, Gilmour Hall, Room 108. You must return the completed form to the appropriate office (either the Ontario Universities’ Application Centre (OUAC) or to the Office of the Registrar, McMaster University) with the appropriate fee
   - In order to allow adequate time for the processing of the General Application, applicants are advised to submit their applications by December 1.
2. Supplementary Application (March 1)
Students must follow the application instructions as found on the School of Social Work web site: http://www.sociology.mcmaster.ca/socwork/ugdprg/admissions_app_instructions.cfm. Students who are unable to access this web site must contact the School of Social Work well before the March 1 deadline for the Fall/Winter term. This form is used to decide when applicants are able to write an admissions test, which is scheduled for two dates in March of each year, both on site and at alternative testing centres outside Hamilton. Adequate time is needed to make these arrangements and to complete the admissions process. Therefore, it is impossible to consider applicants whose Supplementary Application arrives after the March 1 deadline. Questions or concerns may be directed to the School of Social Work.

NOTES
1. Course Groupings: There are two groups of courses in the Social Work program:
   - Foundation of Social Work includes core courses which are required;

FOUNDATION OF SOCIAL WORK
SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 3DD6, 4D06, 4DD6, 4003, 4X03

SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK
SOC WORK 3C03, 3H03, 3G03, 4B03, 4C03, 4F03, 4G03, 4J03, 4L03, 4Q03, 4R03, 4W03

2. Progression Within Program: Students must achieve a minimum grade of C+ in each of SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4003 and 4X03, a Pass in SOC WORK 3DD6 and 4DD6, and a CA of at least 6.0.

3. Students must complete three units of Social Sciences Research Methods (e.g. SOCIOLOGY 2203 or GERONTOLOGY 2C03). If this requirement was completed prior to admission to the B.S.W. program, three additional units from the Social and Political Context of Social Work courses will be taken. A statistics course may not substitute for a research methods course.

4. 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 SOC WORK 2A06, 2B03, 2BB3, 2E03, 3A03, 3D06, 4D06, 4J03, 4003 and 4X03, a Pass in SOC WORK 3DD6 and 4DD6, and a CA of at least 6.0.

5. Students are expected to assume the cost of travelling to and from field practice agencies.

REQUIREMENTS
60 units total
15 units SOC WORK 2A06, 2B03, 2BB3, 2E03 (which must be completed prior to enrolling in SOC WORK 3D06 and 3DD6)
12 units SOC WORK 3D06, 3DD6 (which must be completed prior to enrolling in SOC WORK 4D06 and 4DD6)
12 units SOC WORK 4D06, 4DD6
9 units SOC WORK 3A03, 4003, 4X03
9 units SOC WORK 4J03 and six additional units selected from the Social and Political Context of Social Work courses
3 units Social Sciences Research Methods. If requirement was completed prior to admission, these units must be chosen from Social and Political Context of Social Work courses. (See Note 3 above.)

DEPARTMENT OF SOCIOLOGY
WEB ADDRESS: http://socserv.sociology.mcmaster.ca/sociology/

Honours Arts & Science and Sociology (B.Arts.Sc.; See Arts & Science Program)

Honours Sociology (Specialist Option) (2522)
Students who registered in this program prior to 2001 may see an Academic Advisor in the Office of the Associate Dean for program requirements.

Honours Sociology (2520)

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0, including a grade of at least B- in SOCIOLOGY 1A06.

NOTES
1. Students may take a maximum of six units of Level IV independent research (SOCIOLOGY 4M03, 4MM6 or 4N03).
2. Students should check both this Calendar and the Departmental Handbook for prerequisites and course descriptions.
3. Students may take a maximum of nine combined units of SOCIOLOGY 3G03 and 4G03.

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 SOCIOLOGY 2506
3 units from SOCIOLOGY 3A03, 3P03, 3PP3
3 units from SOCIOLOGY 3D03, 3O03, 3W03
12 units Level IV Sociology
18 units Level II or III Sociology
3 units SOCIOLOGY 2Z03 which must be completed by the end of 60 units
6 units SOCIOLOGY 3H06
3 units HUMAN 2C03
36 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Combined Honours in Sociology and Another Subject

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 6.0 including a grade of at least B- in SOCIOLOGY 1A06. Satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTES
1. 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.
2. Students who choose to complete a thesis (or independent research) in the other subject may replace six units of Level IV Sociology with Level III Sociology. This substitution must be approved in writing by a departmental undergraduate advisor.
3. Students may take a maximum of six units of Level IV independent research (SOCIOLOGY 4M03, 4MM6 or 4N03).
4. Students should check both this Calendar and the Departmental Handbook for prerequisites and course descriptions.
5. Students may take a maximum of nine combined units of SOCIOLOGY 3G03 and 4G03.

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 SOCIOLOGY 2506
3 units from SOCIOLOGY 3A03, 3P03, 3PP3
3 units from SOCIOLOGY 3D03, 3O03, 3W03
12 units Level IV Sociology (See Note 2 above.)
12 units Level II or III Sociology
36 units courses specified for the other subject.
6-9 units  SOCIOL 2Z03 which must be completed by the end of 60 units, and SOCIOL 3H06 or, in combined programs within the Faculty of Social Sciences, the six units Research Methods/Statistics course specified for the other subject.

3 units  HUMAN 2C03. Students combining Honours Arts and Science with Sociology are exempt from this requirement.

6-9 units  Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Sociology with Arts & Science, or with a Humanities subject, are exempt from this requirement.

B.A. in Sociology  {1520}

ADMISSION
Completion of any Level I program, with a Cumulative Average of at least 3.5 including a grade of at least C- in SOCIOL 1A06.

NOTES
1. Students enrolled in the B.A. Gerontology and Sociology program should refer to Gerontological Studies in this section of this Calendar for program requirements.
2. Students should check both this Calendar and the Departmental Handbook 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  3 units  SOCIOL 2S06  2Z03
15 units  Level II or III Sociology
36 units  Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or the Department of Religious Studies.

Minor in Sociology

NOTES
1. Students who have already completed SOCIOL 2006 or 2S06 may use these units towards this requirement of the minor.
2. Students should check both this Calendar and the Departmental Handbook for prerequisites and course descriptions.

REQUIREMENTS
24 units total
6 units  6 units  from SOCIOL 2006, 2D06, 2R03 and 2RR3, 2V06 (See Note 1 above.)
12 units  Level II or III Sociology
Minor In Indigenous Studies

NOTES
1. No more than six of the 18 units from Course List may be Level I courses.
2. At least 12 of the 18 units required for the Minor must be Indigenous Studies or Indigenous language courses.
3. Student who previously completed ANTHROP 3F03 may use these units toward the Course List requirement.

COURSE LIST
INDIG ST 1A03 Introduction to Indigenous Studies
INDIG ST 1AA3 Introduction to Contemporary Indigenous Studies
INDIG ST 2A03 Indigenous Peoples' Spirituality
INDIG ST 2AA3 Indigenous Knowledge and Methodology
INDIG ST 2B03 History of Indigenous Peoples' Sovereignty
INDIG ST 2C03 Contemporary Indigenous Societies and Issues: Selected Topics
Topic 2005-2006: TBA
INDIG ST 2D03 Traditional Indigenous Ecological Knowledge
INDIG ST 3C03 Study of Iroquois First Nations in Contemporary Times
INDIG ST 3CC3 Contemporary Indigenous Societies: Selected Topics
Topic 2005-2006: TBA
INDIG ST 3D03 Contemporary Native Literature in Canada
INDIG ST 3E03 Contemporary Native Literature in the United States
INDIG ST 3G03 Indigenous Creative Arts and Drama: Selected Topics
Topic 2005-2006: TBA
INDIG ST 3H03 Indigenous Medicine I - Philosophy
INDIG ST 3HH3 Indigenous Medicine II - Practical
INDIG ST 3I03 Indigenous Peoples and Social Policy
INDIG ST 3J03 Government and Politics of Indigenous Peoples
INDIG ST 3K03 Indigenous Human Rights
INDIG ST 3L03 Indigenous Independent Study
CAYUGA 1203 Introduction to Cayuga Language and Culture
CAYUGA 2203 Intermediate Cayuga
MOHAWK 1Z03 Introduction to Mohawk Language and Culture
MOHAWK 2Z03 Intermediate Mohawk
OJIBWE 1203 Introduction to Ojibwe Language and Culture
OJIBWE 2203 Intermediate Ojibwe
ANTHROP 2B03 Indigenous Peoples of North America
ANTHROP 2H03 Environment and Culture
ANTHROP 2V03 The Ancient Maya
ANTHROP 2W03 The Aztecs and Incas
ANTHROP 3Y03 Aboriginal Community Health and Well-Being
POL SCI 3C03 Government and Politics of Indigenous Peoples
SOC WORK 4103 Social Work and Indigenous Peoples

REQUIREMENTS
6 units
18 units

from INDIG ST 1A03, 1AA3, CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03
from the Course List (See Notes 2 and 3 above.)

Combined B.A. Program in
Indigenous Studies and Another Subject

ADMISSION
Completion of any Level I program, with a Cumulative Average of at least 3.5 including an average of at least 4.0 in six units from CAYUGA 1Z03, INDIG ST 1A03, 1AA3, MOHAWK 1Z03, OJIBWE 1Z03 or a grade of at least C- in one of CAYUGA 1Z06, INDIG ST 1A06, MOHAWK 1Z06 or OJIBWE 1Z06 and satisfaction of admission requirements for the B.A. program, in the other subject.

NOTES
1. Those students who entered the program prior to September 2005 should follow the requirements as specified in the Calendar which was in effect the year they entered the program.
2. 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.
3. Student who previously completed ANTHROP 3F03 may use these units toward the Course List requirement.

COURSE LIST
ANTHROP 2B03, 2H03, 2VV3, 2W03, 3Y03
POL SCI 3C03
SOC WORK 4103

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 CAYUGA 2203, INDIG ST 2AA3, MOHAWK 2203, OJIBWE 2203
3 units
from INDIG ST 2C03, 2D03
15 units
from Level II, III Indigenous Studies, CAYUGA 2Z03, MOHAWK 2Z03, OJIBWE 2Z03 (if not taken to satisfy requirement above), courses from the Course List of which at least three units must be Level III. (See Notes 2 and 3 above.)
24 units
Electives
12 units

The Combined B.A. Program in Indigenous Studies is governed by the general Academic Regulations of the University and the regulations described below.
INTERDISCIPLINARY MINORS AND THEMATIC AREAS

INTERDISCIPLINARY MINORS

The following two listings constitute University-sanctioned Minors in Archaeology and Jewish Studies.

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 Minor 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.

Archaeology

Coordinator
Eduard Reinhardt (Geography and Earth Sciences)

Committee of Instruction
Joe Boyce (Geography and Earth Sciences)
 Aubrey Cannon (Anthropology)
 Laura Finsten (Anthropology)
 Michele George (Classics)
 Darren Gröcke (Geography and Earth Sciences)
 Selma Gray (Classics)
 Alexandra Retzlaff (Classics)
 Kostalena Michelaki (Anthropology)
 Hendrik Poinar (Anthropology)
 Kostalena Michelaki (Anthropology)
 W. Jack Rink (Geography and Earth Sciences)
 Shelley Saunders (Anthropology)
 Henry Schwarzc (Geography and Earth Sciences)

The Interdisciplinary Minor in Archaeology is based on archaeology and archaeological courses offered in the School of Geography and Earth Sciences, and in the Departments of Classics 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 CLASSICS 1L03 (History and Archaeology of the Ancient World I) and CLASSICS 1L3 (History and Archaeology of the Ancient World II).

COURSE LIST

ANTHROP 2FF3 Human Skeletal Biology and Bioarchaeology
ANTHROP 2G03 North American Prehistory
ANTHROP 2V3 The Ancient Maya
ANTHROP 2W03 The Aztecs and Incas
ANTHROP 3A03 Archaeology and Society
ANTHROP 3C06 Archaeological Field School
ANTHROP 3D03 Archaeology of Death
ANTHROP 3E03 Special Topics in Archaeology I
ANTHROP 3E03 Special Topics in Archaeology II
ANTHROP 3K03 Archaeological Interpretation
ANTHROP 3N03 Primate Evolution
ANTHROP 3P03 Paleopathology
ANTHROP 3F03 Advanced Topics in Archaeology I
ANTHROP 4F03 Advanced Topics in Archaeology II
ANTHROP 4H03 Archaeological Theory
ANTHROP 4H03 Archaeology of Hunters and Foragers
ANTHROP 4R03 Skeletal Biology of Earlier Human Populations
ANTHROP 4U03 Prehistory of the British Isles
CLASSICS 2B03 Greek Art
CLASSICS 2C03 Roman Art
CLASSICS 3Q03 Greek Sanctoraries
CLASSICS 3S03 The Archaeology of the City of Rome and Roman Italy
CLASSICS 4B03 Seminar in Classical Archaeology
ENVIR SC 1G03 Earth and the Environment
GEO 2B03 Soils and the Environment
GEO 2E03 Earth History
GEO 2G03 Earth Surface Processes
GEO 2G03 Natural Disasters
GEO 2I03 GIS and Digital Cartography
GEO 3C03 Earth’s Changing Climate
GEO 3D03 Geoarchaeology of the Underwater Realm
GEO 3E03 Sedimentary Environments
GEO 3G03 Glacial Sediments and Environments
GEO 3H03 Applied GIS
GEO 3P03 Environmental Paleontology
GEO 3Q03 Environmental Reconversion Using Stable Isotopes
GEO 3V03 Environmental Geophysics
GEO 4E03 Coastal Environments
GEO 4F03 Topics of Free Research
GEO 4G03 Glacial Sediments and Environments
GEO 4I03 Advanced GIS

REQUIREMENTS

24 units total:
12 units ANTHROP 1B03 (or 1Z03, if completed prior to 1999)
2PA3, CLASSICS 1A03 (formerly CLASSICS 2A03)
ENVIR SC 1G03
12 units from Course List (see above). At least nine of the 12 units must be selected from outside the student's own department.

Please see the Course Listings section for a detailed description of the above courses.

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 taking List B courses as part of their minor are required to write assignments and research papers on topics directly related to 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 104, ext. 24567, 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 104.

LIST A

COMP LIT 2G03 The Bible as Literature
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 3D03 The Jewish World in New Testament Times
HISTORY 3Z03 Judaism, the Jewish People and the Birth of the Modern World
HISTORY 3Z23 Judaism and the Jewish People in the Twentieth Century
PHILOS 3J03 Modern Jewish Thought
RELIG ST 2B03 Women in the Biblical Tradition
RELIG ST 2DD3 The Five Books of Moses
RELIG ST 2EE3 Prophets of the Bible
RELIG ST 2YY3 The Bible as Literature
RELIG ST 3A03 Modern Jewish Thought
RELIG ST 3D03 The Jewish World in New Testament Times
RELIG ST 3I03 Jesus, Christians, and Others in Antiquity
RELIG ST 3K03 The Bible through the Ages
RELIG ST 3M03 Songs of David: Poetry in the Hebrew Bible
RELIG ST 3R03 Death and the Afterlife in Early Judaism and Christianity
RELIG ST 3Z03 Judaism, the Jewish People and the Birth of the Modern World
RELIG ST 3Z23 Judaism and the Jewish People in the Twentieth Century

LIST B
ANTHROP 3B03 Ethnology: Europe
ANTHROP 3G03 Comparative Mythology
ANTHROP 3H03 Anthropological Demography
CLASSICS 2P06 Ancient Greek Philosophy
COMP LIT 3MM3 Topics in Modern Literature: Israel/Palestine; Boundaries Crossing Boundaries
HISTORY 2E3A3 Islam and Mediterranean Society, 600-1300
HISTORY 2EB3 Islam in the World, 1300-1800
HISTORY 3A3A3 The Modern Middle East
HISTORY 3I03 The International Relations of the European Powers, 1870-1945
PEACE ST 3F03 The Modern Middle East
PEACE ST 3I03 The International Relations of the European Powers, 1870-1945
PHILOS 2A06 Ancient Greek Philosophy
PHILOS 2D03 Moral Issues
PHILOS 3A06 From Kant to Hegel
PHILOS 3H03 Philosophy of Religion
POL SCI 3A03 Human Rights and International Politics
RELIG ST 2C03 Moral Issues
RELIG ST 2E3A3 Islam and Mediterranean Society, 600-1300
RELIG ST 2EB3 Islam in the World, 1300-1800
SOC WORK 4C03 Racism and Social Marginalization in Canadian Society
SOC WORK 4J03 Social Change: Social Movements and Advocacy
SOC WORK 4M03 International and Comparative Social Welfare
SOCIOLE 2E06 Racial and Ethnic Group Relations
SOCIOLE 3203 Ethnics Relations

Please see the Course Listings section for a detailed description of the above courses.

THEMATIC AREAS

The following listing is designed to assist you in choosing courses in areas of study, in which there is currently no B.A. program.

Asian Studies

While there is no B.A. program in Asian Studies, students interested in concentrating in this area may choose from among the following courses offered by various departments. Those desiring further information on specific courses should consult the departmental listing in the Calendar. (Students interested in Japanese Studies should enquire about the Combined Honours program in Japanese Studies and Another Subject.)

Students wishing to pursue Asian Studies may obtain further information from Dr. D. Barrett, Chester New Hall, Room 625, ext. 24130.

COURSES DEALING STRICTLY WITH ASIAN MATERIAL
CMST 2A03 Japanese Communication
COMMERCE 4SF3 Japanese Business
COMP LIT 3M03 Asian Literatures
COMP LIT 3N03 Arabic and Persian Literatures
COMP LIT 3TT3 Modern Japanese Literature in Translation
GEO 3H33 Geography of Japan
HISTORY 2E3A3 Islam and Mediterranean Society, 600-1300
HISTORY 2EB3 Islam in the World, 1300-1800
HISTORY 3A3A3 The Modern Middle East
HISTORY 3B03 Modern Japan
HISTORY 3G33 China: the Revolutionary Century, 1895-1995
HISTORY 4B66 Special Topics in the History of Modern Japan
HISTORY 4G66 Topics in Middle Eastern and Islamic History
RELIG ST 2E03 Engaged Buddhism
RELIG ST 2F03 Storytelling in East Asian Religions
RELIG ST 2I03 Storytelling in Indian Religion
RELIG ST 2L03 Life, Work and Teachings of Mahatma Gandhi
RELIG ST 2P06 Japanese Civilization
RELIG ST 3A03 Popular Religion in the Indian Tradition
RELIG ST 3E03 Japanese Religion
RELIG ST 3L03 The Indian Religious Tradition
RELIG ST 3P03 Buddhism in Tibet
RELIG ST 3R03 The East Asian Religious Tradition
RELIG ST 3U03 The Buddhist Tradition in India
RELIG ST 3UL3 Buddhism in East Asia
RELIG ST 4A03 Indian Philosophy
RELIG ST 4A3 Advanced Reading: Asian Religions
THTR&FLM 2H03 The Contemporary Japanese Film

COURSES WITH SIGNIFICANT ASIAN CONTENT
ECON 2C03 Asian-Pacific Economies
POL SCI 4M06 Topics in International Political Economy
RELIG ST 1B06 World Religions
RELIG ST 2BB3 Images of the Divine Feminine
RELIG ST 2H03 Theory and Practice of Non-Violence
RELIG ST 2Q03 Cults in North America
RELIG ST 2SS3 Women and Religion
RELIG ST 2WW3 Health, Healing and Religion

LANGUAGE COURSES

JAPANESE 1Z06 Beginner's Intensive Japanese
JAPANESE 2Z03 Intermediate Intensive Japanese I
JAPANESE 2ZZ3 Intermediate Intensive Japanese II
JAPANESE 3A03 Advanced Intensive Japanese I
JAPANESE 3A03 Advanced Intensive Japanese II
JAPANESE 3B03 Business Japanese I
JAPANESE 3CC3 Business Japanese II
JAPANESE 4A03 Advanced Readings in Current Affairs in Japanese
JAPANESE 4Z03 Advanced Practice in Japanese
JAPAN ST 4A06 Guided Reading in Japanese Studies
JAPAN ST 4B03 Guided Reading in Japanese Studies
SANSKRIT 3A06 Introduction to Sanskrit Grammar
SANSKRIT 4B06 Readings in Sanskrit Texts

Please see the Course Listings section for a detailed description of the above courses.

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

ART HIST 3B03 Aspects of Canadian Art
ENGLISH 2C03 Contemporary Canadian Fiction
FRENCH 2E03 Literature of Quebec
FRENCH 3A03 The Modern French-Canadian Novel
FRENCH 4U03 Topics in French-Canadian Literature
HISTORY 2T03 Survey of Canadian History, Beginnings to 1885
HISTORY 2TT3 Survey of Canadian History, 1885 to the Present
HISTORY 3N03 Business History: The Canadian Experience in International Perspective
HISTORY 3N03 Canada’s Revolutions: 1939-1982
HISTORY 3P03 Religion and Society in Canada
HISTORY 3W03 Women in Canada and the U.S. to 1920
HISTORY 3WW3 Women in Canada and the U.S. from 1920
HISTORY 3Y03 Death, Disease and Degeneration: A History of Health and Health Care in Canada
MUSIC 3T03 Canadian Music
WOMEN ST 1A06 Women in Canadian Society

SOCIAL SCIENCES

ANTHROP 3Y03 Aboriginal Community Health and Well-Being
ECON 2K03 Economic History of Canada
GEO 2H33 Geography of Planning
GEO 4H33 Urban Housing
POL SCI 1G06 Politics and Government
POL SCI 3FF3 Canadian Foreign Policy
POL SCI 3G03 Federalism: Theoretical, Constitutional and Institutional Issues
POL SCI 3H03 Intergovernmental Policy Issues in Canada
POL SCI 3J03 Provincial Politics in Canada
POL SCI 4006 Canadian Public Policy

Please see the Course Listings section for a detailed description of the above courses.
PART-TIME DEGREE STUDIES

The University offers a broad range of educational opportunities if you wish to take degree studies on a part-time basis. In addition to the daytime offerings in the Fall/Winter there is a wide selection of evening classes available in the Fall/Winter and Spring/Summer sessions. There is a limited number of daytime classes scheduled for the Spring/Summer session.

If you take degree courses, you will associate with one of the undergraduate Faculties (Business, Health Sciences, Humanities, Science or Social Sciences). By doing so, you will have the opportunity to consult with the academic counsellors of your Faculty, and with the departments whose courses are of interest to you. If your interests change, it is often possible to transfer to another department or Faculty.

The courses which you take in the early stages of your education will form the basis for choosing your program of study. The Level I courses will give you the information you need for this purpose, as well as provide the prerequisites for more advanced courses and admission to programs of study. The programs of study which are available entirely through evening and summer courses are indicated on the Degrees by Program chart, in the Degrees, Programs and Courses section of this Calendar. You should also familiarize yourself with the requirements and information found in the following sections: Admission Requirements, General Academic Regulations and Sessional Dates, as well as the program descriptions found in the specific Faculty sections.

ADMISSION

Before you register for any degree course or program, you must apply for admission.

- If you have already completed some university, community college, or other post-secondary education, you will be required to submit official transcripts of this work in order to be considered for admission and possible credit towards your McMaster program.
- If you satisfy the University’s normal admission requirements for full-time study, you may choose to register for part-time study in most programs.
- If you do not satisfy these requirements, you may be admissible as a Mature Student and given the opportunity to show that you can deal successfully with university work. Initially, you may take only one course at a time.

See the Admission Requirements section in this Calendar for details concerning all avenues of admission to degree study.

AVAILABILITY OF COURSES

Although both daytime and evening courses are open to all students, as a part-time student, you may have other responsibilities which restrict you to the courses offered in the evenings, winter and summer. If you can arrange to take day courses in the Fall/Winter session, the options are greatly enlarged.

Normally, publications for part-time students are made available in March for the Spring/Summer session and in June for the Fall/Winter session.

INFORMATION AND COUNSELLING

WEB ADDRESS: http://www.mcmaster.ca/partime

Interested students may telephone the Office of the Registrar, Admissions, at (905) 525-4600 for information about application procedures and admission regulations. The Office is located in Gilmour Hall, Room 108, and is open Monday through Friday until 4:00 p.m. Hours are extended various times throughout the year to accommodate the registration process.

More detailed information and advice concerning programs and courses is provided by the Academic Counsellors within each Faculty as follows:

- Business: ext. 23941
- Humanities: ext. 27532
- Science: ext. 27590
- Social Sciences: ext. 23772

Information about non-degree courses and programs is available through the Centre for Continuing Education (905) 525-9140, ext. 24321 or at the following url: http://www.mcmaster.ca/conted/ or in the Certificate and Diploma Programs section in this Calendar.

MAPS

The McMaster Association of Part-time Students (MAPS) maintains an office and student lounge in the McMaster University Student Centre, Room 234, telephone (905) 525-9140, ext. 22021. MAPS also publishes a newsletter, The Link, which is sent to all part-time students. The office and lounge are open from Monday to Thursday, day and evening, and Friday during the day.

MAPS Executive Director, Jackie Osterman, is available during these hours to help students. All part-time students are invited to use these facilities and to assist their Association in its efforts to improve the quality and range of educational opportunities available to students who can only attend university on a part-time basis.

See the Admision Requirements section in this Calendar for details concerning all avenues of admission to degree study.
CERTIFICATE AND DIPLOMA PROGRAMS

CENTRE FOR CONTINUING EDUCATION

Located at 50 Main Street East, Hamilton, 2nd Floor, the Centre for Continuing Education offers Certificate and Diploma programs. Short courses and workshops for personal and professional development are also available. The Centre offers registration in degree courses as a Listener. For details, please contact the Centre for Continuing Education at extension 24321 or http://www.mcmastercce.com

CERTIFICATE AND DIPLOMA PROGRAMS
APPROVED FOR ADVANCED CREDIT

All CCE Certificate and Diploma programs have been approved by the Senate of McMaster University for advanced credit, as shown below. Information regarding advanced credit for degree study is outlined in Graduates of McMaster Certificate/Diploma Programs in the Admission Requirements section of this Calendar.

ACCOUNTING, DIPLOMA IN
(8956)

Maximum Credit Toward Degree Studies - 24 units
This eleven-course program is designed for individuals planning a career in managerial or financial accounting. All courses satisfy program requirements for both the Society of Management Accountants of Ontario (SMA) and the Certified General Accountants Association (CGA).

ADDITION CAREWORKER, DIPLOMA IN
(8951)

Maximum Credit Toward Degree Studies - 24 units
The diploma requirements consist of 24 units of study organized in compulsory courses and skill and knowledge electives. The program meets the core education hours required by the Canadian Addiction Counsellors Certification Board (CACCB) for professional certification.

ADDITION STUDIES, CERTIFICATE IN
(8969)

Maximum Credit Toward Degree Studies - 15 units
This 15 unit program is designed to provide elective studies in the field of addictions.

BUSINESS ANALYSIS, DIPLOMA IN
(8931)

Maximum Credit Toward Degree Studies - 24 units
The Diploma In Business Analysis is a two-tiered program that combines the technical and management skills, techniques and practices required of an effective business analyst in an information systems environment.

CASE MANAGEMENT, CERTIFICATE IN
(8939)

Maximum Credit Toward Degree Studies - 15 units
This six-course program is designed to develop and/or enhance the skills, knowledge and experience necessary to perform case management functions in a variety of practice settings. Available in-class or on-line.

CERTIFIED CLINICAL RESEARCH ASSOCIATE,
CERTIFICATE IN
(8924)

Maximum Credit Toward Degree Studies - 15 units
This five-course program is designed to develop the concepts, skills, strategies, attitudes and knowledge required to perform clinical trials.

FAMILY MEDIATION, CERTIFICATE/DIPLOMA IN
(8938/8948)

Maximum Credit Toward Degree Studies
- 15 units (Certificate)
- 24 units (Diploma)
This five-course (Certificate)/eight-course (Diploma) program offers a rewarding career opportunity for people in a variety of professions to either gain new experience or expand their skills and knowledge in the field of alternative dispute resolution.

HUMAN RESOURCES MANAGEMENT, DIPLOMA IN
(8958)

Maximum Credit Toward Degree Studies - 24 units
This eight-course program focuses on management skills and practices, current issues and areas of specialization important to human resource management. It is offered in cooperation with the Human Resources Professionals Association of Ontario and the International Personnel Management Association.

INFORMATION TECHNOLOGY (INFOTECH),
CERTIFICATE/DIPLOMA IN
(8920/8923)

Maximum Credit Toward Degree Studies
- 15 units (Certificate)
- 24 units (Diploma)
Designed to develop expertise in the new technologies entering the workplace, this program consists of three levels of courses (Introductory Certificate, Advisor and Leader). The emphasis is on computer knowledge, select software and skills. Courses are limited enrolment.

MANAGEMENT STUDIES, DIPLOMA IN
(8929)

Maximum Credit Toward Degree Studies - 24 units
This eight course program offered in association with the Michael G. DeGroote School of Business at McMaster is designed to develop and/or enhance the business management skills needed to function within a management position.

METALLURGY OF IRON AND STEEL,
CERTIFICATE IN
(8991)

Maximum Credit Toward Degree Studies - 15 units
This six-course program comprehensively covers metallurgical principles involved in the extraction, refining and manufacturing of ferrous products.

POLICE STUDIES, DIPLOMA IN
(8921)

Maximum Credit Toward Degree Studies - 24 units
This program is designed to develop a capacity for critical inquiry at the university level, while augmenting the training received by police and security personnel.

VISUAL ART FOUNDATION STUDIES, DIPLOMA IN
(8937)

Maximum Credit Toward Degree Studies - 24 units
This one year full-time program is a joint partnership between McMaster University and the Dundas Valley School of Art. Offered fully on-site at DVSA, the program provides a solid base for those seeking a foundation for further advanced study in the Visual Arts.

WEB DESIGN AND DEVELOPMENT,
CERTIFICATE/DIPLOMA IN
(8932/8930)
Maximum Credit Toward Degree Studies
- 15 units (Certificate)
- 24 units (Diploma)
This program focuses on technical, design and communication skills development in the field of website management.

WRITING, CERTIFICATE IN
(8941)

Maximum Credit Toward Degree Studies - 15 units
This program covers the fundamentals and advanced study of writing and publishing across many different genres. It has been developed in collaboration with the Faculty of Humanities and members of the local writing community.

PROFESSIONAL ASSOCIATIONS AND INSTITUTES

Many McMaster Certificate and Diploma credit courses are recognized as course equivalencies by the following external associations and institutes:

- Addiction Intervention Association (AIA)
- Association of Administrative Assistants (QAA)
- Canadian Addiction Counsellors Certification Board (CACCB)
- Canadian Institute of Certified Administrative Managers (CAM)
- Canadian Institute of Management (CIM)
- Certified General Accountants Association of Ontario (CGA)
- Credit Institute of Canada (CIC)
- Credit Union Institute of Canada (CUIC)
- Global Risk Management Institute (CRM and FRM)
- Human Resources Professionals Association of Ontario (HRPA)
- Institute of Canadian Bankers (ICB)
- Insurance Institute of Canada-Fellowship (FCIP)
- International Personnel Management Association (IPMA)
- Purchasing Management Association of Canada (PMAC)
- Society of Management Accountants of Ontario

Please contact the Centre for Continuing Education for details.
SCHOOL OF GEOGRAPHY
AND EARTH SCIENCES

The part-time certificate and diploma programs offered by the School of Geography and Earth Sciences can be completed in one or two years and are intended for students with basic academic or experi-ential training in GIS/Geomatics who wish to obtain a qualification in the theoretical and practical aspects of spatial analysis as well as in the more technical aspects of GIS. Further information can be obtained at http://sciwebserver.science.mcmaster.ca/gislab/programs/index.html or by contacting the GIS Laboratory, School of Geography and Earth Sciences at (905) 525-9140 ext. 22542.

DIPLOMA IN SPATIAL INFORMATION SCIENCE (8919)
(FORMERLY DIPLOMA IN SPATIAL ANALYSIS AND GIS)
The eight-course diploma program focuses on advanced concepts in spatial analysis and GIS, complemented with skills in software development and large spatial database design and management. Professionals and graduates are encouraged to register for single courses in this diploma to upgrade their skills.

CERTIFICATE IN GIS (8947)
(GEOGRAPHICAL INFORMATION SYSTEMS)
The six-course certificate program provides expertise and applied skills in desktop GIS tools, remote sensing and spatial statistics for multidisciplinary applications. This program provides an introduction to geographic information systems (GIS) for students or professionals with no prior GIS experience.

For information concerning other Diploma programs offered at the University, please see the Post-Professional Health Sciences Education Programs in the Faculty of Health Sciences section as well as the Diploma in Music Performance in the Faculty of Humanities section of this Calendar.
## COURSE LISTINGS

The courses listed in this section include all courses approved for the undergraduate curriculum for the 2005-2006 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 March, May and August to determine which specific courses will be offered in the upcoming sessions.

### ANTHROPOLOGY

**WEB ADDRESS:** [http://www.socsci.mcmaster.ca/anthro/](http://www.socsci.mcmaster.ca/anthro/)

**Chester New Hall, Room 524**

**Ext. 24423**

### Faculty as of January 15, 2005

**Chair**

Matthew Cooper

**Professors**

- Aubrey Cannon/B.A. (Simon Fraser), Ph.D. (Cambridge)
- Matthew Cooper/B.A. (Brooklyn College), M.Phil., Ph.D. (Yale)
- Harvey Felt/B.A. (Queen’s), M.A. Ph.D. (McGill) F.R.S.C.
- Laura Finston/B.A. (Western Ontario), M.A. (Calgary), Ph.D. (Purdue)
- D. Ann Herring/B.A., M.A., Ph.D. (Toronto)
- William L. Rodman/B.A. (Sydney), M.A., Ph.D. (Chicago)
- Shelley Saunders/B.A., M.A., Ph.D. (Toronto), F.R.S.C.
- Canada Research Chair in Human Disease and Population Relationships

**Associate Professors**

- Regina Darrell (Western Ontario) B.A. (Bryn Mawr), M.A., Ph.D. (Pennsylvania)
- Christopher Ellis (Western Ontario), B.A. (Waterloo), M.A. (McMaster), Ph.D. (Simon Fraser)
- Michael Sponholz (Western Ontario) B.A., M.A. (Toronto), Ph.D. (Southern Illinois)

**Associate Professors**

- Ellen Bedone (Religious Studies) B.A., M.A. (Toronto), Ph.D. (California-Berkeley)
- Petra Rehmann/B.A. (Vienne), M.A. (Munich), Ph.D. (McGill)
- Wayne Warrny/B.A., M.A. (McMaster), Ph.D. (ANU)
- Dennis Willms/B.A. (Waterloo), M.A. (McMaster), Ph.D. (British Columbia)

**Adjunct Associate Professors**

- Trudy Nicks (Royal Ontario Museum) B.A., M.A., Ph.D. (Alberta)
- Robert W. Park (Waterloo) B.A., M.A. (McMaster), Ph.D. (Alberta)

**Assistant Professors**

- Eva Mackey/B.A. (Toronto), M.A., Ph.D. (Sussex)
- Kostis K. Mojarideli/B.A. (Georgia), M.A., Ph.D. (Michigan)
- Christina Moffat/B.Sc. (Toronto), B.A., Ph.D. (McMaster)
- Ana Ning/B.A., M.A., Ph.D. (York)
- Hendrik Poinar /B.Sc., M.Sc (Calgary), Ph.D. (Germany)

**Associate Members**

- Eduard G. Reinhardt (Geography and Earth Sciences) B.A., Ph.D. (Carleton)
- Darren Grockol (Geography and Earth Sciences), B.Sc., (Adelaide), M.Sc. (Monash), D.Phil. (Oxford)

### 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. Registration in all courses with a course code ending ** listed as selected topics and independent research require prior arrangement with the instructor; otherwise, no grade will be submitted for the course.
3. To identify Anthropology courses by subdiscipline, students should refer to the lists of courses under Anthropology Subfields in the section Faculty of Social Sciences, Department of Anthropology.

### Courses

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<tr>
<th>Courses</th>
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<td>WORLD ARCHAEOLOGY</td>
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<td>ANTHROP 2A03</td>
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<td>ANTHROP 2E03</td>
<td>HUMAN VARIATION AND EVOLUTIONARY CHANGE</td>
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<td>ANTHROP 2F03</td>
<td>CULTURAL ANTHROPOLOGY</td>
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<tr>
<td>ANTHROP 2FF3</td>
<td>HUMAN SKELETAL BIOLOGY AND BIOARCHAEOLOGY</td>
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An introduction to the study of human evolution and variability in living species of human and non-human primates.

### ANTHROP 1A03

An introduction to the cross-cultural study of existing peoples, their ways of life, and the ways in which they interpret and experience the world. The course discusses a broad range of societies in order to explore some fundamental issues involving human knowledge and behaviour.

Two hours (lecture), one hour (tutorial); one term

### ANTHROP 1B03

An overview of the chronology and diversity of human prehistory. Examples of archaeological evidence from around the world are used to illustrate the long-term processes of cultural history.

Two hours (lecture), one hour (tutorial); one term

### ANTHROP 1Z03

The study of the interaction between biology and culture. Topics may include: human origins, non-human primates, the concept of race, disease, sex and gender.

Two hours (lecture), one hour (tutorial); one term

### ANTHROP 2A03

The anthropological perspective on nutrition at the population level. Prehistoric, historic, and contemporary human nutrition, emphasizing links with the environment.

Three hours (lectures and discussion); one term

**Prerequisite:** Three units of Level I Anthropology

### ANTHROP 2B03

A comparative study of selected cultures of this continent, dealing with traditional and modern situations.

Three hours (lectures and discussion); one term

### ANTHROP 2D03

An introduction to human genetics, microevolution and macroevolution.

Three hours (one hour lecture, two hour lab); one term

**Prerequisite:** ANTHROP 1Z03

There will be a supplementary fee for supplies used in labs.

Enrolment is limited.

### ANTHROP 2D03

A survey of current issues in primate behaviour, including taxonomy, demography, social structure, reproduction, play cognition and sociobiology. Students will conduct a zoo observation study.

Three hours (lecture and discussion); one term

**Prerequisite:** Six units of Level I Anthropology

### ANTHROP 2E03

An introduction to the study of human evolution and variability in living species of human and non-human primates.

Three hours (lectures and discussion); one term

**Prerequisite:** Six units of Level I Anthropology. ANTHROP 1Z03 is strongly recommended.

This course is required of all students registered in an Honours Program in Anthropology, and is a prerequisite for advanced courses in Physical Anthropology.

### ANTHROP 2F03

An introduction to concepts, theories, and current debates in cultural anthropology. This course is designed to prepare students for more advanced courses in social and cultural anthropology.

Three hours (lectures and discussion); one term

**Prerequisite:** Six units of Level I Anthropology. ANTHROP 1A03 is strongly recommended.

This course is required of all students registered in an Honours Program in Anthropology.

### ANTHROP 2FF3

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.

Three hours (lectures, discussion and lab); one term

**Prerequisite:** Registration in an Honours Anthropology program. Completion of ANTHROP 1Z03 is strongly recommended

Enrolment is limited.
ANTHROP 2G03  READINGS IN INDO-EUROPEAN MYTH
This course will acquaint students with the myths of Ancient Greece, Ancient India, the Celts, and the Norse. Other traditions may also be examined.
Three hours (lectures and discussion); one term

ANTHROP 2G3  MYTHS OF EURASIA AND THE NEW WORLD
An introduction to selected themes in the myths of non-Indo-European peoples of Europe, Asia, and North America.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2G03
Enrolment is limited.

ANTHROP 2H03  ENVIRONMENT AND CULTURE
Relationships between human societies and their environments are examined. A focus is how culture shapes our ideas of nature and the consequences of our actions. Case studies explore both environmental movements and aboriginal societies.
Three hours (lectures and discussion); one term

ANTHROP 2L03  PHONETICS
A study of the sounds of language and human articulatory capabilities.
Three hours (lectures); one term
Prerequisite: LINGUIST 1A03 or permission of the instructor
Cross-list: LINGUIST 2L03
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 2LC3  LINGUISTICS AND CULTURE A: STRUCTURALISM
A study of the application of linguistic models, particularly structuralism, to sociocultural anthropology and related disciplines.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II and above
Antirequisite: ANTHROP 2Q03, 3LC3, LINGUIST 2G03

ANTHROP 2LL3  INTRODUCTION TO LINGUISTIC TYPOLOGY
The study of diversity in the languages of the world, language universals and the parameters of cross-linguistic analysis of grammatical systems.
Three hours (lectures and discussion); one term
Prerequisite: LINGUIST 1A03 and 1A03 (or 1A03); or permission of the Department
Cross-list: LINGUIST 2L03
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 2LP3  LANGUAGE AND PREHISTORY
A survey of the language families of the world, emphasizing the historical implications of language distributions. Historical linguistic methods will be introduced and compared with archaeological findings for prehistoric Eurasia, Africa, Oceania and North America.
Three hours (lectures and discussion); one term

ANTHROP 2Q03  NORTH AMERICAN PREHISTORY
An examination of the origins and development of the major indigenous cultural groups of prehistoric North America.
Three hours (lectures and discussion); one term
Prerequisite: Three units of Anthropology. ANTHROP 1B03 or 2PA3 is strongly recommended.

ANTHROP 2P03  PEOPLES OF THE PACIFIC
Introduction to the peoples of the islands of the Pacific - their history, traditions and current ways of life, and their responses to contact, colonialism and cultural change. Focus will be equally upon the past and the present in Oceania.
Three hours (lectures and discussion); one term

ANTHROP 2PA3  INTRODUCTION TO PREHISTORIC ARCHAEOLOGY
An introduction to the goals and methods of archaeological research with a focus on specific problems in human prehistory.
Three hours (lectures and discussion); one term
Prerequisite: Three units of Level I Anthropology
This course is required of all students registered in an Honours Program in Anthropology.

ANTHROP 2P03  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.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 1A03 or 2F03

ANTHROP 2U03  PLAGUES AND PEOPLE
A 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.
Two hours (lecture), one hour (tutorial); one term
Enrolment is limited.

ANTHROP 2V03  THE ANCIENT MAYA
An introduction to prehistoric Maya society and culture, with an emphasis on the Classic period civilization.
Three hours (lectures); one term
Not open to students with credit in ANTHROP 2V03, AZTECS, MAYA AND INKA prior to September 2001.

ANTHROP 2W03  THE AZTECS AND INCAS
An introduction to and comparison of the late pre-Columbian Aztec empire of Mexico and the Inca empire of Andean South America.
Three hours (lectures); one term
Antirequisite: ANTHROP 2V03

ANTHROP 2X03  VIOLENCE IN ANTHROPOLOGICAL PERSPECTIVE
The aim of the course is to assess the extent to which violence is both controlled by and an expression of society and culture.
Three hours (lectures and discussion); one term

ANTHROP 2Z03  INTRODUCTION TO SOCIAL 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: Registration in any Anthropology program
Cross-list: SOCIO1 2Z03
Antirequisite: CMST 2A03, GEO 2HR3, GERONTOL 2C03, HEALTH 2B03
This course is administered by the Department of Sociology.

ANTHROP 3A03  PHONOLOGY
A study of the patterns of distinctive sounds in the world's languages.
Three hours (lectures); one term
Prerequisite: One of ANTHROP 2L03 or LINGUIST 2L03; or permission of the instructor
Prerequisite (Beginning in 2006-2007): One of ANTHROP 2L03, LINGUIST 2L03
Antirequisite: ANTHROP 2M03, LINGUIST 3A03
Cross-list: LINGUIST 3A03
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 3A33  ARCHAEOLOGY AND SOCIETY
A critical examination of the history of archaeology and the social and political implications of our understanding of the ancient human past.
Three hours (lectures and discussion); one term
Prerequisite: Three units of Level I Anthropology

ANTHROP 3B03  THE EUROPEAN MOSAIC
An introduction to the social and cultural diversity of contemporary Europe. Issues to be explored include socioeconomic changes, regionalism, nationalism and the European Union; religion and ethnicity; racism and xenophobia.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Cultural/Social Anthropology

ANTHROP 3C03  HEALTH AND ENVIRONMENT: ANTHROPOLOGICAL APPROACHES
Examination of the ways in which humans alter and cope with their environment. Topics include: health inequalities, nutrition, population, urbanization, resource utilization, and industrial pollution.
Three hours (lectures and discussion); one term
Prerequisite: Three units of Level I Anthropology, and registration in Level III or IV of any program, ANTHROP 2E03 is highly recommended.

ANTHROP 3C65  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.
Prerequisite: ANTHROP 2PA3 or an equivalent course in archaeological methods.
Not open to students with credit in an equivalent field school from another university.
Enrolment is limited.
ANTHROP 3D03  ARCHAEOLOGY OF DEATH
Archaeological analysis and interpretation of burial practices and other death-ritual.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3E03  SPECIAL TOPICS IN ARCHAEOLOGY I
The topic varies with each instructor (e.g., one class may examine Ancient Mesopotamian Cities and another focus on The Archaeology of Hierarchies).
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3EE3  SPECIAL TOPICS IN ARCHAEOLOGY II
As per ANTHROP 3E03.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3G03  COMPARATIVE MYTHOLOGY
The reconstruction of oral traditions by means of comparative techniques drawn from historical linguistics. The Indo-European traditions of Eurasia will be examined.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2G03 or permission of the instructor

ANTHROP 3H03  ANTHROPOLOGICAL DEMOGRAPHY
This course offers an introduction to the study of population dynamics (birth, death, migration) and population structure. It focuses on issues particularly pertinent to anthropological studies of past and present populations.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2E03

ANTHROP 3I03  SYNTAX
A study of how words are organized into sentences. The emphasis will be on the Functional approach in comparison with other syntactic theories.
Three hours (lectures); one term
Prerequisite: One of ANTHROP 2L3, LINGUIST 2LL3 or permission of the Department
Cross-list: LINGUIST 3I03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 3I13  SEMANTICS
A study of patterns of meaning in language; a critical survey of current theories and issues.
Three hours (lectures); one term
Prerequisite: One of ANTHROP 3I03, 3M03, LINGUIST 3I03, or 3M03, and six units of a language other than English; or permission of the Department
Cross-list: LINGUIST 3I13
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 3I3  INDEPENDENT STUDY IN ANTHROPOLOGY
Independent study of a research problem through published materials and/or fieldwork. It is incumbent upon the student to secure arrangements with the supervising instructor prior to registration in this course; otherwise, no grade will be submitted.
One term
Prerequisite: Registration in any program in Anthropology and permission of the instructor
ANTHROP 3I: may be repeated, if on a different study, to a total of six units.

ANTHROP 3K03  ARCHAEOLOGICAL INTERPRETATION
Technique and methodology in the investigation of archaeological material.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3
Enrollment is limited.

ANTHROP 3L03  HISTORY OF ANTHROPOLOGY
Some of the major developments and personalities in the history of anthropology as a discipline, with emphasis upon the English-speaking world.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Honours Anthropology
Antirequisite: ANTHROP 2L3
This course is required of all students registered in an Honours Program in Anthropology.

ANTHROP 3M03  MORPHOLOGY
The study of word formation in languages of the world; a critical survey of current theories and issues.
Three hours (lectures); one term
Prerequisite: One of ANTHROP 2L3, LINGUIST 2LL3 or permission of the Department
Cross-list: LINGUIST 3M03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 3N03  PRIMATE EVOLUTION
Comparative anatomy and evolutionary development of humans and our nearest living relatives, the other primates.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2E03
Antirequisite: ANTHROP 3MN3

ANTHROP 3P03  RESEARCH METHODS IN CULTURAL ANTHROPOLOGY
Methodologies and techniques of research, especially field study, in sociocultural anthropology.
Three hours (lectures and discussion); one term
Prerequisite: Registration in any program in Anthropology

ANTHROP 3P3  PALEOANTHROPOLOGY
The origins and evolution of human diseases and methods of identifying disease in ancient human remains.
Three hours (lectures, discussion, and lab); one term
Prerequisite: ANTHROP 2F03
Enrollment is limited.

ANTHROP 3R3  THE ANTHROPOLOGY OF GENRE
Selected topics relating to the construction and practice of gender in various cultural contexts.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural Anthropology

ANTHROP 3V03  ANTHROPOLOGY AND HISTORICAL IMAGINATION
This course is situated at the intersection of history and anthropology, and requires especially on the ways in which social actors represent, give meaning to, and strategically employ constructions of the past.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2F03 and registration in any program in Anthropology
Enrollment is limited.

ANTHROP 3W03**  SPECIAL TOPICS IN ANTHROPOLOGY I
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: Registration in any program in Anthropology

ANTHROP 3W3**  SPECIAL TOPICS IN ANTHROPOLOGY II
As per ANTHROP 3W03**.
One term
Prerequisite: Registration in any program in Anthropology

ANTHROP 3Y03  ABORIGINAL COMMUNITY HEALTH AND WELL-BEING
A critical examination of the determinants of health in Aboriginal communities, processes of community revitalization, and recent government policy initiatives.
Three hours (lecture and discussion); one term
ANTHROP 3Z03  MEDICAL ANTHROPOLOGY: THE BIOMEDICAL APPROACH
Patterns of stress and disease with emphasis on the modern biomedical approach. Disease in the evolutionary context with emphasis on disease as a failure of adaptation and response.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of any program. ANTHROP 2E03 or 2F03 is highly recommended.

ANTHROP 3ZZ3  MEDICAL ANTHROPOLOGY: SYMBOLIC HEALING
An interdisciplinary approach to traditional systems of healing such as Greek humeral medicine, Chinese, Shamanic, etc. Emphasis will be on cultural and psychological parameters of healing.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of any program. ANTHROP 2E03 or 2F03 is highly recommended.

ANTHROP 4AE3  ANTHROPOLOGY AND ENVIRONMENT
This course examines the different and rapidly changing ways in which anthropologists study relationships between humans and their environments. It also considers the contributions which anthropologists are making to environmentalism and knowledge about current ecological issues.
Three hours (seminar); one term
Prerequisite: ANTHROP 2F03 or registration in an honours program; or permission of the instructor

ANTHROP 4B03  CURRENT PROBLEMS IN ANTHROPOLOGY I
The topic varies with each instructor.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours 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 ANTHROPOLOGY II
As per ANTHROP 4B03.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology
ANTHROP 4BB3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4D03  APPLIED ANTHROPOLOGY
An examination of how anthropology is applied to solve human problems. Includes discussion of how students can use their anthropological training in non-academic occupations.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV Honours Anthropology

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.
Three hours (seminar); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 4EE3  ADVANCED TOPICS IN ARCHAEOLOGY II
As per ANTHROP 4E03
Three hours (seminar); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 4F03  ARCHAEOLOGICAL THEORY
A seminar in current topics and issues in archaeological theory.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3 and registration in any honours program

ANTHROP 4G03**  INDEPENDENT RESEARCH I
Independent study of a research problem through published materials and/or fieldwork. Study may include museum internship, participation in faculty research, or student-initiated practica or library research. Students will be required to write up the results of their inquiry in scholarly form. It is incumbent upon the student to secure arrangements with the supervising instructor prior to registration in this course; otherwise, no grade will be submitted.

One term
Prerequisite: Registration in any program in Anthropology

ANTHROP 4G03**  INDEPENDENT RESEARCH II
As per ANTHROP 4G03**, but on a different topic.
One term
Prerequisite: Registration in Level IV Honours Anthropology

ANTHROP 4H03  ARCHAEOLOGY OF HUNTER-FISHER-GATHERERS
Study of the prehistoric technologies and organizational strategies used in making a living from the natural environment and examination of the cultural contexts of foraging economies.
Three hours (seminar); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 4H03  HUMAN EVOLUTIONARY GENETICS
The use of population genetics for resolving the origins of modern humans.
Three hours (seminar); one term
Prerequisite: ANTHROP 2P03
Enrolment is limited. Priority will be given to Level IV Honours Anthropology students.

ANTHROP 4I03  CONTEMPORARY ANTHROPOLOGICAL THEORY
Seminar on selected recent developments in anthropological theory.
Three hours (seminar); one term
Prerequisite: ANTHROP 3L03 and registration in Level IV Honours Anthropology
Enrolment is limited. Access will be provided to all Level IV Honours Anthropology students.

ANTHROP 4J03**  ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY I
Study at an advanced level of selected topics within the sub-discipline. Topics may change from year to year.
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03
ANTHROP 4J03 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4JJ3  ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY II
As per ANTHROP 4J03
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03
ANTHROP 4JJ3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4LB3  ADVANCED PHONETICS, PHONOLOGY AND MORPHOLOGY
This course will examine advanced issues in phonetics, phonology and morphology, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is strongly data-oriented, with material taken from several languages of the Caucasus.
Three hours (lectures and discussion); one term
Prerequisite: Nine units of Linguistics or Linguistic Anthropology Courses above Level I. (See Department of Anthropology in the Faculty of Social Sciences section in this Calendar)
Cross-list: LINGUIST 4LB3
Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 4LC3  ADVANCED SYNTAX AND SEMANTICS
This course will examine advanced issues in syntax and semantics, seeking to evaluate current theory and to address data that fall beyond the explanatory capacities of those paradigms. The course is strongly data-oriented, with material taken from several languages of the Caucasus.
Three hours (lectures and discussion); one term
Prerequisite: Nine units of Linguistics or Linguistic Anthropology Courses above Level I. (See Department of Anthropology in the Faculty of Social Sciences section in this Calendar)
Cross-list: LINGUIST 4LC3
Antirequisite: ANTHROP 4LA3, LINGUIST 4LA3
This course is administered by the Department of Modern Languages and Linguistics.

ANTHROP 4M03  ADVANCED TOPICS IN MYTHOLOGY
A seminar in current topics and issues in comparative mythology.
Three hours (seminar); one term
Prerequisite: ANTHROP 2G03, 3G03 and registration in any honours program
Prerequisite: (Beginning 2006-2007): ANTHROP 2G03, 2G03, 3G03 and registration in any Honours program
ART 4N03
ANTHROPOLOGY AND EDUCATION
A comparison of the formal and informal ways in which people learn within their cultural context, and a survey of the uses of anthropology in schools.
Three hours (seminar); one term
Prerequisite: Registration in any Honours program in the Faculty of Social Sciences

ANTHROPOLOGY 4Q03
GLOBAL PROCESSES AND LOCAL CONSEQUENCES
The seminar seeks: 1) to discern the linkages between some of the main processes at work in global systems; 2) to discuss in what ways these processes are global and in what ways they are systemic; 3) to develop hypotheses for the framework of global scale social theory.
Three hours (seminar); one term
Prerequisite: Registration in any Honours program in the Faculty of Social Sciences

ANTHROPOLOGY 4R03
SKELETAL BIOLOGY OF EARLIER HUMAN POPULATIONS
The analysis of human skeletal samples, including such topics as paleopathology, paleodemography, paleonutrition and biological distance analysis.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2F03
Antirequisite: ANTHROP 3006

ANTHROPOLOGY 4U03
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.
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03 and registration in Level IV Honours Anthropology
Not open to students with credit in ANTHROP 4J03, if the topic was Infectious Disease and Human Evolution.

ANTHROPOLOGY 4U03
PREHISTORY OF THE BRITISH ISLES
A seminar course in the prehistory of Great Britain and Ireland from the Lower Paleolithic to the Bronze Age. Within these limits, chronological and topical emphasis may vary.
Three hours (seminar); one term
Prerequisite: ANTHROP 2P03

ANTHROPOLOGY 4XX3
ADVANCED TOPICS IN LINGUISTIC THEORY
Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department of Modern Languages and Linguistics for the topics to be offered.
Two hours (seminar); one term
Prerequisite: One of ANTHROP 3103, 3M03, LINGUIST 3103, 3M03
Cross-list: LINGUIST 4XX3
ANTHROPOLOGY 4XX3/LINGUIST 4XX3 may be repeated, if on a different topic, a total of six units. Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

ART
WEB ADDRESS: http://www.humanities.mcmaster.ca/~sota/
Togo Salmon Hall, Room 414 Ext. 27671

Courses and programs in Art are administered within the School of the Arts of the Faculty of Humanities.

Note:
Art courses are open only to students registered in a program in Honours Art.

Courses

ART 1F03
STUDIO FUNDAMENTALS I
Module one: colour studies, theoretical and practical application of colour. Module two: Dimensional studies; an exploration of form and space. Lectures, critiques and studio practice (four hours); one term
Prerequisite: Portfolio interview (See below.)
Antirequisite: ART 1F06

ART 1FF3
STUDIO FUNDAMENTALS II
Module one: research studies, strategies inherent within visual practice. Module two: drawing studies, the development of drawing practice. Lectures, critiques and studio practice (four hours); one term
Prerequisite: ART 1F06
Antirequisite: ART 1F06

Portfolio review required. Entrance to any Honours Art Program requires the permission of the School of the Arts as these programs and courses have limited enrolments. Students who wish to enrol in ART 1F03 and 1FF3 must first complete a portfolio interview. Portfolio interviews will occur between January and April each year for entrance in September of the same calendar year. Only those students who call the Office of the School of the Arts (ext. 27671) before March 1st to book appointments for portfolio interviews will be guaranteed consideration for entrance into ART 1F03 and 1FF3. Late applicants will only be interviewed if space availability permits. Acceptance into ART 1F03 and 1FF3 will be verified with written confirmation from the School of the Arts. School of the Arts verification and a Letter of Acceptance from the University guarantee a space in the program as long as the student meets the minimum academic requirements as outlined under School of the Arts programs in the Faculty of Humanities section of the Calendar. Applicants for Art should use the MHA OUAC code. The portfolio should contain a variety of works in different media that represent the applicant's creative abilities and interests. Aptitude in art, academic ability, and demonstrated commitment to the discipline are considered in the selection process. In exceptional circumstances, where distance does not allow for an interview, portfolios may be submitted in the form of colour slides or photographs.
Corequisite: SCIENCE 1A00 Students registering in ART 1F03 must also register in SCIENCE 1A00 when completing their registration. Students who receive advanced credit for ART 1F03 must also register in SCIENCE 1A00 when registering in ART 1FF3.

ART 2A03
INTRODUCTORY PAINTING I
A series of studio projects designed to inform and expand the student's technical and conceptual abilities in painting.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2A06

ART 2AA3
INTRODUCTORY PAINTING II
A continuation of studio projects designed to provide technical and conceptual investigations in the field of painting.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2A06

ART 2B03
INTRODUCTORY SCULPTURE I
A series of three-dimensional studio projects designed to provide technical and conceptual abilities in the field of sculpture.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2B06

ART 2BB3
INTRODUCTORY SCULPTURE II
A continuation of three-dimensional studio projects designed to provide technical and conceptual investigations in the field of sculpture.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2B06

ART 2C03
INTRODUCTORY DRAWING I
A series of studio projects designed to inform and expand the student's technical and conceptual abilities in drawing.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2C06

ART 2CC3
INTRODUCTORY DRAWING II
A continuation of studio projects designed to provide technical and conceptual investigations in the field of drawing.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2C06

ART 2FF3
INTRODUCTORY PRINTMAKING I
A series of studio projects designed to inform and expand the student's technical and conceptual abilities in printmaking.
Four hours; one term
Prerequisite: ART 1F06; or ART 1F03 and 1FF3
Antirequisite: ART 2FF3
ART 2F03  INTRODUCTORY PRINTMAKING II
A continuation of studio projects designed to provide technical and conceptual investigations in the field of printmaking.
Four hours; one term
Prerequisite: ART 1F03; or ART 1F03 and 1FF3
Antirequisite: ART 2F03

ART 3D03  PRACTICAL ISSUES IN STUDIO ART
This course is designed to familiarize students with a range of topics associated with the professional and practical aspects of producing art.
This course utilizes the McMaster Museum of Art collections as a research base for studio production.
Three hours; one term
Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3E06  STUDIO PRACTICE AND CRITICISM
This course introduces self-directed studio study.
Weekly critiques, evening Visiting Artists' lectures; two terms
Prerequisite: Registration in Level III Honours Art or Combined Program with Honours Art and a grade of at least B- in a minimum of six units of Level II Art

ART 3F03  INTEGRATED DRAWING AND PRINT MEDIA
This course enables advanced level studio exploration via the interconnections between print media and drawing which may include production of an image in multiple states and integration of a diverse range of two-dimensional processes.
Four hours; one term
Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3G03  INTERDIMENSIONAL STUDIES IN PAINTING AND SCULPTURE
This course enables advanced level studio exploration via the interconnections between sculpture and painting which may include the exchange between three-dimensional and twodimensional concepts of colour in painted reliefsc, polychrome works and installations.
Four hours; one term
Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3H03  INTEGRATED PAINTING AND PRINT MEDIA
This course enables advanced level studio exploration via the interconnections between print media and painting which may include: photo-based image making, cyanotypes, stencilling, hand-painted monotypes, etc.
Four hours; one term
Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 3I03  INTERDIMENSIONAL STUDIES IN SCULPTURE AND DRAWING
This course enables advanced level studio exploration via the interconnections between sculpture and drawing and may include exploration in media such as two dimensional studies for three-dimensional productions, installation designs, etc.
Four hours; one term
Prerequisite: Registration in Level III Honours Art or a Combined Program with Honours Art

ART 4C06  MINOR STUDIO PROJECT
This course combines advanced level, self-directed studio study with critical sessions and a visiting artist lecture series.
Weekly critiques, evening Visiting Artists' lectures; two terms
Prerequisite: Registration in Level IV of a Combined Honours Art and Another Subject program and a grade of at least B- in ART 3E06
Antirequisite: Credit or registration in ART 4E12

ART 4E12  ADVANCED STUDIO PRACTICE AND CRITICISM
This course combines an intensive block of advanced level, self-directed studio study with critique sessions and a visiting artist lecture series.
Weekly critiques, evening Visiting Artists' lectures; two terms
Prerequisite: Registration in Level IV of any Honours Art Program and a grade of at least B- in ART 3E06
Antirequisite: ART 4C06

ART HISTORY
Courses and programs in Art History are administered within the School of the Arts of the Faculty of Humanities.

Courses

ART HIST 1A03  INTRODUCTION TO THE STUDY OF ART
A course that introduces students to the visual arts through a consideration of principles and elements of painting, sculpture, and architecture, and a discussion of various genres.
Two lectures, one tutorial; one term

ART HIST 1A13  INTRODUCTION TO THE HISTORY OF ART
A brief overview of the Western artistic tradition as embodied in the history of painting, sculpture, and architecture.
Two lectures, one tutorial; one term

ART HIST 2A03  VISUAL LITERACY
A course of lectures and discussions that explores the concept of visual literacy and examines the ways in which fine and popular arts structure our understanding through images.
One lecture (two hours), one tutorial/discussion; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2103

ART HIST 2B03  GREEK ART
The architecture, sculpture, and painting of the Greek and Hellenistic worlds.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2B03
This course is administered by the Department of Classics.

ART HIST 2C03  ROMAN ART
The architecture, sculpture, and painting of the Roman world.
Three lectures; one term
Prerequisite: ART HIST 2B03
Cross-list: CLASSICS 2C03
This course is administered by the Department of Classics.

ART HIST 2D03  19TH- AND 20TH-CENTURY ART AND ARCHITECTURE
A study of the major movements and styles in art and architecture from c. 1800 to c. 1970.
Three lectures; one term
Prerequisite: Registration in Level II or above

ART HIST 2F03  THE HISTORY OF GRAPHIC DESIGN
An introduction to the history of graphic, two-dimensional design. The course demonstrates the admixture of high and popular culture that informs advertising, posters, book design and illustration, etc.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 1A03 and 1A13 is recommended
Cross-list: CMST 2N03, MMEDIA 2F03
This course is administered by the School of the Arts.

ART HIST 2G03  FILM HISTORY TO THE SECOND WORLD WAR
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 weekly film screening; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2X03 (formerly CMST 2X06), THTR&FLM 2F03
Antirequisite: DRAMA 2X06
This course is administered by Theatre & Film. Enrollment is limited to 150 students.

ART HIST 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: Registration in Level II or above

ART HIST 2I03  RENAISSANCE AND BAROQUE ART
An introduction to the history of European art in the period 1400 to 1750.
Three lectures; one term
Prerequisite: Registration in Level II or above

ART HIST 3A03  CONTEMPORARY ART
An examination of major developments in painting, sculpture, and other media from c. 1970 to the present together with an analysis of related critical theory.
Three lectures; one term
Prerequisite: ART HIST 2D03 and registration in Level II or above; or permission of the School of the Arts

ART HIST 3B03 ASPECTS OF CANADIAN ART
A survey of the visual arts in Canada from the earliest explorations and settlements to the present.
Three lectures; one term
Prerequisite: Registration in Level III or IV of any program
Alternates with ART HIST 3J03.

ART HIST 3D03 BAROQUE ART
An examination of European art emerging in the period 1580-1750 with a special emphasis on the continuing evolution of the classical tradition.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2D03 is recommended.

ART HIST 3G03 LATE ANTIQUE AND EARLY CHRISTIAN ART
The art and architecture of the later Roman Empire, and the birth of Christian Art (A.D. 200-500).
Three lectures; one term
Prerequisite: ART HIST 2C03
Cross-list: CLASSICS 3G03
Alternates with ART HIST 3H03.
This course is administered by the Department of Classics.

ART HIST 3H03 ARCHAIC GREK ART
The formative period of Greek Art from its rebirth after the Dark Ages to the Persian Wars (c. 1000-480 B.C.) and its relationship to the art of the Near East.
Three lectures; one term
Prerequisite: ART HIST 2G03
Cross-list: CLASSICS 3H03
Alternates with ART HIST 3G03.
This course is administered by the Department of Classics.

ART HIST 3I03 ITALIAN PAINTING AND SCULPTURE 1400-1580
An advanced level lecture course dealing with selected artists and works from the Early Renaissance to Mannerism.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2I03 is recommended
Alternates with ART HIST 3S03.

ART HIST 3J03 ISSUES IN 19TH-CENTURY ART
An historical and critical investigation of selected issues and artists of the 19th Century.
Three lectures; one term
Prerequisite: ART HIST 2D03 and registration in Level II or above; or permission of the School of the Arts
Alternates with ART HIST 3B03.

ART HIST 3L03 THEORIZING CULTURE THROUGH PERFORMANCE
Students will explore artists’ practices in making performances and will analyze how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.
Three hours; one term.
Prerequisite: One of ART HIST 2E03, 3AA3, CMST 2G03, 2P03, 2S03, THTR&FLM 2C03, 2D03, 2E03
Cross-list: CMST-3L03, THTR&FLM 3L03
Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE. If taken in 2001-2002, or credit in THTR&FLM 2E03 if taken in 2002-2003.
This course is administered by Theatre & Film.
Offered in alternate years.

ART HIST 3P03 ISSUES IN STUDIO CRITICISM
A course that allows non-Art students to explore current studio practice and to investigate approaches to the evaluation of quality in contemporary art. Students taking this course are required to attend a preset number of Studio Critiques and Visiting Artists’ Talks.
Seminar (two hours); one term
Prerequisite: Registration in Level III of an Art History or Multimedia program.

ART HIST 3P03 HISTORY OF PHOTOGRAPHY
This course examines historical and contemporary photographic images in the visual arts and considers the connections and distinctions between artistic and media uses of the medium.
Three hours (lectures and discussion); one term.
Prerequisite: Registration in Level II or above
Cross-list: CMST 3P03

ART HIST 3S03 ART AND CIVILIZATION AT THE DAWN OF THE ITALIAN RENAISSANCE 1200-1400
A study of Italian art and civilization in the age of transition between the Middle Ages and the Renaissance.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2D03 is recommended
Alternates with ART HIST 3I03.

ART HIST 3AA3 SPECIAL STUDIES IN CONTEMPORARY ART
An in-depth examination of one or more significant movements in contemporary art, theory and criticism from c. 1970 to the present.
Seminar (two hours); one term
Prerequisite: ART HIST 3AA3 and permission of the School of the Arts
Offered in alternate years.
Enrolment is limited.

ART HIST 4BB3 SEMINAR IN ANCIENT ART
Consult the School of the Arts concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: ART HIST 2B03, 2C03 and registration in Level III or IV of an Honours program in Art History
Cross-list: CLASSICS 4BB3
ART HIST 4BB3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.
This course is administered by the Department of Classics.

ART HIST 4C03 THE HIGH RENAISSANCE
A seminar devoted to consideration of selected themes relating to the High Renaissance in Italy.
Seminar (two hours); one term
Prerequisite: ART HIST 3I03
Offered in alternate years.
Enrolment is limited.

ART HIST 4E03 TOPICS IN EUROPEAN ART (1300-1750)
A course of readings and discussions, under the guidance of a faculty member, concerning European art and artists from 1300 to 1750. Consult the School for the topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Honours program in Art, Art History, or Multimedia. Prior completion of one of ART HIST 3D03, 3I03 or 3S03 is recommended.
Offered in alternate years.
ART HIST 4E03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

ART HIST 4H03 TOPICS IN MODERN ART (1750-PRESENT)
A course of readings and discussions, under the guidance of a faculty member, concerning nineteenth- and twentieth-century art and artists. Consult the School for the topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Honours program in Art or Art History. Prior completion of one of ART HIST 3AA3 or 3J03 is recommended.
Offered in alternate years.
ART HIST 4H03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

ART HIST 4K06 THESIS
Supervised study of a problem in the history of art of special interest to the student.
Tutorials; two terms
Prerequisite: 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.
ART HIST 4V03

THE STUDY, CRITICISM AND EVALUATION OF ART

A seminar to introduce students to the history, theory, and practice of connoisseurship. Its focus will be to develop skills in confronting the single work of art.

Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a program in Art or Art History, Communication Studies or Multimedia

Offered in alternate years.
Enrolment is limited.

ART HIST 4X03

INTRODUCTION TO ART GALLERIES AND MUSEUMS

A study of the history and methods of institutions created for the purpose of collecting, preserving, displaying and interpreting art objects.

Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a program in Art or Art History

Offered in alternate years.
Enrolment is limited.

ARTS AND SCIENCE

WEB ADDRESS: http://www.mcmaster.ca/artscl
Commons Building, Room 105
Ext. 24655 or 23155

Faculty as of January 15, 2005

Director
Gary A. Warner

Council of Instructors

Syliva Bowerbank/(English and Cultural Studies and Arts & Science) B.A. (McMaster); B.Ed. (Toronto), M.A. (Simon Fraser), Ph.D. (McMaster)

Yu Chang/(Religious Studies) B.A. (Toronto), M.A., Ph.D. (Toronto)

Larisa Faulkner/(Communication Studies) B.A. (Nevada), M.A., Ph.D. (Iowa)

August Fleras/(Anthropology) B.A. (Waterloo), M.A., Ph.D. (Victoria)

Nibaldo H. Galleguillos/(Political Science) B.A. (Chile), M.A., Ph.D. (Toronto)

Kathleen Garay/(Archivist, Mills Library) B.A. (East Anglia), M.A. (Toronto), Ph.D. (McMaster)

Jonathan Geen/(Religious Studies) B.Sc., M.A. (Toronto), M.A., Ph.D. (McMaster)

Louis J. Greenspan/(Religious Studies) M.A. (Dalhousie), Ph.D. (Brandeis)

Archibald Harris/(Engineering Physics) B.Sc. (British Columbia), M.A., Ph.D. (Toronto), P.R.S.C., F.D.R.S.

William E. Harris/(Physics) B.Sc. (Alberta), M.Sc., Ph.D. (Toronto)

Robert Henderson/(Kinesiology) B.P.E. (McMaster), M.A., Ph.D. (Alberta)

Atif Kubursi/(Economics) B.A. (American University, Beirut), M.S., Ph.D. (Purdue)

Shawn Loewen/(English and Cultural Studies) B.A. (Simon Fraser), M.A., Ph.D. (McMaster)

Miroslav Lovric/(Mathematics and Statistics) B.S. (Zagreb), M.S., Ph.D. (Ohio State), 3M Teaching Fellow

Brian J. McHattie/(Geography and Earth Science) B.Sc. (Waterloo), M.Sc. (Guelph)

Alan Mendelson/(Religious Studies) A.B. (Kenyon College), M.A. (Brandeis), Ph.D. (Chicago)

Sara H. Mendelson/(Arts & Science) B.A. (Chicago), D.Phil. (Oxford)

Famela Sugiman/(Sociology) B.A., M.A., Ph.D. (Toronto)


Mark Vorobej/(Philosophy) B.A. (Carleton), M.A., Ph.D. (Toronto)


Jean Wilson/(Modern Languages and Linguistics and Comparative Literature and Arts & Science) B.A. (McMaster); B.Ed., M.A., Ph.D. (Toronto)

Notes:

1. Prerequisites: The prerequisite for all Level I, II, III and IV Arts & Science courses is registration in the Arts and Science Program.

2. Limited Enrolment: Enrolment in Level I of the Arts and Science Program is limited to approximately 60 students.

Courses

ARTS&SCI 1A06 WESTERN CIVILIZATION

An examination of significant themes in Western social and intellectual history, including theories of historical change and the influence of class, race and gender on the evolution of social systems.

ARTS&SCI 1B05 WRITING AND INFORMAL LOGIC

The primary aim of this course is to develop the student's critical and analytical skills in dealing with the written word. Students will examine the structure of selected texts, analyze various types of reasoning, and receive individual attention in expository writing.

ARTS&SCI 1C06 INQUIRY

This inquiry course, designed to develop skills basic to the systematic evidence-based investigation of public issues, focuses on issues relevant to Third World Development.

ARTS&SCI 1D05 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.

ARTS&SCI 1D06 serves as a prerequisite for all upper level Mathematics, Statistics, Computer Science and Physics courses, for which MATH 1A03 or MATH 1A04 is a prerequisite.

ARTS&SCI 2A06 MODERN WESTERN CIVILIZATION

Development of political, economic, sociological and psychological thought in the writings of such major figures as Hobbes, Locke, Rousseau, Adam Smith, Burke, Tocqueville, Marx, Mill, Weber, von Hayek, Polanyi, Nietzsche, Schopenhauer, Freud and Skinner.

ARTS&SCI 2D06 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.

ARTS&SCI 2R06 STATISTICS: MATHEMATICAL MODELS FOR CHANGE, CHANCE AND ERROR

Probability, distributions, measures of association, tests of significance, mathematical models, and other quantitative methods useful in the analysis of variable phenomena, are considered.

ARTS&SCI 3A06 LITERATURE

Literary works drawn from a variety of genres, cultures, and historical periods will be examined with a focus on how great writers have treated enduring ethical concerns. It aims to show how literature is an indispensable means of thinking about human life and society.

Prequisite: Registration in Level III or above

ARTS&SCI 3B03 TECHNOLOGY AND SOCIETY I

The Culture of Technology. Current technological practices and approaches are studied as a cultural activity with its own beliefs, values, social structures and institutions.

Antirequisite: STPP 2A06

ARTS&SCI 3BB3 TECHNOLOGY AND SOCIETY II

The Social Control of Technology. The dominant mechanisms of the social control of technology will be studied. Includes an examination of assessment methods and the role of ethics.

ARTS&SCI 3C6 INQUIRY TOPIC: ENVIRONMENTAL EDUCATION

Environmental crisis will be explored as a crisis of western culture's inability to live in a harmonious relationship with the earth. Intentional communities will be a focus with a residential field experience.

Enrolment is limited.

ARTS&SCI 3C6 INQUIRY TOPIC: MEDIA

This course consists of four sections dealing with theoretical and analytical perspectives, political economy of the media, news media and entertainment media and their cultural effects.

Enrolment is limited.
Using an issue-based approach, the antecedents and consequences of scientific discoveries will be explored, focusing on themes such as the role of imagination in leading scientific discovery.

Enrolment is limited.

Using an issue-based approach, the antecedents and consequences of scientific discoveries will be explored, focusing on themes such as the art of interpreting scientific research.

Enrolment is limited.

The social and economic impact in Canada of factors such as race, gender and culture will be explored from an historical perspective.

Enrolment is limited.

This course will focus on issues of diversity in Canada with respect to the Canadian model of multiculturalism and how it relates to other models, e.g. European, Australian and American models.

Enrolment is limited.

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Enrolment is limited.

Readings of Indian texts in translation will centre around themes such as the nature of human intercourse, free will and determinism; renunciation and social action; violence and non-violence; altruism and selfishness.

Two lectures, one tutorial; one term.

Prerequisite: Registration in Level III or above

Cross-list: RELIG ST 3LO3

This course is administered by the Department of Religious Studies.

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.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III or above

Cross-list: RELIG ST 3SO3; JAPAN ST 3SO3

This course is administered by the Department of Religious Studies.

This course consists of study under the supervision of a McMaster faculty member.

Proposal deadline is March 1; information package is available in the Program office.

The same as ARTS & SCI 4A06 but based on more extensive study.

The same as ARTS & SCI 4C06 but based on more extensive research

The same as ARTS & SCI 4C06 but based on more extensive research.

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Prerequisite: ARTS & SCI 3EE3 and registration in Level IV or above.

Permission is based on a study proposal submitted to the review committee, outlining the nature of the inquiry, the learning objectives and proposed modes of evaluation. An information package is available from the Arts & Science Office.

Enrolment is limited.

The nature of genetic information and its storage. Molecular basis of replication, transcription and translation.

WEB ADDRESS: http://www.fhs.mcmaster.ca/biochem/

Health Sciences Centre, Room 4H43

Ext. 22059

Faculty as of January 15, 2005

Chair
Gerard D. Wright

Assistant Professors
Paul J. Bertin, B.Sc., Ph.D. (McMaster)

Graham A. Gibbon, B.Sc., Ph.D. (McGill)

Giuseppe Melacini, B.Sc., Ph.D. (Milan)

Joaquin Ortega, B.Sc. (Zaragoza, Spain), Ph.D. (Universidad Autónoma de Madrid, Spain)

Sujata Persad, B.Sc. (Trinidad), M.Sc., Ph.D. (Manitoba)

Ray Truant, B.Sc., Ph.D. (Toronto)

Bernardo L. Trigatti, B.Sc., Ph.D. (McMaster)

Geoffrey Westuck, B.Sc., Ph.D. (McMaster)

Associate Members
Stephanie A. Atkinson (Pediatrics) B.A. (Western Ontario), Ph.D. (Toronto)

Christian Baran-Diplo, Ph.D. (Munich)

Jonathan L. Bramson, B.Sc., Ph.D. (McGill)

John D. Brennan (Chemistry) B.Sc., Ph.D. (Toronto) (Canada Research Chair

Jack Gauldie (Pathology) B.Sc. (McMaster), Ph.D. (University College, London)

Brian F. Leber (Medicine) B.Sc., M.D., C.M. (McGill), F.R.C.P.C.

Karen Mossman (Pathology) B.Sc., Ph.D. (Alberta)

Gurmit Singh (Pathology) B.Sc., Ph.D. (Dalhousie)

Jeffrey I. Welsz, B.Sc., M.D. (Ottawa)

Peter M. Whyte (Pathology) B.Sc., M.Sc., B.Ed., Ph.D. (New York)

Courses

If no prerequisite is listed, the course is open.

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.

Three lectures; second term

Prerequisite: BIOCHEM 2B3; and CHEM 2B4A or 2A3; and registration in CHEM 2B3 or 2B23; and credit or registration in BIOLOGY 2C03

Antirequisite: BIOCHEM 2A06, 3B03, 3B13, 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 tutorial; first term
Prerequisite: BIOLOGY 1A03, CHEM 1A1A
Corequisite: Either CHEM 2B3A or 2A3A, and either CHEM 2PA3 or 2R03; or HTH SCI 2E03
Antirequisite: BIOCHEM 2A06, 3BB3, 3BT3, 3G03

BIOCHEM 2C03  INQUIRY IN BIOCHEMISTRY I

A collaborative approach to learning about current topics and techniques in biochemistry; research. Students will work in small groups, with a focus on searching the primary literature, written and oral presentations.

Three hours; first term
Prerequisite: Credit or registration in BIOCHEM 2BB3

BIOCHEM 2EE3  METABOLISM AND PHYSIOLOGICAL CHEMISTRY

A brief introduction to proteins, enzymes and gene expression followed by a more detailed treatment of energy and intermediary metabolism with emphasis on physiological chemistry.

Three lectures; second term
Prerequisite: One of CHEM 2B06, 2BA3, 2D03, 2E03, 2006, 20A3 or permission of the department
Antirequisite: BIOCHEM 2A06, 3D03

BIOCHEM 3A03  BIOCHEMICAL RESEARCH PRACTICE

A twelve week research project undertaken in a biochemistry laboratory during the fall, winter or summer term which requires the submission of a formal report. Students are responsible to arrange a suitable project, location and line of supervision. For further information, please refer to www.fhs.mcmaster.ca/biochem/Undergraduate.htm.

Prerequisite: BIOCHEM 2B03 and registration in Honours Biochemistry. Permission of the Department is required.

BIOCHEM 3C03  CELLULAR BIOCHEMISTRY

Biochemical basis of complex cellular processes such as compartmentalization, vesicular traffic, movement and programmed cell death. Emphasis is placed on the principles of evaluation of current research literature.

Three lectures; second term
Prerequisite: BIOCHEM 2A06 or 3D03, and registration in Honours Biochemistry (Molecular Biology Specialization) or Honours Physics (Biophysics Specialization)

BIOCHEM 3D03  METABOLISM AND REGULATION


Three lectures; first term
Prerequisite: BIOCHEM 2BB3
Antirequisite: BIOCHEM 2A06, 2EE3

BIOCHEM 3G03  BIOCHEMISTRY OF MACROMOLECULES

Chemical and conformational properties of proteins and relationships to the function including regulation of enzyme activity. Chemical and physical structure of DNA and RNA relevant to biological function. Three lectures; first term
Prerequisite: CHEM 20A3 and 20B3; or CHEM 2BA3 and 2B3A; or a grade of at least B+ in CHEM 2D03 or 2E03; or CHEM 2E03 and registration in a Chemical Engineering program or Honours Physics (Biophysics Specialization)
Antirequisite: BIOCHEM 2A06, 2BA3, 2BB3, 3BT3

BIOCHEM 3H03  CLINICAL BIOCHEMISTRY

An outline of clinical chemistry; its relation to disease and relevance to health care.

Three lectures; second term
Prerequisite: BIOCHEM 2B06 or 3D03; or BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3; or HTH SCI 2E03

BIOCHEM 3L03  BIOCHEMISTRY LABORATORY I

Illustration of fundamental principles and techniques of experimental biochemistry and molecular biology.

One lab (four hours), one tutorial (two hours); first term
Prerequisite: BIOCHEM 2A06 or 2BB3, and registration in Honours Biochemistry, Honours Molecular Biology or Honours Chemistry (Biological Specialization); or BIOCHEM 2EE3 and 3G03 and registration in Honours Chemistry (Biological Specialization); or registration in Honours Physics (Biophysics Specialization); or HTH SCI 2E03

BIOCHEM 3N03  NUTRITION AND 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; second term
Prerequisite: BIOCHEM 2A06 or 3D03; or BIOCHEM 2EE3 and 3G03; or a grade of at least C+ in BIOCHEM 2EE3; or HTH SCI 2E03

BIOCHEM 3P03  BIOCHEMISTRY LABORATORY II

A preparation for independent experimental work in molecular biology and biochemistry. Multiple techniques are used together to answer complex biochemical questions in both E.coli and Saccharomyces cerevisiae. One lab (three hours), one tutorial (three hours); second term
Prerequisite: BIOCHEM 2A03 and registration in Honours Biochemistry Specialization or permission of the Department. Application for permission must be received by March 1st of the academic year prior to registration.
Antirequisite: BIOLOGY 3V03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 3V03  INTRODUCTION TO COMPUTATIONAL BIOCHEMISTRY

Introduction to biochemical databases, biological data mining and analysis tools, molecular modelling, and ligand docking. Use of internet resources of biological information, computers and software for solving structure- and information-related problems in a biomedical lab.

Three lectures/tutorials in a computer lab; second term
Prerequisite: Completion of any Biochemistry course

Enrolment is limited.

BIOCHEM 4B06  SENIOR PROJECT IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

An extended research project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. It provides a suitable experience for graduate school or industry. Assessment is based on laboratory work, a poster presentation and a final report.

Two terms
Prerequisite: BIOCHEM 3P03 and registration in Honours Biochemistry Specialization; or registration in Honours Physics (Biophysics Specialization). Permission of the Department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a CA of at least 6.0. For further information, please refer to www.fhs.mcmaster.ca/biochem/Undergraduate.htm.

Antirequisite: BIOCHEM 4BB6, 4F03, 4L03, 4P03, CHEM ENG 4L3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 4C03  INQUIRY IN BIOCHEMISTRY II

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; second term
Prerequisite: Registration in Level IV of Honours Biochemistry (Core)

Antirequisite: HTH SCI 3H03, 4A03, 4G06

BIOCHEM 4E03  RECOMBINANT DNA TECHNOLOGY AND GENE EXPRESSION

Recombinant DNA techniques; theory and applications to the study of gene function and evolution and to disease diagnosis and gene therapy. Current concepts of gene regulation at different levels.

Three lectures; first term
Prerequisite: One of BIOCHEM 2B06, 3B03, 3BT3; or BIOLOGY 3H03 and BIOCHEM 3G03; or a grade of at least B+ in BIOCHEM 3G03; or HTH SCI 2E03

BIOCHEM 4EE3  ADVANCED TOPICS IN GENE EXPRESSION

A critical study of the literature from recent primary manuscripts on gene regulation and inter-related regulatory pathways. Emphasis is on the molecular and cellular biology of multiple pathways that interact to affect phenomena in biology and disease.

Three lectures; second term
Prerequisite: BIOCHEM 4E03

BIOCHEM 4F09  SENIOR THESIS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY

A thesis based on a major research project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. The results will also be presented to the department in a seminar or as part of a poster session.

Two terms
Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization. Permission of the department is required. Application for permission must be received by March 1st of the academic year prior to registration. Students are expected to have a C.A. of at least 9.5. For further information, please refer to www.fhs.mcmaster.ca/biochem/ Undergraduate.htm.

Antirequisite: BIOCHEM 4B06, 4F09, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4R09

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 4G03 BIOCHEMICAL PHARMACOLOGY

The pharmacological and biochemical basis of drug absorption, distribution, metabolism, biotransformation, toxicity and susceptibility. Chemical carcinogenesis and mechanisms of action and cellular resistance to antibacterial and antifungal drugs.

Three lectures; first term
Prerequisite: One of BIOCHEM 3B03, 3BT3, 3D03; or BIOCHEM 2E03 and 3G03; or HTH SCI 2E03

BIOCHEM 4Y03 COMPUTATIONAL BIOLOGY

Theory and computational algorithms used in bioinformatics: sequence alignments; database searches; phylogenetic methods; hidden Markov models; neural networks; computational genomics; database design; information management.

Three lectures; first term
Prerequisite: One of BIOCHEM 3Y03, BIOLOGY 3S03 or permission of the Department

PHYSICS 4S03 MOLECULAR BIOPHYSICS

Thermodynamics of protein folding, RNA and DNA structure. Macromolecular structures within the cell: microtubules, actin filaments, protein complexes, membranes, molecular motors. Physical techniques for studying biomolecular structure and dynamics.

Three lectures; first term
Prerequisite: One of CHEM 2R03, MATLS 2803 or PHYSICS 3H04. PHYSICS 3S03 is recommended.

BIOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/biology/

Life Sciences Building, Room 118
Ext. 23049

Faculty of as of January 15, 2005

Acting Chair (Until June 30, 2005)
Rama S. Singh

Chair (Effective July 1, 2005)
Turlough M. Finan

Associate Chairs
André Bédard/Graduate Studies (Until June 30, 2005)
Patricia Chow-Fraser/Undergraduate Studies
Elizabeth A. Werenfijn/Undergraduate Studies (Effective July 1, 2005)

Professors
Turlough M. Finan/B.Sc., M.Sc. (Guelph), Ph.D. (Guelph)
G. Brian Golding/ B.Sc. (Dalhousie), Ph.D. (Alberta)/Senior Canada Research Chair
Delworth G. Ham/I(Allergy and Molecular Medicine) B.Sc., M.Sc. (Queen's), Ph.D. (McMaster)
John A. Hassell/Biology and Biomedical Sciences, Pathology and Molecular Medicine) B.Sc. (Brooklyn College), Ph.D. (Connecticut)
J. Roger Jacobs/ B.Sc., M.Sc. (Calgary), Ph.D. (Toronto)
Jurek Kolasa/ M.Sc., Ph.D. (Poznan)
Colin A. Nurse/B.Sc. (Western Ontario), Ph.D. (Harvard)
Michael J. O'Donnell/B.Sc., Ph.D. (Toronto)
Andrew J. Rainbow/B.Sc. (Manchester), M.Sc. (London), Ph.D. (McMaster)/Undergraduate Advisor
C. David Rolfo/B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
Herbert E. Scribner/B.Sc., M.Sc. (Guelph), Ph.D. (North Carolina)
Patricia S. Singh/B.Sc., M.Sc., Ph.D. (California-Davis)
Elizabeth A. Weretilnyk/B.Sc., M.Sc. (Halifax)
Christopher M. Wood/B.Sc., M.Sc. (British Columbia), Ph.D. (East Anglia) F.R.S.C./Senior Canada Research Chair

Associate Professors
Christian Baron/Dipl. Microbiol, Ph.D. (Munich)
André Bédard/B.Sc. (Montreal), Ph.D. (McGill)
Robin K. Cameron/B.Sc. (Waterloo), Ph.D. (McGill)
Ana Campos/B.Sc., M.A. (Rio de Janeiro), Ph.D. (Brandeis)
BIOLOGY 1A03  CELLULAR AND MOLECULAR BIOLOGY
Structure, molecular composition and function in sub-cellular and cellular systems.
Three lectures, one lab (three hours); one term
Prerequisite: Grade 12 Biology U (or OAC Biology) and registration in one of Science I, Arts & Science I, Health Sciences I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, Chemical Engineering and Bioengineering, Electrical and Biomedical Engineering, any program above Level I; or a grade of at least 80% in Grade 12 Biology U (or OAC Biology). Registration in or completion of CHEM 1A03, 1AA3 is strongly recommended. CHEM 1A03, 1AA3 are prerequisites for many Biology courses in Level II, III, and IV.
Corequisite: SCIENCE 1A00. Students registering in BIOLOGY 1A03 must also register in SCIENCE 1A00 when completing their registration.
Antirequisite: HTH SCI 1006
Students in non-Science programs should consider registering in BIOLOGY 1K03 and SCIENCE 2K03 which do not require laboratories.

BIOLOGY 1A03  BIODIVERSITY, EVOLUTION AND ECOLOGY
Fundamental evolutionary and ecological concepts with particular reference to the diversity of life.
Three lectures, one lab (three hours); one term
Prerequisite: Grade 12 Biology U (or OAC Biology) and registration in one of Science I, Arts & Science I, Health Sciences I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, Chemical Engineering and Bioengineering, Electrical and Biomedical Engineering, any program above Level I; or a grade of at least 80% in Grade 12 Biology U (or OAC Biology). Registration in or completion of CHEM 1A03, 1AA3 is strongly recommended. CHEM 1A03, 1AA3 are prerequisites for many Biology courses in Level II, III, and IV.
Corequisite: SCIENCE 1A00 Students registering in BIOLOGY 1A03 must also register in SCIENCE 1A00 when completing their registration.
Students in non-Science programs should consider registering in BIOLOGY 1K03 and SCIENCE 2K03 which do not require laboratories.

BIOLOGY 1K03  BIOLOGY FOR THE HUMANITIES AND SOCIAL SCIENCES
Principles spanning the realms of biology with a particular emphasis towards the understanding of the human species.
Three lectures, one tutorial; one term
Antirequisite: SCIENCE 2K03
Not open to students registered in a program in the Faculty of Science. BIOLOGY 1K03 is not a prerequisite for further courses in Biology. Other Biology courses of interest to students in Humanities and Social Sciences include SCIENCE 2K03.

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: BIOLOGY 1A03, 1AA3
Antirequisite: BIOLOGY 3G03, 3R03, ENGINEER 4G03, ENGR PHYS 3X03, HTH SCI 1K05, 1H05, 2F03, 2F05, KINESIOL 1A08, 1Y03
Not open to students with credit or registration in BIOLOGY 3P03, 3U03, 3U03.

BIOLOGY 2B03  CELL BIOLOGY
Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.
Three lectures, one lab (three hours), one tutorial; one term
Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3
Antirequisite: HTH SCI 2K03

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.
Three lectures and one tutorial (three hours); one term
Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3; and registration in an Honours program in the Faculty of Science, or a program in Arts & Science, Health Sciences or Kinesiology. Students are required to have a C.A. of at least 6.0; students who require this course for completion of their program are guaranteed admission.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 2D03  PLANT BIODIVERSITY
An introduction to plants emphasizing their diversity in structure, development, ecology, mechanisms of reproduction, adaptations for survival in different environments, and human uses.
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 1A03; and BIOLOGY 1A03 or ENVIR SC 1B03

BIOLOGY 2F03  FUNDAMENTAL AND APPLIED ECOLOGY
An introduction to fundamental ecological principles and illustration of how these are applied to current environmental problems at the level of organisms, populations and ecosystems.
Two lectures, one optional tutorial, one mandatory lab (three hours); one term
Prerequisite: BIOLOGY 1A03

BIOLOGY 2G03  INQUIRY I - CURRENT ISSUES IN BIODIVERSITY
An interactive course exposing students to current issues in the understanding, preservation and management of biodiversity and ecological integrity.
One lecture (three hours), one tutorial; one term
Prerequisite: BIOLOGY 2D03, 2F03; and registration in Level II or III of any program in the Faculty of Science, Health Sciences or the Arts & Science Program. Please note, BIOLOGY 3G03 is open only to students registered in the Biodiversity Specialization of the Honours Biology Program. Antirequisite: BIOLOGY 2B03

BIOLOGY 2I03  INQUIRY IN BIOLOGY I
This course provides an active learning approach to developing skills in designing, interpreting and communicating research in Biology.
One lecture, two workshops; one term
Prerequisite: Registration in Level II of any Honours Biology program, Honours Biology and Psychology or Honours Molecular Biology Antirequisite: BIOLOGY 2G03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
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: One of BIOLOGY 2A03, HTH SCI 2F03, PSYCH 2F03; and one of BIOCHEM 2A06, 2B03, 2EE3 or registration in BIOCHEM 3G03.
BIOLOGY 3P03 is highly 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, photorepiration, mineral nutrition, water relations and transpiration.
Two lectures, one tutorial (three hours); one term
Prerequisite: BIOLOGY 2B03, 2D03

BIOLOGY 3BB3  ULTRASTRUCTURE, DEVELOPMENT AND FUNCTION OF PLANT CELLS
Cells and tissues will be studied. Students will take photomicrographs and electron micrographs.
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2B03, 2D03
Offered in 2005-2006.

BIOLOGY 3E03  FUNDAMENTALS OF MICROBIOLOGY
Microbial structure-function relationships; taxonomy, antimicrobial agents and use of microorganisms in biotechnology.
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2B03, 2D03; and one of CHEM 2BB3, 2D03, 2E03, 2O03, BIOCHEM 2EE3 or equivalent is strongly recommended.

BIOLOGY 3F03  VERTEBRATE ANATOMY
An introduction to the development of structure and function in vertebrates.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2E03 or 2B03. BIOLOGY 2A03 is highly recommended.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Offered in alternate years.
Offered in 2005-2006.

BIOLOGY 3FF3  EVOLUTION
Introduction to the major theoretical concepts and empirical findings in micro- and macroevolution.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03

BIOLOGY 3G03  INQUIRY II- CURRENT RESEARCH IN BIODIVERSITY
An interactive course highlighting current research programs in the general area of biodiversity within the Biology Department. Preparation for BIOLOGY 4C09 and 4F06 project on a biodiversity topic. A mandatory weekend field trip will be held in September. Students enrolling in this course must pay both the nominal incidental fees as prescribed by the instructor and regular tuition fees.
One lecture (three hours), one tutorial; one term
Prerequisite: BIOLOGY 2G03. Restricted to students registered in Level III Honours Biology, (Biology Specialization).

BIOLOGY 3H03  MOLECULAR BIOLOGY OF THE NUCLEUS
Structure of the nucleus and of chromatin; organization of DNA sequences; DNA replication, transcription; gene expression; some relevant techniques.
Two lectures, one tutorial (two hours); one term
Prerequisite: BIOLOGY 2B03
Antirequisite: BIOCHEM 3B03

BIOLOGY 3H3  ORGANIZATION OF THE CYTOPLASM
A detailed examination of the molecular organization and function of cytoplasmic structures in eukaryotes, with particular focus on the differentiation and specialization of the cell surface and the cytoskeleton.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2B03

BIOLOGY 3I03  EUKARYOTIC GENETICS
The genetics of eukaryotic organisms. Experimental problems in gene transmission, interaction and polymorphism. Linkage, recombination and chromosome structure; sex determination.
Three lectures; one term
Prerequisite: BIOLOGY 2B03, 2C03

BIOLOGY 3K03  ANIMAL HISTOLOGY
The structure, function, and organization of cells, tissues, organs and organ systems.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 2E03 or 2B03. BIOLOGY 2A03 is highly recommended.
Antirequisite: HTH SCI 2F03, 2FF3
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3M03  FUNDAMENTALS OF MICROBIOLOGY
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: BIOLOGY 2B03, 2C03
Antirequisite: BIOLOGY 3N03

BIOLOGY 3M3  INVERTEBRATE FORM AND FUNCTION
Analysis of sensory, nervous control systems, feeding, skeletal support, locomotion, excretion, respiration, and reproduction in selected invertebrates.
Two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 2A03 or 2E03
Offered in 2005-2006.

BIOLOGY 3O03  MICROBIAL GENETICS
The genetics of bacteriophages, bacteria and fungi. 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: BIOLOGY 2C03. BIOLOGY 3E03 is strongly recommended.

BIOLOGY 3P03  CELL PHYSIOLOGY
Analysis of cell function with an emphasis on electrical properties, ion transport proteins, signaling via second messengers, mechanisms of cell homeostasis, and epithelial transport.
Two lectures, one tutorial; one term
Prerequisite: BIOLOGY 2A03 or PSYCH 2F03; and credit or registration in one of BIOCHEM 2A06, 2BB3, or 3G03

BIOLOGY 3Q03  PEER MENTORING IN BIOLOGY (CELLULAR AND MOLECULAR BIOLOGY)
This course gives students theoretical and practical experience with teaching methods in biology and provides an introduction to scientific writing and presentation focusing on cellular and molecular biology concepts and topics.
One lecture (two hours), one practicum; one term
Prerequisite: BIOLOGY 1A03; and registration in Level III of a program in Arts & Science or the Faculty of Science; and permission of the instructor.
Antirequisite: BIOLOGY 3O03, HTH SCI 4X03, SCIENCE 2L03, SOC SCI 2L03
Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 118 by March 30 of the academic year prior to registration. Placements announced by May 15, after completion of a successful interview process. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3QQ  PEER MENTORING IN BIOLOGY (BIODIVERSITY, EVOLUTION AND ECOLOGY)
This course gives students theoretical and practical experience with teaching methods in biology and provides an introduction to scientific writing and presentation focusing on evolutionary and ecological concepts.
One lecture (two hours), one practicum; one term
Prerequisite: BIOLOGY 1AA3; and registration in Level III of a program in Arts & Science or the Faculty of Science; and permission of the instructor.
Antirequisite: BIOLOGY 3Q03, HTH SCI 4X03, SCIENCE 2L03, SOC SCI 2L03
Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 119 by September 30 of the calendar year prior to registration. Placements announced by December 1, after completion of a successful interview process. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
FIELD BIOLOGY I

Field work plus written assignments chosen from an assortment of modules offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 4J03, 4JJ3. Available modules are posted in December each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees.

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03, and permission of the Course Administrator, Life Sciences Building, Room 118. Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 3R03, or contact the Course Administrator.

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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: BIOLOGY 2C03
Antirequisite: BIOLOGY 4K03

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.

Two lectures; one lab (three hours); one term
Prerequisite: BIOLOGY 2F03. BIOLOGY 2D03 and STATS 1CC3 are recommended.

COMMUNITY ECOLOGY

Community structure; succession; patterns of diversity and their relevance to conservation; elements of biological control; energy flow; nutrient cycling and climatic influences.

Two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 2A03. BIOCHEM 2E03 and 3G03 are recommended.
Antirequisite: HTH SCI 1D06, 2F03, 2FF3, 2L03, 2L3, 2M3, 2N3, 2T3, 3G03, KINESIOL 1A06, 1Y1Y3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

ANIMAL PHYSIOLOGY - HOMEOSTASIS

Respiration, circulation, acid-base balance and renal function.

Two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 2A03. BIOLOGY 2D03 and 2C03 are recommended.
Antirequisite: HTH SCI 1D06, 2F03, 2FF3, 2L03, 2L3, 2M3, 2N3, 2T3, 3G03, KINESIOL 1A06, 1Y1Y3

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

TECHNIQUES IN MOLECULAR GENETICS

A laboratory course involving basic experiments in Molecular Genetics. One lecture, two labs (three hours each); one term.

Prerequisite: Credit or registration in BIOLOGY 3C03 and registration in Level III or IV of any Honours Biology or Molecular Biology program; or permission of the Instructor
Antirequisite: BIOCHEM 3P03

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PLANT RESPONSES TO THE ENVIRONMENT

Plants display many modifications in their development in response to their environment. This course will examine these phenotypic responses from molecular, morphological and evolutionary perspectives.

Three lectures; one term
Prerequisite: BIOLOGY 2B03, 2C03, 2D03

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: One of BIOLOGY 3F03, 3J03, 3SS3 or 3TT3

CONSERVATION BIOLOGY

Examination of how biological principles, mainly from population biology and genetics can be applied to conserving diversity in the natural world. Three lectures, one tutorial (three hours); one term
Prerequisite: BIOLOGY 2C03; and one of BIOLOGY 3F03, 3J03, 3SS3 or 3TT3

PLANT METABOLISM AND MOLECULAR BIOLOGY

Analysis of plant cell metabolism and the regulation of metabolism at the biochemical and molecular genetic level. Three lectures; one term
Prerequisite: One of BIOCHEM 2A06, 2B03 or 3G03. BIOLOGY 3B03 and 3H03 are recommended.

Offered in alternate years.


SPECIAL PROJECT

A thesis based upon a research project in an area of biology carried out under the direction of a member of the Biology department.

Prerequisite: 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 C.A. of at least 8.5. Arrangements to take BIOLOGY 4C09, 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 http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4C09, or contact the Course Administrator.

Antirequisite: HTH SCI 3H03, 4A09, 4B06

Not open to students with credit or registration in courses in the Science Capstone Course List in the Faculty of Science section of the Calendar.

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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: ANTHROP 2D03 or BIOLOGY 3F03

Offered in alternate years.


POPULATION GENETICS

Conceptual foundations of evolutionary theory and principles of population genetics.

Three lectures; or two lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03; 3F03

ANTIREQUISITE: BIOLOGY 3J03

HUMAN DIVERSITY AND HUMAN NATURE

The nature of genetic diversity in humans; the nature versus nurture debate in relation to genetic determinism and biological basis of behaviour.

Three lectures and one tutorial; one term
Prerequisite: BIOLOGY 2C03 and one of ANTHROP 2E03, BIOLOGY 3F03, 3J03

SPECIAL PROJECT

Students undertake an experimental or library project in a specialized area of biology under the direction of a member of the Biology department.

Prerequisite: 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 C.A. of at least 8.5. Arrangements to take BIOLOGY 4F05, 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 http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4F05, or contact the Course Administrator.

Antirequisite: HTH SCI 3H03, 4A09, 4B06

Not open to students with credit or registration in courses in the Science Capstone Course List in the Faculty of Science section of the Calendar.

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
This course provides an opportunity to explore a specialized area in Biology in a small group setting. 

Prerequisite: A grade of at least B+ in BIOLOGY 3F03 or 3K03, or registration in BIOLOGY 3F03 or 3K03; and permission of the instructor. Application for permission must be received by the Course Administrator, Life Sciences Building, Room 118, by March 31st of the academic year prior to registration. These are minimum requirements, and final selection will be based on academic merit. 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

Offered in alternate years. 


BIOLOGY 4G99

SENIOR GENETICS CO-OP THESIS

A thesis based upon a research project in an area of genetics carried out under the direction of a member of the Department. 

Prerequisite: Registration in Level IV of the Honours Biology Genetics Specialization Co-op program and permission of the Course Administrator, Life Sciences Building, Room 118. Arrangements to take BIOLOGY 4G99, 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 http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4G99. 

Antirequisite: HTH SCI 3H03, 4A09, 4B06

Not open to students with credit or registration in courses in the Science Capstone course List in the Faculty of Science section of the Calendar. 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

BIOLOGY 4I03

INQUIRY IN BIOLOGY II

This course provides an opportunity to explore a specialized area of Biology in a small group setting. 

Lectures, seminars and discussions (three hours; one term) 

Prerequisite: Registration in Level IV Honours Biology. BIOLOGY 4I03 may not be repeated. For information regarding module offerings, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4I03, or contact the Course Administrator, Life Sciences Building, Room 118. 

Antirequisite: BIOLOGY 4C09, 4F06, 4FF3, 4G99, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4R09, PHARMAC 4F09 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

BIOLOGY 4J03

FIELD BIOLOGY II

A second field module chosen from those offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 3R03, 4JJ3. Available modules are posted in December of each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees. 

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03, and permission of the Course Administrator, Life Sciences Building, Room 118. 

Offered in alternate years. 

BIOLOGY 4J13

FIELD BIOLOGY III

A third field module chosen from those offered by faculty from McMaster and other Ontario Universities' Biology Departments. This module must differ from any completed for credit in BIOLOGY 3R03, 4JJ3. Available modules are posted in December of each year. Content and schedules vary annually. Students enrolling in this course must pay both the incidental fees, as prescribed by the Department, and the regular tuition fees. 

Prerequisite: BIOLOGY 1A03, 1AA3 or one of ENVIR SC 1A03, 1B03 or 1G03; and permission of the Course Administrator, Life Sciences Building, Room 118. Restricted to students who have completed Level III Honours Biology (Biodiversity Specialization). 

Some modules have additional prerequisites. For information on Field Biology, please refer to the Biology web site at http://www.science.mcmaster.ca/biology/undergraduate/courses.htm and click on BIOLOGY 4JJ3, or contact the Course Administrator. 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

BIOLOGY 4P06

HUMAN ANATOMY

A study of the human body by dissection, self-teaching modules and videotapes. 

Two labs (two and one half hours; two terms). 

Prerequisite: A grade of at least B+ in BIOLOGY 3F03 or 3K03, or registration in BIOLOGY 3F03 or 3K03; and permission of the instructor. Application for permission must be received by the Course Administrator, Life Sciences Building, Room 118, by March 31st of the academic year prior to registration. These are minimum requirements, and final selection will be based on academic merit. 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

BIOLOGY 4P03

MEDICAL MICROBIOLOGY

Prerequisite: BIOLOGY 3E03. Credit or registration in BIOLOGY 3003 is strongly recommended. 

Offered in alternate years. 

Offered in 2005-2006. 

BIOLOGY 4PP3

MICROBIAL DIVERSITY AND ENVIRONMENTAL BIOTECHNOLOGY

Study of interaction of microorganisms with the environment with emphasis on topics of ecological significance including plant-microbe interactions, nutrient cycling and waste treatment. 

Two lectures, one tutorial (three hours; one term) 

Prerequisite: BIOLOGY 3E03. Credit or registration in BIOLOGY 3003 is strongly recommended. 

Offered in alternate years. 


BIOLOGY 4R03

HUMAN GENETICS

The human genome and genetic medicine. Topics include normal and pathological cytology; the human genome project; gene mapping, linkage and therapy. 

Two lectures, one tutorial (two hours; one term) 

Prerequisite: BIOLOGY 2B03, 2C03, 3O3 

BIOLOGY 4TO3

NEUROBIOLOGY

Selected topics in neurobiology at the molecular and cellular level including neuron development, ion channels, neurotransmitter functions, learning and memory, and neurological disorders. 

Two lectures, one tutorial (three hours; one term) 

Prerequisite: BIOLOGY 3P03. One or more of BIOLOGY 3H03, 3H13, 3UL3, PSYCH 2F03. 3F03 is also recommended. 

Offered in alternate years. 


BIOLOGY 4U03

RADIATION BIOLOGY

The effects of radiation on biological material at the molecular, cellular, tissue and whole organism level. 

Three lectures; or two lectures and one tutorial; one term 

Prerequisite: One of BIOLOGY 2B03 or 2C03, and one of BIOLOGY 3L03, MED PHYS 3T03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op; or permission of the instructor 

BIOLOGY 4V03

VIROLOGY

The viruses of animals, bacteria, and plants, with emphasis on the molecular biology of virus replication and the diversity of virus-cell interactions. 

Three lectures, one tutorial (two hours; one term) 

Prerequisite: One of BIOCHEM 3C03, BIOLOGY 3H03, 3H13 or permission of the instructor 

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 and one tutorial; one term 

Prerequisite: One of BIOLOGY 3M3, 3P03, 3U03, 3U13 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar. 

Offered in alternate years. 

Offered in 2005-2006. 

BIOLOGY 4XX3

WORKSHOP IN MOLECULAR GENETICS

An intensive two week laboratory/lecture course. Topics covered will include scientific reasoning, ethics, technology transfer, molecular genetics techniques, techniques used in cell culture and gene expression studies. 

NOTE: Course will consist of two weeks of laboratory instruction, seminars and workshops. To be held the first two weeks of May. 

Prerequisite: BIOLOGY 3E03; and registration in an Honours Biology program; and permission of the Instructor. Application for permission must be received by March 31st of the academic year prior to registration. 

Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
BIOLOGY 4Y03  ECOLOGY OF INLAND WATERS
Physical, chemical, and biological interrelationships of inland waters, including aspects of pollution. Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 3F03 and credit or registration in one of BIOLOGY 3G03, 3SS3, 3TT3; or permission of the instructor.

HTH SCI 3103  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: BIOLOGY 2F03 or HTH SCI 2K03
Antirequisite: BIOLOGY 3X03

HTH SCI 4113  ADVANCED TOPICS 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: BIOLOGY 3X03 or HTH SCI 3103
Antirequisite: BIOLOGY 4113

MED PHYS 3T03  RADIOACTIVITY AND RADIATION INTERACTIONS
Radioactivity and radiation phenomena: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection. Three lectures; one term
Prerequisite: One of PHYSICS 1B31, 1B32 or permission of the instructor
Antirequisite: BIOLOGY 3L03, PHYSICS 3T03

MOL BIOL 4H03  MOLECULAR BIOLOGY OF CANCER
Cancer at the cellular and molecular level. Topics include: properties of cancer cells, activation of proto-oncogenes, function of oncogenes, transgenic mouse models, and cancer viruses. Two lectures; one tutorial; one term
Prerequisite: One of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03, 3H13 or permission of the instructor

MOL BIOL 4J03  MOLECULAR IMMUNOLOGY
This advanced course applies small group based learning to immunological problems. Topics concern development of immunoassays, resistance to infection and immunity in health and disease. One session (two hours), one tutorial; one term
Prerequisite: One of BIOLOGY 3X03 or HTH SCI 3103, and one of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03 or permission of the instructor
Cross-list: BIOCHEM 4J03, HTH SCI 4J03
This course is administered by the Bachelor of Health Sciences (Honours) Program.

BUSINESS

(SEE COMMERCE)

CANADIAN STUDIES

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)

CAYUGA

(SEE INDIGENOUS STUDIES, CAYUGA)

CHEMICAL ENGINEERING

WEB ADDRESS: http://www.chemeng.mcmaster.ca
John Hodgins Engineering Building, Room 374 Ext. 24957

Faculty as of January 15, 2005

Chair
A. N. Hrymak

Distinguished University Professors

Professors
James M. Dickson/ B.A.Sc., M.A.Sc. (Waterloo), Ph.D. (Virginia Tech.)
Ralph L. Outhy/B.Sc., M.Sc. (Aln Shama), Ph.D. (Western Ontario), M.B.A. (Toronto)
Thomas E. Martin/ B.S. (SIUN), M.S. (Dayton), Ph.D. (Massachusetts)
Robert H. Peillon/B.Sc., M.Sc. (Guelph), Ph.D. (Bristol)/Senior Canada Research Chair
Paul A. Taylor/B.Sc., Ph.D. (Wales), P.Eng.
Shaping Zhu/B.Eng. (Zhejiang), Ph.D. (McMaster), P.Eng./Canada Research Chair

Adjunct Professor

Associate Professors
Christopher L. E. Swartz/B.Sc.Eng. (Cape Town), Ph.D. (Witsun)
Heather Sheardown/B.Eng. (McMaster), Ph.D. (Toronto), P.Eng.

Adjunct Associate Professors
Lyndon W.J. Jones/B.Sc. (Wales), Ph.D. (Aston)
Theodora Kourtis/Dipl. Eng. (Chemical) (Aristotle), Ph.D. (McMaster)

Assistant Professors
Lisa Crossley/B.Sc.(McGill), B.Sc.E., Ph.D. (Queen's)
Carlos Filipe/B.S. (Universidade Catolica Portuguesa), Ph.D. (Clemson)
Raja Ghosh/B.S., M.S. (Jadavpur), D.Phil. (Oxford)
Kim Jones/B.A.Sc. (Waterloo), M.Sc. (Guelph), Ph.D. (Toronto)
Michael Thompson/B.Sc., B.Eng., M.Eng. (McMaster), Ph.D. (Waterloo)

Adjunct Assistant Professors
Leopold K. (Kris) Kostanski/M.Eng., Ph. D. (Technical University of Szczecin)
Shannon L. Quinn/B.Sc., B.A.Sc. (Ottawa), Ph.D. (Queen's)

Associate Members
Michael Brook/Chemistry B.Sc. (Toronto), Ph.D. (McGill)
Kari Dalmi/Veress/Physics and Astronomy B.Sc., M.Sc., Ph.D. (Guelph)
Nicholas Kevian/Engineering and Statistics B.Sc. (British Columbia), Ph.D. (Cambridge)
An-Chang Shi/Physics and Astronomy B.Sc. (Fudan), M.Sc., Ph.D. (Illinois)
Judith West-Mays/Pathology and Molecular Medicine B.Sc. (Wilfrid Laurier), M.Sc., Ph.D. (Waterloo)

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.

Courses
CHEM ENG 2A04  HEAT TRANSFER
Steady and unsteady conduction and convection, condensation and boiling. Understanding fundamentals behind heat exchangers, and finned arrangements. Numerical simulations of complex heat transfer systems. Three lectures, one tutorial (two hours); second term
Prerequisite: Registration in a Chemical Engineering or Materials Engineering program
Corequisite: One of CHEM ENG 2G03, 2F04, MATLS 2B06, 2D03

CHEM ENG 2B03  INTRODUCTION TO BIOPROCESS ENGINEERING
Unit operations approach: material and energy balances; survey of momentum, heat and mass transfer; basics of chemical process design. Two lectures (one hour each), one tutorial (two hours); first term
Prerequisite: Registration in Level II Honours Biochemistry (Biotechnology and Genetic Engineering Specialization) or Level II Civil Engineering (Water/Environmental Engineering Stream)
Not open to students registered in a Chemical Engineering program.
CHEM ENG 2D04 CHEMICAL ENGINEERING PRINCIPLES I
Steady-state mass balances in chemical processes and the first law of thermodynamics. The behaviour of gases and liquids, and their physical equilibria. Recycle in steady state operation.
Three lectures, one tutorial (three hours); first term
Prerequisite: Registration in Level II of any Chemical Engineering program.

CHEM ENG 2F04 CHEMICAL ENGINEERING PRINCIPLES II
Combination and mass and energy balances in the steady and unsteady state.
The second law of thermodynamics and physical chemical equilibria.
Introduction of process simulation packages.
Three lectures, one tutorial (three hours); second term
Prerequisite: Registration or credit in CHEM ENG 2D04.

CHEM ENG 2G03 PROBLEM SOLVING AND TECHNICAL COMMUNICATION
Developing awareness, strategies, creativity, analysis and interpersonal skills in the context of solving homework problems and preparing technical communications. Interpretation, retrieval manipulation and communication of information.
Three lectures; first term
Antirequisite: CHEM ENG 2C02, 2G02.

CHEM ENG 3B04 CELL BIOLOGY AND MICROBIOLOGY
Introduction to cell structure and function, including transport and chemical signals, adaptation of structure and function. Use of microorganisms in biotechnology. Biology of the prokaryotic cell.
Three lectures, one lab (three hours); second term
Prerequisite: Registration in Chemical Engineering and Bioengineering.

CHEM ENG 3BK3 BIO-REACTION ENGINEERING
Three lectures; first term
Prerequisite: Registration in Level IV of any Chemical Engineering program; or CHEM ENG 2B03; or permission of the Department.

CHEM ENG 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: Registration in Level IV of a Chemical Engineering Program; or CHEM ENG 2B03; or permission of the Department.

CHEM ENG 3D03 CHEMICAL ENGINEERING THERMODYNAMICS
Review of the total energy balance, mechanical energy balance and thermodynamics of one component system. Chemical reaction and phase equilibria of multicomponent systems; emphasis on non-ideality.
Two lectures, one tutorial (two hours); first term
Prerequisite: CHEM ENG 2F04.

CHEM ENG 3E04 PROCESS MODEL FORMULATION AND SOLUTION
Formulation of models for various chemical processing units in the steady and unsteady states. Techniques for numerical solution of model equations, including algebraic and ordinary differential equations, both linear and non-linear.
Three lectures; one tutorial (one hour), every week; first term
Prerequisite: CHEM ENG 2F04, MATH 2M05.

CHEM ENG 3G04 SIMULATION, MODELLING AND PROBLEM SOLVING
Chemical process simulation including models for heat exchangers, separators and reactors. Group skills, decision-making and self-directed, problem-based learning.
Three lectures, one tutorial (two hours); second term
Prerequisite: CHEM ENG 2G02 or 2G03; and registration or credit in CHEM ENG 2A04, 3D03, 3E04, 3K04, 3M04.
Antirequisite: CHEM ENG 3G03.

CHEM ENG 3K04 INTRODUCTION TO REACTOR DESIGN
Stoichiometry of multiple reactions, kinetics of homogeneous reactions, interpretation of batch data, design of ideal and non-ideal CSTR and plug flow reactors.
Three lectures; one tutorial (two hours); second term
Prerequisite: MATH 2M06 and registration or credit in CHEM ENG 2F04 and 3D03; or a grade of at least D+ in CHEM ENG 2B03 and permission of the Department.

CHEM ENG 3L02 INTERMEDIATE LABORATORY SKILLS
Experiments and projects in heat transfer, thermodynamics, mass transfer and fluid mechanics with appropriate data analysis and report writing.
One lecture, one lab (three hours); second term
Prerequisite: CHEM ENG 3D03, 3M04, 3C04 and registration or credit in CHEM ENG 2A04.

CHEM ENG 3M04 MASS TRANSFER AND STAGWISE OPERATIONS
Stage operations, diffusion, mass transfer coefficients, distillation, differential contacting and absorption.
Three lectures, one tutorial (two hours); first term
Prerequisite: CHEM ENG 2F04.

CHEM ENG 3Q04 FLUID MECHANICS
The laws of statics and dynamics in both compressible and incompressible fluids. Equations of conservation and modern turbulence and boundary layer theory applied to submerged and conduit flow. Similarity, unsteady flow, measuring devices and fluid machinery.
Three lectures, one tutorial (three hours); first term
Prerequisite: MATH 2M06, or both MATH 2P04 and 2Q04, or both MATH 2A03 and 2C03 (any of which may be taken concurrently); and registration in a Chemical Engineering or Materials Science or Materials Engineering program.

CHEM ENG 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: One of CHEM 2B06, 2D03, 2E03, 2006, 2W2W, 2WW4.

CHEM ENG 4B03 POLYMER REACTION ENGINEERING
Three lectures; first term
Prerequisite: CHEM ENG 3K04, 3Q03.

CHEM ENG 4C03 STATISTICS FOR ENGINEERS
Linear regression analysis in matrix form, non-linear regression, multi-response estimation, design of experiments including factorial and optimal designs. Special emphasis on methods appropriate to engineering problems.
Three lectures; one term
Prerequisite: One of COMMERCE 2A3, STATS 3N03 or 3Y03.

CHEM ENG 4E03 DIGITAL COMPUTER PROCESS CONTROL
This course addresses key aspects of implementing control via discrete calculations using digital computers. Topics include discrete-time dynamic models, system identification, analysis of discrete-time systems, design of digital control systems and model predictive control.
Three lectures; first term
Prerequisite: CHEM ENG 3E04, 3K04, 3M04, 3P04; and CHEM ENG 3G03 or 3Q03.

CHEM ENG 4G03 OPTIMIZATION IN CHEMICAL ENGINEERING
The application on optimization methods to important engineering problems in equipment design and operation, statistics, control, engineering economics and scheduling. The course will emphasize problem definition, model formulation and solution analysis, with sufficient details on existing algorithms and software to solve problems.
Two lectures, one tutorial (two hours); second term
Prerequisite: CHEM ENG 3E04, 3K04, 3M04, 3P04; and CHEM ENG 3G03 or 3Q03.
Corequisite: CHEM ENG 4N04.

CHEM ENG 4K03 REACTOR DESIGN FOR HETEROGENOUS SYSTEMS
Catalytic kinetics, mass transfer limitations, packed and fluidized bed reactors, two phase reactors.
Three lectures; second term
Prerequisite: CHEM ENG 3K04.
CHEM ENG 4L02 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), one lecture; first term
Prerequisite: CHEM ENG 3L02; and registration in Level IV of any Chemical Engineering program

CHEM ENG 4L13 BIO LABORATORIES
Recombinant DNA technology including cloning, directed mutagenesis, DNA sequencing and expression of cloned genes. Reaction kinetics and reactor design for enzyme and fermentation reactions. Advanced separation methods for bioprocessing operations.
Two labs (four hours); second term
Prerequisite: BIOCHEM 4H03 and registration in Honours Biochemistry (Biotechnology and Genetic Engineering Specialization) or BIOCHEM 3G03 and registration in Chemical Engineering and Bioengineering
Antirequisite: BIOCHEM 4B06, 4B08, 4F09, 4G03, 4L03
Cross-list: BIOCHEM 4L13

This course is administered by the Department of Biochemistry and Biomedical Sciences.

CHEM ENG 4M03 SEPARATIONS
Overview of separation processes, liquid-liquid extraction, supercritical \& dilution extraction, adsorption, chromatography, filtration, membrane separation processes, introduction to bioseparations.
Three lectures; first term
Prerequisite: CHEM ENG 2A04, 3004, 3M04

CHEM ENG 4N04 ENGINEERING ECONOMICS AND PROBLEM SOLVING
Making decisions about the design and operation of engineering systems, with the analysis emphasizing safety, economics, equipment performance, uncertainty, flexibility and monitoring, including trouble shooting. Students will work individually and in groups on problem-based projects.
Three lectures; one tutorial (two hours); first term
Prerequisite: CHEM ENG 3D03, 3K04, 3M04, 3P03; and CHEM ENG 3G03 or 3G04
Antirequisite: ENGINEER 2B03 or 4B03

CHEM ENG 4T03 APPLICATIONS OF CHEMICAL ENGINEERING IN MEDICINE
Applications of chemical engineering principles to biological systems and medical problems including examples from hemodynamics, blood oxygenation, artificial kidney systems, controlled drug release, biosensors and biomaterials.
Three lectures; second term
Prerequisite: One of CHEM ENG 3004, ENG PHYS 3003 or MECHE ENG 3004

CHEM ENG 4W04 CHEMICAL PLANT DESIGN AND SIMULATION
Projects, often in cooperation with industry, usually involve steady-state computer simulation of an existing process or design of a new process. Plant equipment may be tested to develop simulation models.
Two lectures and two tutorials (two hours); second term
Prerequisite: Registration in Level IV Chemical Engineering or Level V Chemical Engineering and Management or Level V Chemical Engineering and Society or Level V Chemical Engineering and Bioengineering

CHEM ENG 4X03 POLYMER PROCESSING
An introduction to the basic principles of polymer processing, stressing the development of models. Rheology of polymers, extrusion, molding, films, fibers, and mixing. Reactive processing.
Three lectures; one term
Prerequisite: One of CHEM ENG 2A04, MATLS 3E04 or MECHE ENG 3R03; and CHEM ENG 3004 or MECHE ENG 3004

CHEM ENG 4Y04 SENIOR INDEPENDENT PROJECT
A 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: Registration in Level IV Chemical Engineering or Level V Chemical Engineering and Management or Level V Chemical Engineering and Society or Level V Chemical Engineering and Bioengineering; and a CA of at least 8.5

CHEM ENG 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: Registration in final level of any Engineering program

CHEMISTRY

WEB ADDRESS: http://www.chemistry.mcmaster.ca
A.N. Boums Science Building, Room 156
Ext. 23490

Faculty of January 15, 2005
Chair
Brian E. McCurry

Acting Associate Chair
Alexander D. Bain

Professor
Alexander D. Bain B.Sc. (Toronto), M.Sc. (British Columbia), Ph.D. (Cambridge)
Jacques Barbier/B.Sc. (Toronto), Ph.D. (ANU)
Michael A. Brook/Ph.D. (McGill)
John E. Greedan/Ph.D. (Tufts), F.C.I.C.
Mark P. Hilchey/Ph.D. (McMaster), Ph.D. (British Columbia), F.C.I.C /
Semenov Canada Research Chair
Vio E. Melan/Ph.D. (Western Ontario), F.C.I.C.
Brian E. McCurry/Ph.D. (British Columbia), Ph.D. (Stanford), F.C.I.C /
Stephen A. Jarlskog Chair in Environment and Health
Gary J. Schroebig/Ph.D. (Loras College, Iowa), M.Sc. (Brock), Ph.D. (McMaster), F.R.S.C.
Harald D.H. Söder/St.B.Sc. (Darmstadt), Ph.D. (Ottawa)
Johan K. Trelou/Ph.D., M.Sc., Ph.D. (Utrecht)
Nick H. Wierski/Ph.D. (Alberta), M.Sc., Ph.D. (Johns Hopkins), F.C.I.C.

Adjunct Professors
Timothy P. Bender/Ph.D. (Carleton)
Cherif F. Matta/Ph.D. (McMaster)
Christopher R. Paige/Ph.D. (London), M.Sc. (Brock), Ph.D. (McMaster)

Associate Professors
John D. Brennan/Ph.D., M.Sc. (McMaster), Ph.D. (Toronto)
Richard M. Capet/Ph.D., B.Sc. (McMaster)
Randall S. Dunot/Ph.D. (Western Ontario), Ph.D. (Toronto)
Peter H. Mathis/Ph.D. (Oxford), Ph.D. (Alberta)
Jim McNelty/Ph.D., M.Sc., Ph.D. (McMaster)

Assistant Professors
Alex Aadorov/Ph.D. (McMaster), Ph.D. (California-Berkeley)
Maggie Austen/Ph.D. (Dalhousie), Ph.D. (McMaster)
Paul W. Ayers/Ph.D. (David Lipcomb), Ph.D. (North Carolina-Chapel Hill/Canada Research Chair
Paul J. Berti/Ph.D. (Waterloo), M.Sc. (Ottawa), Ph.D. (McGill)
James F. Britten/Ph.D. (St. Francis Xavier), Ph.D. (McMaster)
Philip Britz-McKibbin/Ph.D. (Toronto), Ph.D. (British Columbia)
David J. H. Emslie/Ph.D. (Brisloll
Gillian R. Goward/Ph.D. (Waterloo)
Donald W. Hughes/Ph.D. (McMaster)
Peter Kruse/Ph.D. (FSU-Jena), Ph.D. (California-San Diego)
Yueh Lu/Ph.D. (Anhui U., China), M.Sc. (Beijing Agr. U. J.), Ph.D. (Simon Fraser)/Canada Research Chair
Phillip Lock/Ph.D. (McMaster)
Graham A. McGibbon/Ph.D. (Toronto), Ph.D. (McMaster)
Brian M. Mielia/Ph.D. (U. of British Columbia)
Barbara Rusea/M.Sc. (Jagiellonian, Cracow), Ph.D. (Cracow)
Kalachevski Saravanaguten/Ph.D. (McGill)
John F. Vaillant/Ph.D., Ph.D. (McMaster)
Ignacio Vargas-Baca/Ph.D., M.Sc. (UNAM), Ph.D. (Calgary)/Undergraduate Advisor

Associate Members
Raman Chirikali/Ph.D. (Kerala, India), M.Sc. (New York), Ph.D. (McMaster)
Richard M. Epan/Ph.D. (Biotechnology and Biomedical Sciences) AB (Johns Hopkins), Ph.D. (Columbia)
Robert H. Pelton/Ph.D. (McMaster), M.Sc. (Muphol), Ph.D. (Bristol)
Gerald D. Wright/Ph.D. (Biotechnology and Biomedical Sciences) Ph.D. (Waterloo)
Daniel S.C. Yang/Ph.D. (Biotechnology and Biomedical Sciences) Ph.D. (McMaster), Ph.D. (Pittsburgh)
Shiping (Stephen) Zhu/Ph.D. (Chemical Engineering and Materials Science and Engineering) B.Eng. (Zhejiang), Ph.D. (McMaster), P.Eng.
CHEM 1A03 INTRODUCTORY CHEMISTRY I
An introduction to chemical principles, including bonding, structure, energetics and electrochemistry. A laboratory provides experience in experimental techniques and accurate measurement.
Three lectures, one tutorial, one lab (three hours) every other week; first term
Prerequisite: Grade 12 Chemistry U (or OAC Chemistry) and either registration in one of Science I, Engineering I, Arts & Science I, Health Science I, Kinesiology I, Mathematics and Statistics I, Medical Radiation Sciences I, any program above Level I; or a grade of at least 80% in Grade 12 Chemistry U (or OAC Chemistry); or CHEM 1R03
Corequisite: SCIENCE 1A00. Students registering in CHEM 1A03 must also register in SCIENCE 1A00 when completing their registration.
Antirequisite: CHEM 1E03
CHEM 1E03 INTRODUCTORY CHEMISTRY II
An introduction to equilibrium, chemical kinetics and organic chemistry.
Three lectures, one tutorial, one lab (three hours) every other week; second term
Prerequisite: CHEM 1A03 or 1E03
CHEM 1R03 GENERAL CHEMISTRY I
A general introduction to chemistry, suitable for students without Grade 12 Chemistry U (or OAC Chemistry).
Three lectures; second term
Prerequisite: OSS Grade 11 Chemistry (or OSiSS Grade 12 Chemistry (Advanced))
Not open to students with 80% or higher in Grade 12 Chemistry U (or OAC Chemistry).
Not open to students with credit or registration in CHEM 1A03.
Students in the Faculty of Science do not receive credit for this course.
CHEM 2A03 ANALYTICAL CHEMISTRY I
An introduction to the basic principles of analytical chemistry, with particular emphasis on solution equilibria and classical methods of analysis.
Two lectures, one lab (three hours); first term
Prerequisite: Registration in a Chemical Engineering program; or credit or registration in either CHEM 2R03 or both CHEM 2PA3 and 2PB3; or permission of the instructor
Antirequisite: CHEM 2BB3
CHEM 2BB3 INTRODUCTORY INORGANIC CHEMISTRY
An introduction to the chemistry of non-transition elements; introduction to symmetry.
Three lectures, one lab (three hours) every week; second term
Prerequisite: Registration in a Biochemistry, Chemistry, Honours Materials Science, Honours Science (Stream D) or B.Sc. Physical Science program; or permission of the instructor
Antirequisite: CHEM 2WW2, 2WW4
CHEM 2R03 ANALYTICAL CHEMISTRY
An introduction to the basic principles of analytical chemistry with application to selected classical and instrumental methods of analysis.
Two lectures, one lab (three hours); second term
Prerequisite: Registration in an Honours Biochemistry program; or credit or registration in either CHEM 2R03 or both CHEM 2PA3 and 2PB3; or permission of the instructor
Antirequisite: CHEM 2A03
CHEM 2A03 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 (two hours) every other week; first term
Prerequisite: CHEM 1AA3 or CHEM 1BB3
CHEM 2BB3 GENERAL CHEMISTRY II
A general introduction to chemistry, suitable for students without Grade 12 Chemistry U (or OAC Chemistry).
Three lectures; second term
Prerequisite: CHEM 1BB3
CHEM 2PA3 THERMODYNAMICS AND PHASE EQUILIBRIA
An introduction to macroscopic and microscopic aspects of thermodynamics and their application to physical transformations.
Three lectures, one lab (three hours); one tutorial; second term
Prerequisite: CHEM 1AA3, MATH 1A03
Antirequisite: CHEM 2R03, PHYSICS 2H04
CHEM 2PB3 CHEMICAL THERMODYNAMICS AND KINETICS
Thermodynamics of equilibrium chemical and electrochemical systems, and macroscopic and microscopic aspects of kinetics.
Three lectures, one lab (three hours); one tutorial; second term
Prerequisite: CHEM 2PA3
Antirequisite: CHEM 2R03
CHEM 2R03 GENERAL PHYSICAL CHEMISTRY
Physical chemistry as applied to life and environmental sciences. Topics include thermodynamics, chemical equilibria, physical equilibria, transport phenomena, kinetics and enzyme kinetics.
Three lectures; first term
Prerequisite: CHEM 1AA3; and ARTS66GC1 D105 or MATH 1A03
Antirequisite: CHEM 2PA3, 2PB3, PHYSICS 2H04
CHEM 2WW2 INTRODUCTORY INORGANIC CHEMISTRY
An introduction to inorganic chemistry. Emphasis on bonding and structure in inorganic compounds of representative main group and transition elements.
Two lectures; first term
Prerequisite: CHEM 1A03 or 1E03; and registration in a program administered by the Department of Materials Science and Engineering
Antirequisite: CHEM 2103, 2WW4, 3003
CHEM 3A03 ANALYTICAL CHEMISTRY II
An introduction to modern instrumental methods of analysis.
Two lectures; one lab (three hours); first term
Prerequisite: CHEM 2A03 or 2BB3; and CHEM 2PB3 or 2PB3
Antirequisite: ENVIR SC 3A03
CHEM 3BB3 QUANTUM MECHANICS
An introduction to quantum chemistry, quantum structures, group theory and symmetry, and vibrational and rotational spectroscopy, and molecular orbital theory.
Three lectures, one lab (three hours), one tutorial; first term
Prerequisite: CHEM 2BB3; and PHYSICS 1B03 or 1B03
Antirequisite: CHEM 3BB3
CHEM 3BB3 QUANTUM MECHANICS AND SPECTROSCOPY II
An introduction to the electronic structure and spectroscopy of atoms and molecules.
Three lectures; second term
Prerequisite: CHEM 3B3A; and MATH 2A03 or 2P04
Antirequisite: CHEM 3B03

CHEM 3D03 ORGANIC CHEMISTRY
A mechanistically oriented discussion of mono- and polyfunctional organic compounds with emphasis on applications to synthesis.
Three lectures, one lab (three hours); first term
Prerequisite: CHEM 2BB3 or 2O03
Antirequisite: CHEM 3F03

CHEM 3F03 BIO-ORGANIC CHEMISTRY
Topics in bio-organic chemistry; a sequel to CHEM 20B3.
Three lectures, one lab (three hours); second term
Prerequisite: CHEM 2BB3 or 2O03, and registration in an Honours Biochemistry program or Honours Arts & Science and Biochemistry; or permission of the instructor
Antirequisite: CHEM 3A03

CHEM 3L03 INDUSTRIAL CHEMISTRY
A survey of processes in the chemical industry, with examples drawn from inorganic, organic and polymer chemistry.
Three lectures; first term
Prerequisite: CHEM 2030 and one of CHEM 2BB3, 2E03, 2O03; or registration in Level III or IV of a Chemical Engineering program

CHEM 3L13 CHEMISTRY LABORATORY INQUIRY
An experimental chemistry laboratory. Experiments will be selected based on the student's Chemistry Specialization.
Two labs (three hours each); second term
Prerequisite: CHEM 2A03, 2B03, 2I03; 2O03 and registration in a Level III Honours Chemistry program
Antirequisite: CHEM 47A3

CHEM 3P03 TRANSITION METAL CHEMISTRY
The chemistry of the heavier transition elements; an introduction to organometallic chemistry and bio-inorganic chemistry.
Three lectures, one lab (three hours); second term
Prerequisite: CHEM 3C03
Antirequisite: CHEM 2W2, 2W4

CHEM 3Q03 INORGANIC CHEMISTRY
The properties, structures and reactions of inorganic compounds with emphasis on transition metal chemistry.
Three lectures; first term
Prerequisite: CHEM 2103
Antirequisite: CHEM 3B03

CHEM 3Z03 PROPERTIES OF MATERIALS
Familiar material properties-optical, thermal, electromagnetic and mechanical-and their exploitation in commercial applications, are investigated in terms of the physical chemistry toolkit of quantum mechanics, spectroscopy and introductory statistical mechanics.
Three lectures; second term
Prerequisite: CHEM 2P03 and credit or registration in CHEM 3B03; or permission of the instructor
Antirequisite: CHEM 3Z03

CHEM 4A03 ADVANCED ORGANIC CHEMISTRY
An introduction to the principles of physical organic chemistry and the elucidation of organic reaction mechanisms, and to pericyclic reactions in the ground and excited electronic states of organic molecules.
Three lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4B03 CHEMICAL APPLICATIONS OF SPECTROSCOPY
Aspects of molecular spectroscopy and their application to the solution of chemical problems.
Three lectures; one term
Prerequisite: CHEM 3B03

CHEM 4C03 SOLID STATE CHEMISTRY
Structure and properties of crystalline solids. Topics include crystal chemistry and crystal symmetry, introduction to space groups, defects in ionic crystals, non-stoichiometry, electronic structure and properties of semiconductors and metals.
Three lectures; one term
Prerequisite: CHEM 3Q03

CHEM 4D03 ORGANIC STRUCTURE AND SYNTHESIS
Application of spectroscopic methods to structure determination. Synthetic methodology in organic chemistry.
Three lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4DD3 MECHANISTIC BIOLOGICAL CHEMISTRY
Amino acid, nucleic acid, enzyme and coenzyme chemistry with emphasis on molecular reaction mechanisms.
Three lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4F03 SURFACE CHEMISTRY
Current topics in surface science; surface characterization and microscopy; adsorption and heterogeneous catalysis; applications in electronic materials and nanotechnology.
Three lectures; one term
Prerequisite: CHEM 3B03 or permission of the instructor

CHEM 4G06 SENIOR THESIS
A thesis based on a project under the direction of a Chemistry Department faculty member.
Prerequisite: Registration in Level IV of any Honours Chemistry program and a C.A. of 6.0 or permission of the Department. Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

CHEM 4P03 ADVANCED ANALYTICAL CHEMISTRY
A course dealing with modern topics in analytical chemistry.
Three lectures; one term
Prerequisite: CHEM 2N03 or 3A03; and CHEM 2P03 or 2R03

CHEM 4PP3 POLYMER CHEMISTRY
Chemistry of monomers, polymers, polymerization mechanisms and processes, with emphasis on organic polymer chemistry.
Three lectures, one term
Corequisite: CHEM 3D03 or 3F03

CHEM 4Q03 ADVANCED QUANTUM MECHANICS
Applications of quantum mechanics to problems of chemical interest.
Three lectures; one term
Prerequisite: CHEM 3B03 or PHYSICS 3M03

CHEM 4R03 ADVANCED TRANSITION METAL CHEMISTRY
A selection from the following topics: mechanisms of reactions involving transition metal ions; homogeneous catalysis; applications of NMR and other physical methods; organometallic chemistry; ligand field theory.
Three lectures; one term
Prerequisite: CHEM 3P03 or permission of the instructor

CHEM 4S03 ADVANCED MAIN GROUP CHEMISTRY
A selection from the following topics: chemistry of selected main group elements, electronic deficient compounds, and applications of physical methods to inorganic structure determination.
Three lectures; one term
Prerequisite: CHEM 3D03

CIVIL ENGINEERING
WEB ADDRESS: http://www.eng.mcmaster.ca/civil/
John Hodgins Engineering Building, Room 301
Ext. 24287 or 24315

Faculty as of January 15, 2005
Chair
Dieter F.E. Stolle

Professors
Brian Baetz/B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Duke), P.Eng.
Robert G. Drysdale/B.Sc. (Manitoba), M.A.Sc., Ph.D. (Toronto), F.C.S.C.E., F.C.A.E., P.Eng., Martini, Mascarin and George Chair in Masonry Design Ahmed Gharabia/Ph.D., (Cairo), M.Eng., Ph.D. (McMaster), P.Eng., Joe Ng/UNE Consulting Chair in Design, Construction and Management in Infrastructure Renewal
Frederick L. Hall/B.A. (Amherst), M.Sc. (M.I.T.), Ph.D. (Chicago)
Stan Pietruszczak/B.Sc., M.Sc. (Warsaw), Ph.D. (Polish Acad. Sci.)


Associate Professors

Assistant Professors
C. Andrew Chislett/B.A.Sc., M.Eng., Ph.D. (McMaster), P. Eng.
H. Johnson/Ph.D. (McMaster), P. Eng.
CIVIL ENGINEERING

Assistant Professors
Paulin Coulibaly/B.A.Sc., M.A.Sc. (Nice), Ph.D. (Laval)
Sarah Dickson/B.A.Sc., Ph.D. (Waterloo), P.Eng.
Peijun Guo/B.Sc., M.Sc., Ph.D. (SWJTU), Ph.D. (Calgary)
Yiping Guo/B.Sc. (Zhejiang), M.A.Sc., Ph.D. (Toronto), P.Eng.
Michael J. Tait/B.E.Sc., Ph.D. (Western Ontario)

Adjacent Assistant Professors
Dean Ingles/B.Eng., Ph.D. (McMaster)
Syed Molok/B.S. (Osmania), M.S. (Nebraska), Ph.D. (McMaster), P.Eng.

Lecturers
Cameron Churchhill/B.Eng., M.Eng. (McMaster)
Usama M. Saeed/B.Sc., M.Sc. (Am Shaw), Ph.D. (McMaster)

Department Notes:
1. 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.
2. Unless otherwise stated, the duration and the frequency of activities are as follows:
   - one lecture consists of one hour each week
   - one tutorial consists of two hours each week
   - one lab consists of three hours each week

Courses

CIV ENG 2A02 SURVEYING AND MEASUREMENT
Introduction to measurement and computational techniques of surveying, the theory of measurement and errors, adjustment of observations. One lecture, one tutorial or one lab; first term

CIV ENG 2A04 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 or one lab; second term
Prerequisite: CIV ENG 2E03; and credit or registration in MATH 2M06

CIV ENG 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; second term
Prerequisite: CIV ENG 1D04, PHYSICS 1D03 and credit or registration in CIV ENG 2P04

CIV ENG 2K03 COMMUNICATIONS IN CIVIL ENGINEERING
Oral and written communication in context of civil engineering activity. A professional liaison program involving site visits. Two lectures, one tutorial (three hours); first term

CIV ENG 2J04 ECOLOGICAL AND GEOLOGICAL ASPECTS OF CIVIL ENGINEERING
The relationship between humans and their earth environment. Composition of "earth": processes that operate on or beneath the surface. Global interactions of the atmosphere, hydrosphere, lithosphere and the biosphere. Principles of ecological systems. Man's perturbations on the biosphere. Three lectures, one tutorial or one lab; second term
Prerequisite: Credit or registration in CIV ENG 1C03
Antirequisite: GEO 3U03

CIV ENG 2L04 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 or one lab; second term
Prerequisite: CIV ENG 1D04 and MATH 2M06

CIV ENG 2N04 ENGINEERING MECHANICS: DYNAMICS
Kinematics and dynamics of particles and rigid bodies. Motion with respect to a rotating frame of reference. Work, energy and momentum principles. Free, damped and forced vibrations of single degree of freedom systems. Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term
Prerequisite: Credit or registration in CIV ENG 2P04
Antirequisite: CIV ENG 2P04, MECH ENG 2004

CIV ENG 3A03 GEOTECHNICAL ENGINEERING I
Composition of soils, soil identification and classification; compaction; strength theory; effective stress concept; stresses and displacements using elastic solutions; consolidation theory; numerical solutions. Two lectures, one tutorial or one lab; first term
Prerequisite: CIV ENG 2J04, 2004

CIV ENG 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 or one lab; second term
Prerequisite: Credit or registration in CIV ENG 3A03

CIV ENG 3C03 ENGINEERING SYSTEMS
Mathematical models and systems; economic comparison of projects; optimization; linear, nonlinear and dynamic programming; simulation modelling. Two lectures, one tutorial; second term
Prerequisite: CIV ENG 2E03; and credit or registration in MATH 3J04 or STATS 3J04

CIV ENG 3G03 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. Two lectures, one tutorial; first term
Prerequisite: CIV ENG 2G03

CIV ENG 3H03 INTRODUCTION TO CONSTRUCTION ENGINEERING
A 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; first term

CIV ENG 3J04 REINFORCED CONCRETE DESIGN
Introduction to concrete technology; 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 lab; second term
Prerequisite: CIV ENG 2E03; and credit or registration in CIV ENG 3G03, 3P03

CIV ENG 3K03 INTRODUCTION TO TRANSPORTATION ENGINEERING
Analysis/design of water distribution networks; analysis and design of wastewater collection systems; pumps. Two lectures, one tutorial or one lab; second term
Prerequisite: CIV ENG 2B03; and credit or registration in MATH 3J04 or STATS 3J04
Antirequisite: CIV ENG 3J04

CIV ENG 3M03 MUNICIPAL HYDRAULICS
Analysis/design of water distribution networks; analysis and design of wastewater collection systems; pumps. Two lectures, one tutorial or one lab; second term
Prerequisite: CIV ENG 2B03; and credit or registration in CIV ENG 3K03, 3P03
Antirequisite: CIV ENG 3J04

CIV ENG 3P03 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, two labs (three hours each); first term
Prerequisite: CIV ENG 2C04, MATHS 1M03
Antirequisite: CIV ENG 3J04

CIV ENG 3R03 PROJECT MANAGEMENT WITH CONSTRUCTION APPLICATIONS
An introduction to construction project management; tender documents, estimating, bidding, proposals, and construction contracts; project planning, scheduling, controlling of time, cost and quality, dispute resolution; Safety Act and construction regulations, liability, legal and ethical considerations; case histories. Two lectures, one tutorial; first term
Prerequisite: Registration in Level III or above of a Civil Engineering program
CIV ENG 3G03 STEEL STRUCTURES
Introduction to design in steel, tension and compression members, plate buckling aspects, beam instability, beam design, beam-columns, bolted and welded connections. Applications employing steel structures building code. Two lectures, one tutorial; second term.
Prerequisite: Credit or registration in CIV ENG 3G03

CIV ENG 3U03 PHYSICO-CHEMICAL PROCESSES
Water/waste water quality/characteristics; primary and secondary treatment; emphasis is placed on physical and chemical unit processes including coagulation, flocculation, sedimentation, filtration, precipitation; advanced treatment processes, including ion exchange, chemical oxidation, and membranes are also addressed.
Two lectures, one tutorial; second term.
Prerequisite: One of CHEM ENG 2B03, 2D04, 2F04

CIV ENG 4A04 ENGINEERING HYDROLOGY
Hydrologic cycle; climate; hydrologic processes, precipitation; unit hydrograph; hydrologic statistic, hydrologic routing; groundwater flow. Design units = 1.0
Three lectures, one tutorial (three hours); first term.
Prerequisite: CIV ENG 3M04

CIV ENG 4C04 ENVIRONMENTAL IMPACT AND SUSTAINABILITY
Natural and urban ecosystems; environmental impact/assessment/legislation; energy and environmental audits; life cycle analysis; solid and hazardous wastes; air quality and control; sustainable infrastructure design. Design units = 3.0.
Three lectures, one tutorial, capstone project; first term.
Prerequisite: Registration in the final level of a Civil Engineering program.
Antirequisite: CIV ENG 4D03

CIV ENG 4D04 GEOMETRIC HIGHWAY DESIGN
Design of various types and classes of streets and highways. Theory and practice in design of intersections, interchanges, arterial highways, and freeways. Design and traffic safety concepts. Design units = 3.0.
Three lectures, one tutorial; first term.
Prerequisite: CIV ENG 3K03

CIV ENG 4G03 PAVEMENT MATERIALS AND DESIGN
Components of highway pavements; ground water and drainage for highway facilities; soil compaction and stabilization; aggregates; bituminous and concrete materials, flexible pavement design; concrete pavement design; interlocking pavement structures. Design units = 2.0.
Two lectures, one lab; second term.
Prerequisite: CIV ENG 3B03

CIV ENG 4H03 ANALYSIS OF TRANSPORTATION SYSTEMS
An introduction to the use of models in transportation planning. Topics include data issues, model computation classes, laboratory work, discussion or individual study.
Prerequisite: MATH 3J04 or STATS 3J04
Cross-list: GEO 4D03

This course is administered by the School of Geography and Earth Sciences.

CIV ENG 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 and with and without sway effects. Application of computer programs. Design units = 0.0.
Three lectures, one tutorial; second term.
Prerequisite: CIV ENG 3G03; MATH 3J04 or STATS 3J04

CIV ENG 4L04 DESIGN OF WATER RESOURCES SYSTEMS
Investigation, planning, analysis and design of water resources systems. Introduction to GIS tools. Frequency analysis, design storms, urban drainage and analysis, floodplain analysis and flood control. Design units = 4.0.
Two lectures, one tutorial (one hour), one lab; second term.
Prerequisite: CIV ENG 3M04

CIV ENG 4M04 DESIGN AND SYNTHESIS OF STRUCTURES
Structural design process, gravity and lateral loading requirements, structural performance criteria, choice of structural systems. Analysis and design of different structural systems, such as frames, structural walls and slabs. Analysis and design of actual buildings. Design units = 4.0.
Three lectures, one lab, capstone project; first term.
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4S04 FOUNDATION ENGINEERING
Principles of foundation design; bearing capacity, settlement and locations, footings, deep foundations, piles, pile groups and drilled piers; retaining walls. Design units = 3.0.
Three lectures, one tutorial; first term.
Prerequisite: CIV ENG 3B03

CIV ENG 4W04 DESIGN OF LOW RISE BUILDINGS
Structural systems and load distribution, design of masonry, wood, and cold-formed steel. Introduction to building envelope design. Design units = 4.0.
Three lectures, one tutorial; second term.
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4Y04 BRIDGES AND OTHER STRUCTURAL SYSTEMS
Bridge loads and analysis for load effects. Design of reinforced concrete solid-slab, T-beam type bridges, composite floor system and plate girders. Stresses, ultimate strength, and design of pre-stressed concrete structures. Fatigue Design. Design units = 4.0.
Three lectures, one tutorial; first term.
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4Z04 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 must be required to present a seminar, and will submit a final written report before April 1. Design units = variable according to project.
Antirequisite: CIV ENG 4D03

Department Note:
The following courses are available as electives to qualified students in any program:

a) Classical Archaeology and Art History
CLASSICS 1A03, 2B03, 2C03, 3G03, 3H03, 3Q03, 3S03

b) Ancient History and Society
CLASSICS 2K03, 2L03, 2L23, 2Z03, 3C03, 3C03, 3E03, 3E03, 3L23, 3L03, 3T03

c) Ancient Philosophy
CLASSICS 2P06, 4K03

d) Classical Literature in Translation
CLASSICS 2D03, 2E03, 2H03, 3E03, 3S03, CLASSICS 3I03, 3T03

e) Greek Language and Literature
GREEK 1Z03, 1Z23, 2A03, 2A23, 3A03, 3B03, 4B03, 4B23

f) Latin Language and Literature
LATIN 1Z03, 1Z23, 2A03, 2A23, 3A03, 3B03, 4A03, 4B03, 4B23
CLASSICS 1A03  INTRODUCTION TO CLASSICAL ARCHAEOLOGY
A study of the history and methodology of Greek and Roman archaeology illustrated with materials from excavated sites.
Three lectures; one term
Antirequisite: CLASSICS 1B06

CLASSICS 1B06  MYTH AND LITERATURE: THE TROJAN WAR AND BEYOND
A study of Greek and Roman mythology and literature with emphasis on the heroines and heroes of the Trojan War. Homer's Odyssey and Vergil's Aeneid will be read in translation.
Two lectures, one tutorial; one term
Antirequisite: CLASSICS 1B06

CLASSICS 1B30  MYTH AND LITERATURE: JUSTICE, POWER AND DESTINY
A study of the main themes of Classical mythology through the reading of Greek and Roman authors. Attention will also be given to mythological themes in post-classical writers and artists.
Two lectures, one tutorial; one term
Antirequisite: CLASSICS 1B06

CLASSICS 1L03  HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD I
The history of the Ancient Near East and Greece down to the end of the 5th century B.C. based on documentary sources and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list: HISTORY 1L03
Antirequisite: CLASSICS 1L06, HISTORY 1L06

CLASSICS 1L06  HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD II
The history of Greece and Rome from the 4th century B.C. to the fall of Rome based on documentary sources and archaeological evidence.
Two lectures, one tutorial; one term
Cross-list: HISTORY 1L13, HISTORY 1L08
Antirequisite: CLASSICS 1L06, HISTORY 1L08

CLASSICS 2B03  GREEK ART
The architecture, sculpture and painting of the Greek and Hellenistic world.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: ART HIST 2B03

CLASSICS 2C03  ROMAN ART
The architecture, sculpture, and painting of the Roman world.
Three lectures; one term
Prerequisite: CLASSICS 2B03
Cross-list: ART HIst 2C03

CLASSICS 2D03  GREEK AND ROMAN MYTHOLOGY
A 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 Vergil.
Three lectures; one term
Prerequisite: Registration in Level II of above
Cross-list: COMP LIT 2D03

CLASSICS 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).
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2E03, THTR&FLM 2G03

CLASSICS 2H03  GREEK AND ROMAN DRAMA
Selected Greek and Roman Tragedies and Comedies will be read in translation. The course will concentrate on characterization and the philosophical and religious aspects of ancient drama.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 2H03

CLASSICS 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: Registration in Level II or above
Cross-list: HISTORY 2K03

CLASSICS 2L03  HISTORY OF CLASSICAL GREECE
Greek from the rise of the city-states to Alexander, with particular attention to political, social and cultural developments in the light of literary and archaeological evidence (No Greek or Latin required).
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2L03

CLASSICS 2L3  HISTORY OF CLASSICAL ROME
Rome from the middle Republic through the Empire, with particular attention to the political, military and social developments in the light of literary and archeological evidence. (No Greek or Latin required.)
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2L3

CLASSICS 2P06  ANCIENT GREEK PHILOSOPHY
A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.
Three lectures; two terms
Prerequisite: One of three units of Philosophy, ARTS&SCI 1A06, registration in a program in Classics or Philosophy or permission of the Department.
Cross-list: PHILOS 2A06
This course is administered by the Department of Philosophy.

CLASSICS 2Z03  GREEK AND ROMAN RELIGION
A study of the role of religion in Greek and Roman public and private life.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2Z03

CLASSICS 3C03  THE LATE ROMAN REPUBLIC
An examination of major themes in the political, social, and economic history of Rome from the mid-second century B.C. to the assassination of Caesar.
Three lectures; one term
Prerequisite: One of CLASSICS 1L06, 1LL3, 2K03, 2LL3, 3CC3, 3E03; and registration in Level III or above
Cross-list: HISTORY 3C03
Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3
If the topic was The Late Republic.
Alternates with CLASSICS 3CC3.

CLASSICS 3CC3  THE EARLY ROMAN EMPIRE
An examination of major themes in the political, social, and administrative history of Rome under the early emperors.
Three lectures; one term
Prerequisite: One of CLASSICS 1L06, 1LL3, 2K03, 2LL3, 3CC3, 3E03; and registration in Level III or above
Cross-list: HISTORY 3CC3
Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3
If the topic was The Early Empire.
Alternates with CLASSICS 3CC3.

CLASSICS 3E03  THE ROMAN FAMILY
The ancient Roman family, including social, economic and legal aspects.
Three lectures; one term
Prerequisite: One of CLASSICS 1L06, 1LL3, 2K03, 2LL3, 3CC3, 3E03; and registration in Level III or above
Cross-list: HISTORY 3E03
Alternates with CLASSICS 3E03.

CLASSICS 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: Registration in Level III or above
Cross-list: HISTORY 3EE3
Alternates with CLASSICS 3EE3.
CLASSICS 3G03 LATE ANTIQUE AND EARLY CHRISTIAN ART
The art and architecture of the later Roman Empire, and the birth of Christian art (A.D. 200-600).
Three lectures; one term
Prerequisite: ART HIST 2C03 or CLASSICS 2C03
Cross-list: ART HIST 3G03
Alternates with CLASSICS 3H03.

CLASSICS 3H03 ARCHAIC GREEK ART
The formative period of Greek Art, from its rebirth after the Dark Ages to the Persian Wars (c. 1000-480 B.C.), and its relationship to the art of the Near East.
Three lectures; one term
Prerequisite: CLASSICS 2803 or 2H03
Cross-list: ART HIST 3H03
Alternates with CLASSICS 3G03.

CLASSICS 3I03 TOPICS IN GREEK AND ROMAN LITERATURE
Previous topics include: Greek and Roman Epic, Greek and Roman Elegiac and Lyric Poetry, The Legend of the Trojan War, Crime and Punishment, Satire, The Poet and Society. Consult the Department concerning the topic to be offered.
Three lectures; one term
Prerequisite: Six units of Classics
Cross-list: COMP LIT 3I03
CLASSICS 3I03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3J03 THE HELLENISTIC AGE
The successors of Alexander, the world of the monarchies and their absorption into the Roman Empire. Political, cultural and social achievements in the light of modern historical research will be emphasized.
Three hours (lectures and discussion groups); one term
Prerequisite: One of CLASSICS 1G03, 1J06, 1L3, 2L03
Cross-list: HISTORY 3J03
CLASSICS 3J03 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3K03 GREEK SANCTUARIES
Ancient Greek sanctuaries and their social and political context. Topics will include architecture and art, as well as activities such as sacrifices, athletic games, healing, and oracular consultation.
Three lectures; one term
Prerequisite: CLASSICS 1A03 or 2B03
Alternates with CLASSICS 3K03.

CLASSICS 3L03 THE ARCHAEOLOGY OF THE ROMAN CITY
Urbanism in Roman Italy through an examination of the archaeological remains of Pompeii, Herculaneum, Ostia and other cities of Roman Italy.
Three lectures; one term
Prerequisite: CLASSICS 1A03 or 2C03
Alternates with CLASSICS 3L03.

CLASSICS 3P03 ANCIENT THEATRE IN CONTEXT
The history of theatres and theatrical production in Greece and Rome with consideration of the social significance of drama in antiquity. The course will also include archaeological material.
Three lectures; one term
Prerequisite: CLASSICS 2H03 or six units of Classics
Cross-list: COMP LIT 3P03

CLASSICS 3Q03 CLASSICAL LITERATURES AND BEYOND
A study of representative texts from the Greek and Roman literary traditions as well as their influence and afterlife in one or more later literary traditions.
Two hours; one term
Prerequisite: Registration in Level II or above of a Classics or Comparative Literature program or permission of the Department.
Cross-list: COMP LIT 3Q03

CLASSICS 3R03 SEMINAR IN CLASSICAL ARCHAEOLOGY
Consult the Department concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: Six units from CLASSICS 1A03, 3Q03, 3S03 and registration in Level III of IV of an Honours program in Classics (A); or permission of the Department.
CLASSICS 3R03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

CLASSICS 4B03 SEMINAR IN ANCIENT ART
Consult the Department concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: CLASSICS 2B03, 2C03 and registration in Level III or IV of an Honours program in Classics (A).
Cross-list: ART HIST 4B03
CLASSICS 4B03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

CLASSICS 4E03 SEMINAR IN ANCIENT SOCIETY
Consult the Department for the topic to be offered.
Prerequisite: Six units from CLASSICS 2K03, 2L03, 2LL3, 3C03, 3CC3, 3E03, 3LL3 and registration in Level III or IV of an Honours program in Classics (A); or permission of the department.
CLASSICS 4E03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

CLASSICS 4K03 ANCIENT PHILOSOPHY
A critical study of one or more ancient Greek philosophers such as Parmenides, Plato, Aristotle.
Seminar (two hours); one term
Prerequisite: CLASSICS 2P06 and registration in Level III or above.
Cross-list: PHILOS 4K03
Offered in alternate years. This course is administered by the Department of Philosophy.

CLASSICS 4T03 INDEPENDENT STUDY
Reading and research In Classics, 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: Registration in Level IV of any Honours program in Classics with a Cumulative Average of at least 9.5, and permission of the Department.

GREEK...
Notes:
1. Students should note that the Department has classified its Greek language courses under the following categories:
   - Introductory Level Language Courses: GREEK 1Z03, 1Z23
   - Intermediate Level Language Courses: GREEK 2A03, 2A23
2. Students with Grade 12 Greek U (or OAC Ancient Greek) should normally register in GREEK 2A03, but with special permission, may register in either GREEK 1Z03 or 1Z23.

Courses, if no prerequisite is listed, the course is open.

GREEK 1Z03 BEGINNER'S INTENSIVE ANCIENT GREEK
A rapid introduction to the basic grammar of Ancient Greek.
Three lectures; one term
Antirequisite: GREEK 1Z06
Enrolment is limited.
For graduates of Grade 12 Greek U (or OAC Ancient Greek), who must have special permission to register in the course.

GREEK 1Z23 BEGINNER'S INTENSIVE ANCIENT GREEK
This course continues the study of the grammar of Ancient Greek begun in Greek 1Z03 and introduces students to the reading of passages from Greek authors.
Three lectures; one term
Prerequisite: GREEK 1Z03. Students with Grade 12 Greek U (or OAC Ancient Greek) must obtain special permission to register in the course.

GREEK 2A03 INTERMEDIATE GREEK
A study of selected passages from Greek authors designed to develop a student's proficiency in reading Greek. The course will also include grammatical exercises.
Three lectures; one term
Prerequisite: One of Grade 12 Greek U (or OAC Ancient Greek), GREEK 1Z06 or 1Z23. Students using this course as a Humanities requirement must register for GREEK 2A03 and 2A23

GREEK 2AA3 INTERMEDIATE GREEK
A study of selected passages from Greek authors designed to develop further the student's proficiency in reading Greek.
Three lectures; one term
Prerequisite: GREEK 2A03
GREEK 3A03  
GREEK HISTORIANS  
Selected readings from Greek historical authors, such as Herodotus and Thucydides. The course will also include grammatical exercises.  
Three lectures; one term  
Prerequisite: Six units of Level II Greek  

GREEK 3B03  
HOMER  
Selected readings from Homer's Iliad or Odyssey.  
Three lectures; one term  
Prerequisite: Six units of Level II Greek  
Alternates with GREEK 4B03.  

GREEK 4B03  
GREEK TRAGEDY  
Selected readings from Sophocles, Euripides, or Aeschylus.  
Three lectures; one term  
Prerequisite: Six units of Level II Greek.  
Alternates with GREEK 3B03.  

GREEK 4BB3  
TOPICS IN GREEK LITERATURE II  
Consult the Department for the topic to be offered.  
Three lectures; one term  
Prerequisite: Six units of Level II Greek  
GREEK 4BB3 may be repeated, if on a different topic, to a total of six units.  
Alternates with LATIN 4BB3.  

GREEK 4K03  
GUIDED READING IN GREEK AUTHORS  
Selected readings from Greek authors supervised by a member of the Department.  
Tutorials; one term  
Prerequisite: Six units of Level II Greek and registration in Level III or IV of any Honours program in Classics, and permission of the Department.  
GREEK 4K03 may be repeated, if on a different topic, to a total of six units.  

LATIN 3A03  
LATIN HISTORIANS  
Readings in selected Latin historians such as Sallust, Livy, and Tacitus. The course will also include grammatical exercises.  
Three lectures; one term  
Prerequisite: LATIN 2A03, 2AA3  
Alternates with LATIN 4A03.  

LATIN 3B03  
VERGIL  
Readings from Vergil's Aeneid, Georgics or Eclogues.  
Three lectures; one term  
Prerequisite: LATIN 2A03, 2AA3  
Alternates with LATIN 4B03.  

LATIN 4A03  
CICERO  
Readings from the works of Cicero. The course will also include grammatical exercises.  
Three lectures; one term  
Prerequisite: LATIN 2A03, 2AA3  
Alternates with LATIN 3A03.  

LATIN 4B03  
LATIN LOVE POETRY  
Readings in Latin Love Poetry.  
Three lectures; one term  
Prerequisite: LATIN 2A03, 2AA3  
Alternates with LATIN 3B03.  

LATIN 4BB3  
TOPICS IN LATIN LITERATURE  
Consult the Department for the topic to be offered.  
Three lectures; one term  
Prerequisite: Six units of Level II Latin  
LATIN 4BB3 may be repeated, if on a different topic, to a total of six units.  

COLLAB  
(SEE NURSING, NURSING CONSORTIUM (D STREAM))  

COMMERCe  

WEB ADDRESS:  http://www.degrootemcmaster.ca  
M.G. DeGroote Building, Room 104  
Ext. 23914  

Faculty as of January 15, 2005  

Chair, Marketing, International Business and Business Policy Area  
Kenneth R. Deal  

Chair, Finance and Business Economics Area  
Trevor Chamberlain  

Chair, Accounting and Financial Management Services Area  
Khalid Nairn  

Chair, Human Resources and Management Area  
Willi Wiesner  

Chair, Management Science and Information Systems Area  
Mahmut Parlar  

Professors  
Prakesh L. Abad (B. Tech. (Indian Institute of Technology), M.S., M.B.A., Ph.D. (Cincinnati)/(Management Science))  
Naresh C. Agarwal (B.A., M.A. (Delhi), Ph.D. (Minnesota)/(Human Resources)/Coordinator, Ph.D. Program (Human Resources))  
Aml Amershi (B. Sc. (University of East Africa), Ph.D.(British Columbia)/(Accounting and Financial Management Services Area)/AIC Chair in Investment and Portfolio Management; Director, AIC Institute for Strategic Business Studies)  
Vishwanath Babbar (Eng. (Madras), M.B.A. (Western Illinois), Ph.D. (British Columbia)/(Organizational Behaviour))  
Christopher K. Bart (B.A., M.B.A. (York), Ph.D. (Western Ontario), C.A. (Business Policy)/Director of the Management of Innovation and Technology Program)  
Trevor W. Chamberlain (B. Sc. (California-Berkely), M.B.A. (McGill), Ph.D. (Toronto), C.A./Finance/Chair, Finance and Business Economics Area)  
M.W. Luke Chan (B. Sc. (Prince Edward Island), M.A., Ph.D. (McMaster) (Finance and Business Economics)/Associate Vice-President (International Affairs))
Kiritarcan Karagareinam/B.Sc (Sri Lanka), M.S.E.E. (Perdue), Ph.D. (Syracuse), C.M.A.(Accounting and Financial Management Services Area)
Peter Mui/B.Sc. (Hong Kong), M.B.A., Ph.D. (Toronto)/Finance
Emad Mohd./B.A. (Kingwai), M.B.A., Ph.D. (Georgia State)/(Accounting)
David Pain/B.Com./B.Com. (Kurukshetra), M.Phi, Ph.D. (Bradford)/
(Marketing, Business Policy and International Business)
Scouray Ray/B.Tech. (India), M.S. (Texas), Ph.D. (Minnesota)/(Marketing)
Aaron Schat/B.A. (Redeemer), M.A., Ph.D. (Guelph)/(Organizational Behaviour)
Alfred Seaman/B.B.A. Admin. (New Brunswick), Ph.D. (Queen's), C.M.A. (Accounting)
John Siem/B.A., M.A., Ph.D. (Concordia)/(Accounting)
Kevin Tasa/B.Com. (Saskatchewan), M.Sc., Ph.D. (Toronto)/(Human Resource Management)

Industry Professors
Paul K. Bates/(Financial Management Services)/Dean
- Terry Flynn/B.Com., M.A., Ph.D. (Syracuse)/(Marketing)

Lecturers
Rita Cossa/H.B.A. (Wilfrid Laurier), M.B.A. (McMaster)/(Marketing)
Hong-Tzu Hao/B.A. Finance (Tamkang)/(Accounting)
Teal McAbee-Early/B.Com. (Queen's), M.I.R., Ph.D. (Toronto)/(Marketing and Business Policy)
Mandeep Malik/B.A. (Chandigarh), M.A. (Canberra)/(Marketing)
Linda Moffat/B.A. (Manitoba), M.A., Ph.D. (Carleton)/(Human Resource Management)
Owen Randal/I.B.A., M.B.A. (McMaster)/(Marketing)
Marvin G. Ryder/B.A., B.Sc. (Carleton), M.B.A. (McMaster)/(Marketing and Business Policy)
Tiina Salisbury/B.Com., M.B.A. (McMaster)/(Management Science and Information Systems)
Linda Stockton/B.A. (McMaster)/(Marketing)
Peter Villis/B.Sc., B.Sc.(Eng.), B.Com., M.B.A. (McMaster), P.Eng/(Marketing)

Faculty Notes:
1. Upper Level Commerce courses are not open to Business I students.
2. The Commerce courses for the Business Minor are open to students registered in any four- or five-level McMaster degree program. For these students, enrolment will be limited to 40 spaces per course on a first-come, first-served basis in the following courses: COMMERCE 2AA3, 2B3, 2B4, 2FA3, 2MA3, 2QA3, 2QB3, 3BC3, 3FA3, 3MC3. Please note that all prerequisites for these courses must also be satisfied. Students registered in a McMaster Commerce, Engineering Management, or Labour Studies program (where applicable) will be guaranteed enrolment in these courses. See Minor in Business in the Faculty of Business section of this Calendar.
3. Effective September 1999, students taking COMMERCE 2AA3, 2FA3, 2MA3 as Business Minor courses will also be required to have obtained a minimum grade of B- in ECON 1A06 or 1B03 as a prerequisite.
4. The Commerce courses for the Minor in Finance and the Minor in Accounting and Financial Management Services are open to students admitted to the Minor. Please note that all prerequisites for these courses must also be satisfied. Students taking COMMERCE 2AA3 and 2FA3 as Minor in Accounting or Minor in Accounting and Financial Management Services courses will also be required to have obtained a minimum grade of B- in ECONOMICS 1A06 or an average of at least 7.0 in ECON 1B03 and 1B6 as a prerequisite.
5. Graduates of McMaster's Commerce programs or one of the Engineering and Management programs may take, as part-time students, Level III and IV Commerce courses (not previously taken, to a maximum of 18 units), excluding COMMERCE 4A03, 4A04, 4A05, with the permission of the Academic Programs Office. (See the Admission Requirements section of this Calendar under the heading Continuing Students.)

These courses are available as ACC 500, 501, ACC 502 through the School of Business, subject to sufficient enrollments and availability of qualified instructors. For details concerning these courses, please see the McMaster University Course Timetable at the following url: http://registrar.mcmaster.ca/infernal/timet.
Other than those graduates specified above, Commerce courses are not open to Continuing Students.

C. Sherman Cheung/B.S. (Louisiana State), M.S., Ph.D. (Illinois)/(Finance and Business Economics)
Robert G. Cooper/B.Eng., M.Eng. (McGill), M.B.A., Ph.D. (Western Ontario)/(Marketing)
Rick D. Hackett/B.Sc. (Toronto), M.A. (Windsor), Ph.D. (Bowling Green State)/(Human Resources)/(Canada Research Chair, Management of Organizational Behaviour and Human Performance)
Elko J. Kleinsmich/Dipl. Ing. (Staatliche Ingenieurschule, Hannover), M.B.A., Ph.D. (McGill)/(Marketing and International Business)
Clarence C.Y. Kwan/Ph.D. (Ottawa), M.B.A. (McMaster), Ph.D. (Toronto), P.Eng./(Finance)/CIBC Chair in Financial Markets
John W. Medcalf/B.A. (New Brunswick), M.A., Ph.D. (Toronto)/(Organizational Behaviour)
Dean C. Mountain/B. (McMaster), M.A., Ph.D. (Western Ontario)/(Finance and Business Economics)
Mahmut Parlas/B.Sc., M.Sc. (Middle East Technical University), Ph.D. (Waterloo)/(Management Science)/(Chair, Management Science and Information Systems Area)
William Richardson/B. Sc., Ph.D., M.B.A. (McMaster)/(Accounting and Financial Management Services Area)
Joseph B. Rose/B.A. (Adelphi), M.B.A. (California), Ph.D. (SUNY-Buffalo)/(Industrial Relation)
Mohamed M. Shehata/B.Com. (Tanta), M.Sc. (Ain-Sham), M.B.A. (North Texas State), Ph.D. (Florida)/(Accounting)
George Steiner/M.Sc. (Budapest), Ph.D. (Waterloo)/(Production and Management Science)/(Coordinator, Ph.D. Program/(Management Science)/(Systems)
George O. Wokoloski/B.Sc. (Toronto), M.B.A. (Western Ontario)/(Ph.D. (Wisconsin)/(Management Science)
Yufei Yuan/B.S. (Fudan), Ph.D. (Michigan)/(Information Systems)/(Wayne C. Fox Chair
F. Isik Zeytinoğlu/B.A., M.A. (Bogazici), M.S., Ph.D. (Pennsylvania) /(Management and Industrial Relations)

Associate Professors
Nick Bontis/B.A., Ph.D. (Western Ontario)/(Marketing, International Business and Policy)/Director, Undergraduate Programs
Y.C. Lillan Chan/B.A. (Chinese Univ. of Hong Kong), Ph.D. (Virginia Polytechnic Institute and State University)/(Accounting)/(Director, M.B.A. Programs)
Kenneth R. Desi/B.S., M.B.A., Ph.D. (SUNY-Buffalo)/(Marketing and Management Science)/(Chair, Marketing, International Business and Business Policy Area)
Khaled Hassanein/B.Sc. (Kuwait), M.A.Sc. (Toronto), Ph.D. (Waterloo), M.B.A. (Wilfrid Laurier)/(Information Systems)/(Director, MeRC)
Bernadette E. Lynn/B.A. (Carlow College), M.A. (Pittsburgh), Ph.D., M.B.A. (McMaster), C.M.A.)/(Accounting)/(Associate Dean Administration Al R. Montazemi/H.N.D. (Tessside Polytechnic), M.Sc. (Southampton), Ph.D. (Waterloo)/(Information Systems)
S. M. Khalid Naimar, B.A., M.A. (Delhi), Ph.D. (Florida)/(Accounting)/(Chair, Accounting and Financial Management Services Area)
Sudipto Sarkar/B.Tech. (Indian Institute of Technology), Ph.D. (Columbia)/(Finance)
D. Wayne Taylor/B.A. (Toronto), M.P.A., Ph.D. (York)/(Business and Public Policy)/(Director, Health Services Management Program
James H. Tiessen/B.Sc. (Alberta), M.Sc. (Guelph), Ph.D. (York)/(International Business)
Will Whelan/ B.A. (Wilfrid Laurier), M.A.Sc., Ph.D. (Waterloo)/(Human Resources)/(Chair, Human Resources and Management Area

Assistant Professors
Narat Churnpat/B.A. (Thammasat), M.B.A./Drexel, Ph.D. (York)/(Finance)
Catherine Connolly/B.Com. (McMaster), M.Sc., Ph.D. (Queen's)/(Organizational Behaviour)
Anna Daniolova/B.Sc. (Yerevan Polytechnic Institute), M.S. (American University of Armenia), M.A., Ph.D. (Indiana)/(Finance)
Brian Detor/B.Sc. (Western Ontario), M.I.S., Ph.D. (Toronto)/(Information Systems)
Maureen Huffman/B.Com., M.A., Ph.D. (Alberta)/(Marketing)
5. Level II and Level III Commerce courses are generally scheduled for three one-hour lectures per week; one term. Level IV Commerce courses are generally scheduled for two lectures per week (a two-hour lecture and a one-hour lecture); one term.

6. Level IV Commerce requirements: the six units of Level III or IV Commerce courses noted in the School of Business section of this Calendar can only be taken by Level IV Commerce students in their final year.

Courses

**COMMERCE 1E03 BUSINESS ENVIRONMENT AND ORGANIZATION**
This course will examine the relationship between business organizations, their functional areas, and the environments - social, political, legal and regulatory and technological - that affect them.
Prerequisite: Registration in Business.

**COMMERCE 2A03 FINANCIAL ACCOUNTING I**
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.
Prerequisite: ECON 1A06 or 1B03 and registration in any Commerce or Engineering and Management program; or a grade of at least B- in ECON 1A06 or 1B03 and registration in any four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2B03 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.
Prerequisite: COMMERCE 2A03 and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2A33 ORGANIZATIONAL BEHAVIOUR AND HUMAN RESOURCES**
This course provides an overview of the field. Topics include: creativity, problem solving, decision-making, systems approaches, organizational effectiveness, motivation, work reorganization and organizational structures.
Prerequisite: Registration in any Commerce, Engineering and Management, Labour Studies or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2F03 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.
Prerequisite: ECON 1A06 or 1B03; and one of MATH 1A03, 1B03, or 1N03; and COMMERCE 2A03; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2F03 INTRODUCTION TO MARKETING**
This course introduces the conceptual underpinnings and operational facets of marketing with a primarily consumer (as opposed to industrial) focus.
Prerequisite: ECON 1A06 or 1B03 and registration in any Commerce or Engineering and Management program; or a grade of at least B- in ECON 1A06 or 1B03 and registration in any four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2Q03 COMPUTER-AUGMENTED STATISTICAL ANALYSIS**
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.

**COMMERCE 2Q03 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.
Prerequisite: One of COMP SCI 1B03, 1MC3, 1S03, 1T3A, 1Z3A, ENGINEER 1D04, MMEDIA 1A03; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 2S03 COMMUNICATION, THINKING AND GROUP SKILLS**
Students will be introduced to the effective use of written and oral communication skills; thinking skills including convergent, divergent and creative thinking as well as logic and rhetoric; and group and interpersonal skills including leadership. Students practice these skills in exercises concerned with current business issues.
Prerequisite: Registration in a Commerce program.

**COMMERCE 2S03 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.
Prerequisite: Registration in Level II or above of any Commerce or Engineering and Management program.
Cross-list: PHILOS 2N03.
This course is administered by the Department of Philosophy.

**COMMERCE 3A03 FINANCIAL ACCOUNTING II**
A 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.
Prerequisite: COMMERCE 2A03 and registration in any Commerce or Engineering and Management program.
(BO. Com. students - see Note 6 above.)

**COMMERCE 3A03 FINANCIAL ACCOUNTING III**
A 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.
Prerequisite: COMMERCE 3A03 and registration in any Commerce or Engineering and Management program.
(BO. Com. students - see Note 6 above.)

**COMMERCE 3A03 BUSINESS MANAGEMENT**
A study of the underlying principles of business management. Topics include: leadership, motivation, organizational structure, and operations.
Prerequisite: Registration in any Commerce or Engineering and Management program.
(BO. Com. students - see Note 6 above.)

**COMMERCE 3A03 HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS**
This course builds on COMMERCE 2A03, focusing on human resource management and labour relations issues and practices from a general management education perspective.
Prerequisite: COMMERCE 2A03 or KINESIOL 3L03; and registration in any Commerce, Labour Studies, Engineering and Management or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 3F03 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.
Prerequisite: COMMERCE 2F03 or ECON 2103; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program.
Enrolment is limited. (See Note 2 above.)

**COMMERCE 3F03 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.
Prerequisite: COMMERCE 2F03 or ECON 2103; and registration in any Commerce or Engineering and Management program.
(BO. Com. students - see Note 6 above.)
COMMERC 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.
Prerequisite: COMMERC 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERC 3IN0 COMMERC INTERNSHIP PROGRAM
Career development; job strategies; skills assessment; resume/application form preparation; interview/presentation skills; orientation to the workplace. Successful completion of an eight, twelve or sixteen month internship, employer evaluation and work term report.
Lecture/workshop (six sessions); first term or second term
Prerequisite: Successful completion of Level II Commerce. Transcript notation granted upon successful completion of an 8, 12 or 16 month approved internship.

COMMERC 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.
Prerequisite: COMMERC 2MA3; and COMMERC 2QA3 or STATS 3Y03; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 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.
Prerequisite: COMMERC 2MA3 and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 3MC3 APPLIED MARKETING MANAGEMENT
This course builds upon material in COMMERC 2MA3 but is more applied in nature and covers the 4 Ps in greater depth. It also has a heavier industrial and service sector component, and relies more on practical, real world cases. A major field project (student teams working with companies) is a critical part of the course.
Prerequisite: COMMERC 2MA3 and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program
Enrolment is limited. (See Note 2 above.)

COMMERC 3OA3 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.
Prerequisite: COMMERC 2QA3 and registration in any Commerce or Engineering and Management program

COMMERC 3QC3 PRODUCTION/OPERATIONS MANAGEMENT
An introduction to the production/operations function with emphasis on the use of quantitative analysis to assist decision-making. Topics include: layout of facilities, aggregate planning, scheduling, inventory control and quality control.
Prerequisite: COMMERC 3OA3 and registration in a Commerce program; or registration in any Engineering and Management, Mechanical Engineering or Manufacturing Engineering program
Antirequisite: COMMERC 4OA3, MECH ENG 4C03

COMMERC 4AA3 MANAGERIAL ACCOUNTING II
A 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.
Prerequisite: COMMERC 2AB3 or 3AA3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4AC3 FINANCIAL ACCOUNTING IV
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, etc.
Prerequisite: Credit or registration in COMMERC 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 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.
Prerequisite: COMMERC 3AB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERC 4AE3 ACCOUNTING INFORMATION SYSTEMS
This course emphasizes the understanding of the roles of accounting information and information technology in managerial decision-making, operational support, stewardship, and organizational competitiveness. Applications of concepts will be emphasized.
Prerequisite: COMMERC 3AB3 and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4AF3 ACCOUNTING THEORY
A review of accounting theory as a background for applying underlying concepts to current accounting problems. The course emphasizes current literature.
Prerequisite: Credit or registration in COMMERC 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4AX3 SPECIAL TOPICS IN ACCOUNTING
Various topics in Accounting 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.
Prerequisite: Announced at the time of offering
For information on course offerings, please refer to the School of Business web site at http://www.degrote.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programs Office, MG1 104.
COMMERC 4AX3 may be repeated, if on a different topic, to a total of six units.

COMMERC 4BA3 BEHAVIOURAL ISSUES IN MANAGEMENT
Detailed analysis of employee motivation and reward systems; organizational structure; leadership and decision-making; group processes; and management of conflict and change.
Prerequisite: Registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4BB3 PERSONNEL 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.
Prerequisite: COMMERC 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4BC3 COLLECTIVE BARGAINING
A survey of the nature, determinants, and impact of collective bargaining in Canada. Both the procedural and substantive aspects of collective bargaining will be studied.
Prerequisite: One of COMMERC 3BA3, 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies program.
(B.Com. students - see Note 6 above.)

COMMERC 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.
Prerequisite: One of COMMERC 3BA3, 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies program.
COMMERC 4BC3 is recommended. (B.Com. students - see Note 6 above.)

COMMERC 4BE3 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.
Prerequisite: COMMERC 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERC 4BF3 LABOUR LAW AND POLICY
An analysis of the concepts and fundamentals of Canadian labour law and analysis of Canadian labour policy.
Prerequisite: COMMERC 3BA3 or 3BC3; and registration in any Commerce or Engineering and Management program. Subject to space availability.
(B.Com. students - see Note 6 above.)
Cross-list: LABR ST 3C03
This course is administered by 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: COMMERCE 3FB3 or 3BC3; and registration in any Com­merce or Engineering and Management program. Subject to space avail­ability. (B.Com. students - see Note 6 above.)
Cross-list: LABR ST 4C03

COMMERCE 4B13 : TRAINING AND DEVELOPMENT
This course provides a framework for establishing, revising and examine­ning training programs in organizations. Topics include: needs assess­ment, development of training objectives, planning and delivery of in­struction, learning principles and evaluation of training.
Prerequisite: COMMERCE 3B93 or 3BC3; and registration in any Com­merce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4B13 : GENDER ISSUES IN BUSINESS
This course discusses the successes and challenges of women in busi­ness in an international context, across various professions and as entre­preneurs and business owners.
Prerequisite: Registration in any Commerce or Engineering and Manage­ment program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4SX3, SPECIAL TOP­ICS IN BUSINESS, if taken in January 1998.

COMMERCE 4B3 : 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 internal allocation of technology management.
Prerequisite: COMMERCE 2B93 registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4B3X, if taken in Janu­ary 1998 or 1999.

COMMERCE 4B3 : SPECIAL TOPICS IN HUMAN RESOURCES/LABOUR RELATIONS
Various topics in Human Resources/Labour Relations 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.
Prerequisite: Announced at time of offering.
For information on course offerings, please refer to the School of Busi­ness web site at http://www.degroote.mcmaster.ca/programs/com­merce/courses.html or contact the Academic Programs Office, MGD 104.
COMMERCE 4B3X may be repeated, if on a different topic, to a total of six units.

COMMERCE 4FA3 : CASES IN MANAGERIAL FINANCE
This course covers the application of basic financial theory and analy­sis, from a managerial point of view, to specific cases. Consideration is given to the strategic, marketing, operational and personal factors which impact on financial decision making.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)
Antirequisite: COMMERCE 4FC3

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.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)
Antirequisite: COMMERCE 4FB3

COMMERCE 4FH3 : Mergers, Acquisitions and Corporate Control
This course examines the processes by which mergers and other types of corporate control transactions take place, and the role of restructuring shifts in resource allocation by corporations.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FI3 : TRADING IN FINANCIAL MARKETS
This course attempts to develop practical skills in trading financial securities - fixed income, equities, futures and options - focusing on trading strategies based on market analysis and risk measurement.
Prerequisite: COMMERCE 3FA3 with a grade of at least B-; and registra­tion in Honours Commerce or any Engineering and Management program
Enrolment is limited.

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.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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.
Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4FX3 : SPECIAL TOPICS IN FINANCE
Various topics in Financial Analysis will be covered, if the topic is appro­priate. Course content may be altered, if necessary, to reflect recent developments in the field. The topics to be included are announced at the time of the course offering.
Prerequisite: Announced at time of offering.
For information on course offerings, please refer to the School of Business web site at http://www.degroote.mcmaster.ca/programs/com­merce/courses.html or contact the Academic Programs Office, MGD 104.
COMMERCE 4FX3 may be repeated, if on a different topic, to a total of six units.

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.
Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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.
Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)

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.
Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above)
Not open to students with credit or registration in COMMERCE 4MX3, if the topic was Sales Management.

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 operation. Students will consider the role of the retail environment - elements of the retail environment; and retail strategies.
Prerequisite: COMMERCE 3MC3 and registration in any Commerce or Engi­neering and Management program. (B.Com. students - see Note 6 above.)
COMMERCETE179

COMMERCETE4PA3BUSINESS 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.
Prerequisite: COMMERCETE3MC3; and registration in Level IV of a Commerce program or Level V of an Engineering and Management program.

COMMERCETE4QB3ANALYSIS 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 may be used to illustrate some of the concepts covered in the course.
Prerequisite: One of COMMERCETE3QC3, 4QA3 or MECH ENG 4C03; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERCETE4QD3DATABASE DESIGN AND IMPLEMENTATION
This course is designed to introduce the basic concepts of database design, implementation, and management. Students will gain hands on experience through assignments and team projects.
Prerequisite: COMMERCETE2QB3 and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERCETE4QE3TELECOMMUNICATION AND ELECTRONIC BUSINESS
The new trends and issues on telecommunication networks and their business applications including: wireless telecommunication, Web technology; Electronic business, Network security, Smart cards, Intelligent agents and the use of Intranet and Extranet.
Prerequisite: COMMERCETE2QB3 and registration in any Commerce or Engineering and Management program.
Not open to students with credit in COMMERCETE4QX3, if the topic was Specific Topics in Business Data Communication (if taken in September 1997). (B.Com. students - see Note 6 above.)

COMMERCETE4PF3PROJECT MANAGEMENT
Topics include: project selection, project organization structures, life cycles, planning, estimation, budgeting, resource allocation, contract, project management software, reporting and controlling issues and conflict management.
Prerequisite: COMMERCETE2BA3; 3QA3 and registration in a Commerce program; or registration in an Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERCETE4QG3TOTAL QUALITY MANAGEMENT
TQM topics include: strategic quality planning, quality in design and processes, tools for quality improvement and control, and standards such as ISO 9000.
Prerequisite: COMMERCETE3QC3 and registration in a Commerce program; or registration in an Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERCETE4QH3MANAGEMENT ISSUES IN ELECTRONIC BUSINESS
This course will cover the issues that the modern business manager must deal with in making strategic decisions concerning the choice, implementation, and execution of electronic business solutions.
Prerequisite: COMMERCETE2QB3 and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)

COMMERCETE4QX3SPECIAL TOPICS IN MANAGEMENT
SCIENCETE4and INFORMATION SYSTEMS
Various topics in Management Science and 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 the course offering.
Prerequisite: Announced at time of offering.
For information on course offerings, please refer to the School of Business web site at http://www.degroot.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programs Office, MGD 104.
COMMERCETE4QX3 MAY be repeated, IF on a different topic, to a total of six units.

COMMERCETE4SA3INTERNATIONAL BUSINESS
The key features of, and trends in, the global business environment. The implications of cultural and political differences. Comparative operartional practices and multinational management.
Prerequisite: COMMERCETE3MC3; and registration in Level IV of a Commerce program or Level V of any Engineering and Management program.
Antirequisite: COMMERCETE4PE3

COMMERCETE4SB3INTRODUCTION 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.
Prerequisite: Credit or registration in COMMERCETE3AB3 and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)
Antirequisite: COMMERCETE4PB3

COMMERCETE4SC3ADVANCED 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.
Prerequisite: COMMERCETE4SB3 or 4PB3; and registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)
Antirequisite: COMMERCETE4PC3

COMMERCETE4SD3COMMERCIAL 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.
Prerequisite: Registration in any Commerce or Engineering and Management program.
(B.Com. students - see Note 6 above.)
Antirequisite: COMMERCETE4PD3

COMMERCETE4SE3ENTREPRENEURSHIP
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.
Prerequisite: Registration in any Commerce, Japanese Studies or Engineering and Management program.
(B.Com. students - see Note 6 above.)
Cross-list: JAPAN ST 4S03

COMMERCETE4SY3INDEPENDENT STUDY IN BUSINESS
Faculty supervised project. A supervising faculty member must be arranged, and authorization of the Associate Dean secured, in the term preceding the term of study.
Prerequisite: To be determined by the supervising faculty member and registration in any Commerce or Engineering and Management program.
Project forms are available from MGD-104.
(B.Com. students - see Note 6 above.)

COURSES FOR PROFESSIONAL DESIGNATION...

COMMERCETE4AG3ADVANCED ACCOUNTING TOPICS
This course extends beyond the knowledge base of earlier accounting courses and deals with specific advanced accounting topics, such as the conceptual framework, standard setting, not-for-profit accounting and fiduciary accounting.
Prerequisite: COMMERCETE4AC3, 4AF3; and registration in any Commerce or Engineering and Management program or graduation from a Commerce program.
Available Summers subject to sufficient enrolments and availability of qualified instructors.
(Continuing Students - see Note 4 above.)

COMMERCETE4AH3ADVANCED AUDITING
This course considers a number of advanced topics concerning both the auditor and the audit profession. It builds on the knowledge of the audit task derived in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses.
Prerequisite: COMMERCETE4AC3, 4AD3; and registration in any Commerce or Engineering and Management program or graduation from a Commerce program.
Available Summers subject to sufficient enrolments and availability of qualified instructors.
(Continuing Students - see Note 4 above.)
COMMUNICATION STUDIES

COMMERCCE 4A13 COMPUTER CONTROL AND AUDITING
This course introduces the student to the field of EDP auditing through lectures, readings and hands-on experience with EDP audit software. Prerequisite: COMMERCCE 4AC3, 4AD3; and registration in any Commerce or an Engineering and Management program or graduation from a Commerce program. Available Summers subject to sufficient enrolments and availability of qualified instructors. (Continuing Students - see Note 4 above.)

WEB ADDRESS: http://www.humanities.mcmaster.ca/~cmst
Togo Salmon Hall, Room 512
Ext. 23488

Faculty as of January 15, 2005

Acting Director
Liss Platt
Professor
Henry Giroux/B.S. (Maine), M.A. (Appalachian State), D. Arts (Carnegie-Mellon)/Global Television Network Chair in Communications
Assistant Professor
Christina Baade/Communication Studies and School of the Arts) B.Mus. (Northwestern), M.Mus. Ph.D. (Wisconsin-Madison)
Catherine Frost/Communication Studies and Political Science) B.A. (Lakehead), M.A., Ph.D. (Toronto)
Violetta Igneski/Communication Studies and Philosophy) B.A., M.A. (Western Ontario), Ph.D. (Toronto)
Alexandre Savigny/Communication Studies and French) B.A. (York), M.A., Ph.D. (Toronto)
Jeremy Stolow/Communication Studies and Sociology) B.A. (Toronto), M.A., Ph.D. (York)

Courses If no prerequisite is listed, the course is open.

CMST 1A03 INTRODUCTION TO COMMUNICATION
Students will examine both practical and fundamental concepts in communication studies and the effects of language, mass communications, performative acts and the Internet on social, cultural and cognitive processes in the context of the four streams of the Communication Studies Program. Three hours (lectures and tutorials); one term

CMST 1B03 DEVELOPMENTS IN HUMAN COMMUNICATION: PAST AND PRESENT
A survey of human communication throughout history and across cultures. This course will include discussion of orality and literacy; manuscript, print and electronic media; and human communication through visual and pictorial arts. Three hours (lectures and tutorials); one term

CMST 2A03 QUANTITATIVE METHODS IN COMMUNICATION RESEARCH
An introduction to the basic approaches and principles for gathering and analyzing quantitative data in communication studies. Topics include sampling techniques, interviewing, questionnaire construction, focus groups, content analysis, and the fundamentals of statistical analysis and inference. Three hours (lectures and tutorials); one term
Prerequisite: Registration in a program in Communication Studies.
Antirequisite: ANTHROP 2203, GEO 2H1R3, GERONTOL 2C03, HEALTHST 2B03, SOCIOLO 2Z03

CMST 2A03 JAPANESE COMMUNICATION
The Japanese language is examined from socio-cultural and pragmatic viewpoints identifying the unique characteristics of the target language that lie behind its use. Such knowledge is invaluable in solving problems of intercultural communication. Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: JAPAN ST 2A03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 2B03 QUALITATIVE METHODS IN COMMUNICATIONS RESEARCH
An introduction to the qualitative research in communication studies. Topics may include research ethics, discourse analysis, textual analysis, ethnography, structuralist and poststructuralist approaches to the study of communication. Three hours (lectures and tutorials); one term
Prerequisite: Registration in a program in Communication Studies

CMST 2BB3 INTRODUCTION TO CULTURE AND COMMUNICATION
An introduction to theoretical and methodological approaches to cultural studies focusing on communicative practice. Students will analyze relationships between cultural identity, producers, consumers, institutions, technologies and practices of mediated communication. Three hours, one term
Prerequisite: Registration in a program in Communication Studies or permission of the Program Counsellor for Communication Studies

CMST 2C03 COMMUNICATION THEORY I:
FUNDAMENTAL PERSPECTIVES
An introduction to various theories on the organization, use and manipulation of language, such as semiotics, socio-linguistics, interpersonal communication, group communication and performance. Three hours (lectures and tutorials); one term
Prerequisite: Registration in Level II or above of a program in Communication Studies

CMST 2D03 COMMUNICATION THEORY II:
THE INFORMATION SOCIETY AND ITS IMPLICATIONS
An introduction to various theories on the organization, use and manipulation of information in a global context, and its impact on the corporate economy and the development of the individual and society. Three hours (lectures and tutorials); one term
Prerequisite: CMST 1B03, 2C03

CMST 2E03 THE NATURE OF TEXTS:
FROM SLANG TO FORMAL DISCOURSE
The course will investigate a variety of styles and registers from the conversational to the literary and academic. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: LINGUIST 2E03
This course is administered by the Department of Modern Languages and Linguistics.

CMST 2F03 PROFESSIONAL WRITING
This course offers instruction on a variety of professional communication forms such as resumes, letters of inquiry, proposals, press releases, and the evaluation of web page design. Students will also read and evaluate arguments covering timely media topics such as television violence and internet spam. Three hours (lectures, discussion and workshops); one term
Prerequisite: Registration in Level II or above of a program in Communication Studies
Enrolment is limited.

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 (lectures and discussion); one term
Prerequisite: Three units of Communication Studies and registration in Level II or above
Cross-list: SOTA 2G03
This course is administered by the School of the Arts.

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 (lectures and discussion); one term
Prerequisite: Registration in Level II or above of a program in Communication Studies or Women's Studies
Cross-list: WOMEN ST 2H03
CMST 2M03

**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: Registration in Level II or above
Cross-list: ART HIST 1A03, PHIL 2H03
This course is administered by the Department of Philosophy. Offered in alternate years.

CMST 2P03

**DRAMATIC FORMS**
Different performance techniques and conventions demand particular forms of dramatic narrative. By comparing the way similar stories are told in different media and genres, students identify the structuring elements of dramatic texts written for live performance, film television and music theatre.
Three hours (lectures and group presentations); one term
Prerequisite: DRAMA 1A03, 1A06 (or 1A06); or THTR&FLM 1A03, 1B03
Cross-list: COMP LIT 2D03, THTR&FLM 2C03
Antirequisite: DRAMA 2D03, 2D06
This course is administered by the School of the Arts.

CMST 2Q03

**MUSIC OF THE WORLD’S CULTURES**
A survey of music traditions of non-European cultures, e.g., far Eastern, Indian, African.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: MUSIC 2A03
Antirequisite: MUSIC 4X03
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 2R03

**POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: POST-WORLD WAR II**
Popular music, its social meanings, and media 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: Registration in Level II or above
Cross-list: MUSIC 2S03
Antirequisite: MUSIC 2A03
This course is administered by the School of the Arts.

CMST 2S03

**NEW MEDIA AND PERFORMANCE**
This course will explore critical issues in new media and examine the ways in which new media shape the creation, reception and interpretation of forms of performance.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: MUSIC 2S03
This course is administered by the School of the Arts.

CMST 2T03

**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: Registration in Level II or above
Cross-list: MUSIC 2T03, THTR&FLM 2T03
This course is administered by the School of the Arts.

CMST 2U03

**LINGUISTIC LANDSCAPE**
The history of language use in Europe from antiquity to the present day. The course will illustrate the different functions of language in social life and the growth of national, standardized idioms. It will also serve as an introduction to the history of linguistics as a discipline.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: EVROPT ST 2B03, LING UIST 2A03
Antirequisite: ANTHRO 2A03
CMST 2V03 CONFLICT TRANSFORMATION: THEORY AND PRACTICE
An examination of ways of preventing, resolving and transforming conflicts in everyday life, in our own culture and others, and in the arenas of family, business, the law, schools and large-scale political conflicts.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above or permission of the Director of Peace Studies
Cross-list: PEACE ST 2A03
This course is administered by Peace Studies.

CMST 2W03 CRITICAL THINKING
This course aims to improve skills in analyzing and evaluating arguments and presentations found in everyday life and academic contexts, and to improve critical judgement.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: HUMAN 2C03
Antirequisite: ARTS&SCI 1B06
This course is administered by the Department of Philosophy.

CMST 2X03 FILM HISTORY TO THE SECOND WORLD WAR
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 weekly film screening; one term
Prerequisite: Registration in Level II or above or registration in a program in Film Studies or Communication Studies (Cultural Studies Stream).
Cross-list: ART HIST 2G03, THTR&FLM 2F03
Antirequisite: CMST 2X05
This course is administered by Theatre & Film.
Enrolment is limited to 150 students.

CMST 2Y03 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).
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2E03, THTR&FLM 2G03
This course is administered by the Department of Classics.

CMST 2Z03 POLITICS AND THE MEDIA
Theories and practices of the reciprocal relationship between the communications media and the political system.
Three hours (lectures and tutorials); one term
Prerequisite: CMST 1A03 and 1B03; or POL SCI 1G06
Cross-list: POL SCI 2C03
This course is administered by the Department of Political Science.

CMST 3B03 PRACTICAL ASPECTS OF MEDIA PRODUCTION
In consultation with a faculty member, students will complete an independent project or an applied placement on an approved topic involving the application of communication skills, theories and methodologies. It is the student's responsibility to obtain the agreement of the instructor and to complete a proposal form (available in the Communication Studies Office). Independent Study proposals must be approved by the Committee of Instruction during the term before the project is to be done.
Prerequisite: Registration in Level III or IV of a program in Communication Studies with a Cumulative Average of at least 6.5 and permission of the Committee of Instruction.

CMST 3B83 WOMEN 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 visual modalities such as film, video, television, advertising, etc.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: Registration in Level III or above and one of ART HIST 2A03, CMST 2F03, 2I03, DRAMA 2X05, THTR&FLM 1B03 or WOMEN ST 1A06
Cross-list: THTR&FLM 3F03, WOMEN ST 3B83
Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002.
This course is administered by Women's Studies.

CMST 3C03 MEDIA AND SOCIAL ISSUES
Media representations of social problems such as homelessness and violence are examined comparatively in light of journalistic ethics and ideology, the relations between media and sources, and the constraints on objectivity.
Three lectures; one term
Prerequisite: Registration in Level III or above of a Communication Studies or Sociology program
Cross-list: SOCIOI 3C03
Enrolment is limited.
This course is administered by the Department of Sociology.

CMST 3C3C READING FILM
A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.
Three hours, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, or Theatre and Film Studies. It is recommended that students should already have taken CMST 2X03 or 2X06.
Cross-list: COMP LIT 3L03, CSCT 3CC3, ENGLISH 3CC3, THTR&FLM 3F03 (formerly DRAMA 3H03)
This course is administered by the Department of English and Cultural Studies.

CMST 3D03 POLITICAL COMMUNICATION
The relationship between politics and the media is analyzed in terms of issues such as political news coverage, electioneering, political marketing, policy formation and publicity, and agenda-setting and public opinion.
Three lectures; one term
Prerequisite: Registration in a Communication Studies or Political Science program
Cross-list: POL SCI 3BB3
This course is administered by the Department of Political Science.

CMST 3E03 ARGUMENTATION THEORY
The theory of argumentation is central to any sort of social or dialectical approach to the theory of knowledge. The theoretical issues discussed in this course would include the concept of an argument, the analysis of arguments and the evaluation of arguments.
Three hours (lectures and discussion); one term
Prerequisite: CMST 2W03 or PHILOS 2B06; and registration in Level II or above
Cross-list: PHILOS 3M03
This course is administered by the Department of Philosophy.

CMST 3F03 TOPICS IN VISUAL CULTURE
This course will examine a variety of topics in the critical study of visual culture, including gender and spectatorship, consumerism and the arts, and visual literacy in the 21st century.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: SOTA 3C03
This course is administered by the School of the Arts.

CMST 3G03 INTRODUCTION TO SOCIOLINGUISTICS
An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include linguistic variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.
Three lectures; one term
Prerequisite: Registration in Level III or IV of a program in Communication Studies (Language and Social Life Stream), or Linguistics; or permission of the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 3X03
Antirequisite: ANTHROP 3X03
This course is administered by the Department of Modern Languages and Linguistics.

CMST 3H03 CREATING CEREMONIES
An examination of the performative aspects of ceremonies and rituals such as weddings, funerals, political inaugurations, parades, mass, festivities around such religious celebrations as Christmas and Hanukkah, and the rituals associated with theatre and concert going.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above of a program in Communication Studies.
CMST 3103 COMMUNICATION POLICY AND LAW
An examination of the role of government policy, regulation, and law on the structure and functioning of the mass media. Topics include cultural policy, communication technology policy, free speech, and privacy rights.
Three lectures; one term
Prerequisite: Registration in Level III or above of a program in Communication Studies.

CMST 3K03 MEDIA AUDENCES 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 lectures; one term
Prerequisite: CMST 2A03 and registration in Level III or above of a program in Communication Studies.

CMST 3L03 THEORIZING CULTURE THROUGH PERFORMANCE
Students will explore artists' practices in making performances and will analyse how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.
Three hours; one term
Prerequisite: One of ART HIST 2E03, 3A03, CMST 2G03, 2P03, 2S03, THTR&FLM 2C03, 2D03, 2E03
Cross-list: ART HIST 3L03, THTR&FLM 3L03
Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE, if taken in 2001-2002, or credit in THTR&FLM 2E03 if taken in 2002-2003.
Offered in alternate years.
This course is administered by Theatre & Film.

CMST 3M03 THEATRE AND COMMUNITY DEVELOPMENT
Students who explore the different approaches to community-based theatre generated in a range of social and cultural milieus and will analyse the sense of community implicit in a variety of popular and community-based theatre projects.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: THTR&FLM 3G03 (formerly DRAMA 3M03)
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3M33 THE INTERNET AND PUBLIC LIFE
This course examines how the Internet and other digital media may be reshaping political and personal relationships and altering the nature of the public sphere.
Three hours; one term
Prerequisite: CMST 2203 or POL SCI 2703; and registration in Level III or above
Cross-list: POL SCI 3M33
Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Public Life in a Digital Age.
This course is administered by the Department of Political Science.

CMST 3N03 ETHICAL ISSUES IN COMMUNICATION
This course will examine ethical issues as they arise in interpersonal communication and mass communication. The dominant moral theories and approaches to moral decision-making will be analysed and put to use to help students understand and evaluate concrete examples.
Three hours (lectures and discussion groups); one term
Prerequisite: CMST 2C03; and one of CMST 2A03 or 2B03; and registration in Level III or above of a program in Communication Studies
Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Ethical Issues in Communication.

CMST 3P03 HISTORY OF PHOTOGRAPHY
This course examines historical and contemporary photographic images in the visual arts and considers the connections and distinctions between artistic and media uses of the medium.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: ART HIST 3P03
This course is administered by the School of the Arts.

CMST 3Q03 TOPICS IN ORGANIZATIONAL COMMUNICATION
This course focuses on communication as an effective management tool for issues including consensus-building, corporate culture, leadership and motivation, decision-making, cultural diversity and communicating change.
Three hours (lectures and discussion groups); one term
Prerequisite: CMST 2C03; and one of CMST 2A03 or 2B03; and registration in Level III or above of a program in Communication Studies.

CMST 3S33 FILM, VIDEO AND ENTERTAINMENT CULTURE
Critical approaches to forms of entertainment culture which permeate our everyday lives (e.g., popular films, video culture, television). Topics may include the cultural meanings of popular imagery, star-gazing, and commercialization.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: CMST 2X03 or 2X06
Cross-list: THTR&FLM 3S03
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3T03 TOPICS IN NATIONAL CINEMAS I
This course examines film in relation to nations and national contexts. Areas of investigation may include filmic production of a particular country, national belonging and transnational identities.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of CMST 2S03, 2X03 or 2X06
Cross-list: COMP LIT 3V03, THTR&FLM 3Q03 (formerly DRAMA 3T03)
Offered on an irregular rotation basis.
This course is administered by the School of the Arts.

CMST 3TT3 TOPICS IN NATIONAL CINEMAS II
This course examines film in relation to nations and national contexts. Areas of investigation include filmic production of global/local characteristics.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03
Cross-list: COMP LIT 3V03, THTR&FLM 3Q03
Antirequisite: DRAMA 3TT3
Offered on an irregular rotation basis.
This course is administered by the School of the Arts.

CMST 3U03 INDEPENDENT FILM AND VIDEO
An exploration of artists' film and video produced outside of dominant institutions, including such practices as documentary, autobiography, community projects, experimental film, short film, and video art.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of CMST 2S03, 2X03 or 2X06
Cross-list: THTR&FLM 3N03
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3V03 PRAGMATICS
A 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 lectures; one term
Prerequisite: LINGUIST 1A03 and 1A3 (or 1A06); or FRENCH 2H03; or permission of the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 3P03
Antirequisite: ANTHROP 3P03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 3WW3 WOMEN IN A MULTICULTURAL SOCIETY
An interdisciplinary exploration of the experiences of women in different subcultures within a multicultural society, through an examination of social and historical conditions, policies, and personal narratives. Topics may include immigration, voice, mobility, identity, hybridity.
Three hours (seminar and discussion); one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: WOMEN ST 3D03
Antirequisite: WOMEN ST 3D06
This course is administered by Women's Studies.
CMST 3X3 FILM HISTORY: 1941 TO THE PRESENT
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 arts forms, narrative, genre, and authorship.
Two lectures, plus one weekly screening; one term
Prerequisite: CMST 2X03
Cross-list: THTR&FLM 3L03
Antirequisite: CMST 2X06
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3Y03 PHILOSOPHY OF LANGUAGE
A survey of philosophical problems concerning language. Topics to be considered include reference, synonymy, truth, and linguistic knowledge.
Three lectures; one term
Prerequisite: At least six units of Philosophy, and registration in Level III or IV of any program
Cross-list: PHILOS 3E03
Offered in alternate years.
This course is administered by the Department of Philosophy.

CMST 4A03 THESIS PROJECT
Students will develop and execute their own research project, in consultation with a faculty advisor. Involves regular meetings with the advisor and a final public presentation of research endeavours.
Prerequisite: Registration in Level IV of a program in Communication Studies with a Cumulative Average of at least 9.0 and permission of the Committee of Instruction
Enrolment is limited.

CMST 4B03 INDEPENDENT STUDY IN ADVANCED APPLIED COMMUNICATION
Students will apply communication skills, theories and methodologies to complete an advanced independent project in the field of communications. This will be undertaken following successful completion of relevant courses in the appropriate Stream. Entry is by application to the Committee of Instruction during the term before the course is to be taken.
Prerequisite: Registration in Level IV of a program in Communication Studies with a Cumulative Average of at least 8.5 and permission of the Committee of Instruction
Enrolment is limited.

CMST 4C03 ISSUES IN PERFORMANCE STUDIES
This course serves to synthesize and expand students' engagement with issues studied in performance studies courses through the examination of writings that draw on anthropology, phenomenology, materialist analysis, psychoanalysis, gender theory, postmodernism, postcolonialism and intercultural reception.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Enrolment is limited.

CMST 4C03 MEDIA STUDIES, CULTURAL POLITICS AND PUBLIC PEDAGOGY
A critical examination of global media in its diverse forms, focusing on the public role of media, the connection between pedagogy and politics, and the crucial role of culture as a primary element of politics.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Students may take only one of CMST 4C03, 4N03, or 4Q03.
Enrolment is limited.

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.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Enrolment is limited.

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.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Enrolment is limited.

CMST 4F03 STUDIES IN FILM
Senior seminar: An examination of selected films.
Seminar (two hours); one term
Prerequisite: CMST 2X03 and registration in Level III or IV of a program in Communication Studies. CMST 2X03 or 2X06 is recommended.
Cross-list: THTR&FLM 4E03 (formerly DRAMA 4F03)
Enrolment is limited. Priority will be given: first to students registered in Level IV of any Theatre & Film Studies program, and then to students registered in Level IV of the Communication Studies program.
This course is administered by the School of the Arts.

CMST 4G03 APPLIED LINGUISTICS
This course acquaints the student with the contributions that the linguist, psycholinguist, sociolinguist can make to second language learning and teaching.
Three lectures; one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 4B03
Antirequisite: ANTHROP 4BL3
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4I03 COMPUTERS AND LINGUISTIC ANALYSIS
This course studies the linguistic applications of computer technology in general, and language processing in particular, including parsers and machine translation.
Two lectures, one lab; one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics courses above Level I; or permission of the Department of Modern Languages and Linguistics
Cross-list: LINGUIST 4D03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4L03 APPROACHES TO DISCOURSE
This course offers an overview of different approaches to the analysis of discourse, including speech act theory, interactional sociolinguistics, ethnography of communication, pragmatics, conversation analysis, and critical discourse analysis.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of a program in Communication Studies or Linguistics, or permission of the Program Counselor for Communication Studies
Cross-list: LINGUIST 4Z23
Enrolment is limited.

CMST 4M03 COMMUNICATION, CULTURE AND TECHNOLOGY, 1844-1927
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.
Three hours (lectures and discussion); one term
Prerequisite: CMST 2B03 and registration in Level IV of a program in Communication Studies (Cultural Studies Stream)
Enrolment is limited.

CMST 4N03 PRODUCING AND VIEWING THE NEWS
This course will examine how the mode of production of the news influences audiences' perceptions and values of social and political life. Specific emphasis will be put on gate-keeping, agenda-setting and headline transformation.
Three hours (lectures and discussion); one term
Prerequisite: CMST 2B03 and registration in Level IV of a program in Communication Studies
Students may take only one of CMST 4CC3, 4N03 or 4Q03.
Enrolment is limited.

CMST 4Q03 ADVANCED TOPICS IN COMMUNICATION
Students will learn about specific areas or aspects of research in communication studies, such as critical media discourse, culture and consumption, media and globalization, etc.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Antirequisite: CMST 4K03
Students may take only one of CMST 4CC3, 4N03 or 4Q03.
Enrolment is limited.

CMST 4R03 ADVANCED TOPICS IN COMMUNICATION (Continued)
Students will learn about specific areas or aspects of research in communication studies, such as critical media discourse, culture and consumption, media and globalization, etc.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Antirequisite: CMST 4K03
Students may take only one of CMST 4CC3, 4N03 or 4Q03.
Enrolment is limited.

CMST 4S03 ADVANCED TOPICS IN COMMUNICATION (Continued)
Students will learn about specific areas or aspects of research in communication studies, such as critical media discourse, culture and consumption, media and globalization, etc.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level IV of a program in Communication Studies
Antirequisite: CMST 4K03
Students may take only one of CMST 4CC3, 4N03 or 4Q03.
Enrolment is limited.
CMST 4R03 CROSS-CULTURAL COMMUNICATION
Students 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: LINGUIST 1A03, 1A03 and six units of Linguistics courses above Level I; or permission of the Department
Cross-list: LINGUIST 4R03
Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Cross-Cultural Communication. Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4S03 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, as well as computer mediated, intercultural, international and political communication.
Seminar (two hours); one term
Prerequisite: LINGUIST 1A03, 1A03 and six units of Linguistics courses above Level I; or permission of the Department
Cross-list: LINGUIST 4S03
Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Interpersonal Communication. Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

CMST 4T03 FORENSIC LINGUISTICS
This course examines issues arising from the language-law interface, including: speaker/author identification; interpretation and transcription of police interrogations, witness statements, trial discourse; written legal language.
Seminar (two hours); one term
Prerequisite: LINGUIST 3K03
Cross-list: LINGUIST 4T03
Not open to students with credit in CMST 4H03, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Forensic Linguistics. Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

COMPARATIVE LITERATURE
WEB ADDRESS: http://www.humanities.mcmaster.ca/complit
Togo Salmon Hall, Room 726
Ext. 24265

Courses and programs in Comparative Literature are administered within the Office of Interdisciplinary Studies of the Faculty of Humanities. For information and counselling, please contact the Director of Comparative Literature (Ext. 24091).

Faculty as of January 15, 2005

Acting Directors
Joseph Adamson
Jean Wilson

Professors
Joseph Adamson/B.A. (Trent), M.A., Ph.D. (Toronto)
Nasrin Rehmi/B.A., M.A. (Dalhousie), Ph.D. (Alberta)

Associate Professor
Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Committee of Instruction
Joseph Adamson (English and Cultural Studies and Comparative Literature)
Iris Bruce (Modern Languages and Linguistics)
Nina Kolesnikoff (Modern Languages and Linguistics)
John C. Stout (French)
Jean Wilson (Comparative Literature and Modern Languages and Linguistics)

Notes:
1. No language other than English is required for courses listed under Comparative Literature.
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.

COMP LIT 1A03 INTRODUCTION TO COMPARATIVE LITERATURE I
Students engage in the close study of selected literary works from texts of antiquity to the beginnings of modern literature. Considerable attention is given to the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

COMP LIT 1AA3 INTRODUCTION TO COMPARATIVE LITERATURE II
An introduction to comparative literary studies, through the exploration of selected works from the eighteenth century on. Considerable attention is given to the development of critical skills in reading and writing.
Two lectures, one tutor; one term

COMP LIT 2A03 MODERN EUROPEAN LITERATURE I
A study of the central themes and ideas shaping the Enlightenment and Romanticism through the reading of representative works.
Three lectures; one term
Prerequisite: Registration in Level II or above

COMP LIT 2AA3 MODERN EUROPEAN LITERATURE II
A study of the central themes and forms of major literary movements from Romanticism to Postmodernism through the reading of representative works.
Three lectures; one term
Prerequisite: Registration in Level II or above

COMP LIT 2BB3 NORTH AND SOUTH AMERICAN LITERATURES
A comparative study of key motifs in selected North and South American literary traditions which may include magic realism, the Gothic, poetry, fantasy and metafiction.
Three lectures; one term
Prerequisite: Registration in Level II or above

COMP LIT 2CC3 WORLD LITERATURE
An introduction to recent debates on what constitutes "world literature," focusing on a broad range of key works from several different continents, languages and cultures.
Three lectures; one term
Prerequisite: Registration in Level II or above

COMP LIT 2003 DRAMATIC FORMS
Different performance techniques and conventions demand particular forms of dramatic narrative. By comparing the way similar stories are told in different media and genres, students identify the structural elements of dramatic texts written for live performance, film television and music theatre.
Lectures and group presentations (three hours); one term
Prerequisite: Three units of Level I Theatre & Film or Drama and registration in Level II or above of a Comparative Literature program
Cross-list: CMST 2P03, THTR&FLM 2C03
Antirequisite: DRAMA 2D03, 2D06
This course is administered by the School of the Arts.

COMP LIT 2E03 CONCEPTS OF CULTURE
An analysis of the development 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: Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or permission of the Departmental Counsellor for English and Cultural Studies
Cross-list: CMST 2M03, CSCT 2M03, ENGLISH 2M03
This course is administered by the Department of English and Cultural Studies.

COMP LIT 2EE3 MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g. literature, art, photography, film, music) produced by avant-garde and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beat, the sixties, situationism and punk.
Three hours; one term
Prerequisite: Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or permission of the Departmental Counsellor for English and Cultural Studies. Cross-list: CMST 3N3, CSCT 3N3, ENGLISH 32N3

This course is administered by the Department of English and Cultural Studies.

COMP LIT 2F03 CONTEMPORARY CRITICAL APPROACHES TO LITERATURE

The course will offer a grounding in reading literary texts from a range of contemporary critical approaches.

Three hours; one term

Prerequisite: Registration in a program in English, Comparative Literature or permission of the Departmental Counsellor for English and Cultural Studies. Cross-list: ENGLISH 2A03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 2G03 THE BIBLE AS LITERATURE

An examination of narratives from the Hebrew Bible, Intertestamental literature, and New Testament, from a literary perspective. Attention is paid to narrative features such as character, plot, irony and symbolism, as well as to the dynamics of the reading experience.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level II or above Cross-list: RELIG ST 2V23

This course is administered by the Department of Religious Studies.

COMP LIT 2H03 GREEK AND ROMAN DRAMA

Selected Greek and Roman Tragedies and Comedies will be read in translation. The course will concentrate on characterization and the philosophical and religious aspects of ancient drama.

Three lectures; one term

Prerequisite: Registration in Level II or above Cross-list: CLASSICS 2H03

This course is administered by the Department of Classics.

COMP LIT 2H33 MASTERWORKS OF GERMAN LITERATURE

A survey of major works from a variety of genres, by Goethe, Kleist, Heine, Büchner, Mann, Rilke, Brecht and others.

Three lectures; one term

Prerequisite: Registration in Level II or above

COMP LIT 2M03 GREEK AND ROMAN MYTHOLOGY

A 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 Vergil.

Three lectures; one term

Prerequisite: Registration in Level II or above Cross-list: CLASSICS 2D03

This course is administered by the Department of Classics.

COMP LIT 3A03 THEORY 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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Women’s Studies or permission of the Departmental Counsellor for English and Cultural Studies Cross-list: CLASSICS 3A03, ENGLISH 3A03, WOMEN ST 3H33

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3B83 NORTHROP FRYE AND GENRE

This course focuses on the poetics of literary structures and genres as outlined in the seminal work of Northrop Frye.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3D03, TOPICS IN LITERARY GENRES II, if the topic was Northrop Frye and Genre.

COMP LIT 3C03 TWENTIETH-CENTURY THEATRE

An exploration of important formal and social experiments that marked twentieth-century theatre and paved the way for contemporary theatre forms.

Lecture and discussion (three hours); one term

Prerequisite: Three units of Theatre & Film or Drama and registration in Level III or IV of a Comparative Literature program Cross-list: THTR&FLM 3E03

Offered in alternate years.

This course is administered by the School of the Arts.

COMP LIT 3E03 KAFKA AFTER KAFKA

This course examines the influence of Franz Kafka’s fiction on writers, critics, and film makers of the twentieth century.

Three hours; one term

Prerequisite: Registration in Level II or above

Not open to students with credit in COMP LIT 3U03, TOPICS IN MODERN LITERATURE if the topic was Kafka after Kafka.

COMP LIT 3G03 EUROPEAN DRAMA

A study of representative plays by major European dramatists from the 18th century to the present.

Two hours; one term

Prerequisite: Registration in Level II or above

COMP LIT 3G03 COMPARATIVE THEATRE

A comparison of two or more theatrical traditions.

Three lectures; one term

Prerequisite: Three units of Theatre & Film or Drama and registration in Level III or IV of a Comparative Literature program Cross-list: THTR&FLM 3H03

Offered in alternate years.

This course is administered by the School of the Arts.

COMP LIT 3H03 BIBLICAL TRADITIONS IN LITERATURE

A study of the influence of the Bible on Western literature, especially English. Approaches may include the examination of symbolism, imagery, typology, doctrinal themes and narrative structures.

Three hours; one term

Prerequisite: Registration in Level II or above Cross-list: ENGLISH 3S03

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3H03 THE LYRIC

Using a wide range of poetry from different cultures and historical periods as examples, this course explores the numerous characteristic features that constitute the diversity of the lyric.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3D03, TOPICS IN LITERARY GENRES I, if the topic was The Lyric.

COMP LIT 3I03 TOPICS IN GREEK AND ROMAN LITERATURE

Previous topics include: The Poet and Society, Greek and Roman Elegiac and Lyric Poetry, The Legend of the Trojan War, Satire, Consult the Department concerning topic to be offered.

Three lectures; one term

Prerequisite: Registration in Level III or IV of a Comparative Literature program Cross-list: CLASSICS 3I03

COMP LIT 3I03 may be repeated, if on a different topic, to a total of six units.

This course is administered by the Department of Classics.

COMP LIT 3J06 THE AGE OF ELIZABETH I

A consideration of this tumultuous age, galvanized by revolutions in exploration, religion, and selfhood, and ruled by a female monarch. Authors include Spenser, Sidney and women writers.

Three hours; two terms

Prerequisite: Registration in a program in Comparative Literature Cross-list: ENGLISH 3J06

This course is administered by the Department of English and Cultural Studies.

COMP LIT 3J06 THE FAIRY TALE

An examination of fairy tales from a variety of cultures and historical periods. Students will also explore theories of the folktale and their implications for our understanding of other literary genres.

Seminar (two hours); one term

Prerequisite: Registration in Level II or above of a Comparative Literature program

Not open to students with credit in COMP LIT 3D03, TOPICS IN LITERARY GENRES II, if the topic was The Fairytale.

COMP LIT 3K03 20TH-CENTURY RUSSIAN LITERATURE

A study of Russian literature of the 1920s and 1930s with special attention to Akhmatova, Bulgakov and Sholokhov.

Three lectures; one term

Prerequisite: Registration in Level II or above
COMPARATIVE LITERATURE

COM 3K3: CONTEMPORARY RUSSIAN LITERATURE
A study of contemporary Russian literature since 1955, with special attention to Pasternak, Solzhenitsyn and Yevtushenko.
Three lectures; one term
Prerequisite: Registration in Level II or above

COM 3L03: READING FILM
A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.
Three hours, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or Theatre & Film Studies. It is recommended that students should already have completed one of CMST 2X03, 2X05, DRAMA 2X06, THTR&FLM 2FC3
Cross-list: CMST 3CC3, CSCT 3CC3, ENGLISH 3CC3, THTR&FLM 3RC3
(formerly DRAMA 3H03)
This course is administered by the Department of English and Cultural Studies.

COM 3M03: ASIAN LITERATURES
A study of representative texts from Asian Literatures. The course will focus, in particular, on the literatures of India, China and Japan.
Three lectures; one term
Prerequisite: Registration in Level II or above
Offered in alternate years.

COM 3MM3: THE LITERATURE OF ISRAEL AND PALESTINE
Through the study of relevant literature and film, with a focus on contemporary Israeli and Arab texts, students gain a context for the exploration of conflicts in the Middle East.
Three hours; one term
Prerequisite: Registration in Level II or above

COM 3N03: ARABIC AND PERSIAN LITERATURES
A study of representative texts from Arabic and Persian literatures, read in English translation. May include a segment on film.
Three lectures; one term
Prerequisite: Registration in Level II or above
Offered in alternate years.

COM 3NN3: WOMEN IN GERMAN LITERATURE AND CULTURE
This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: GERMAN 3NN3, WOMEN 3NN3
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

COM 3Q03: THE HISTORY OF CRITICAL THEORY
A survey of the main developments in critical theory from Plato to the end of the 19th century. Areas of investigation may include: art, aesthetics, civil society, representation, ethics and knowledge.
Three hours; one term
Prerequisite: Registration in Level III or IV of a Comparative Literature program
Cross-list: CSCT 3Q03, ENGLISH 3Q03
This course is administered by the Department of English and Cultural Studies.

COM 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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English or permission of the English and Cultural Studies Departmental Counselor.
Cross-list: CSCT 3QQ3 or ENGLISH 3QQ3
This course is administered by the Department of English and Cultural Studies.

COM 3R06: POSTCOLONIAL CULTURES: THEORY AND PRACTICE
A study of contemporary texts including literature, film and art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.
Two hours; one term
Prerequisite: Registration in Level II or above of a program in Classics or Comparative Literature, or permission of the Director of Comparative Literature and the Chair of Classics
Cross-list: CLASSICS 3Y03
This course is administered by the Department of Classics.

Three hours; two terms
Prerequisite: Registration in Level III or IV of a Comparative Literature program
Cross-list: CSCT 3R06, ENGLISH 3R06, PEACE 3S06
This course is administered by the Department of English and Cultural Studies.

COM 3RR3: 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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies, Women's Studies or permission of the Departmental Counselor for English and Cultural Studies
Cross-list: CSCT 3RR3, ENGLISH 3RR3, PEACE 3RR3, WOMEN 3RR3
This course is administered by the Department of English and Cultural Studies.

COM 3SS3: 19TH-CENTURY RUSSIAN LITERATURE
A study of the major novels by Dostoevsky and Tolstoy.
Three lectures; one term
Prerequisite: Registration in Level II or above

COM 3T03: THE THEATRE OF GREECE AND ROME
The history of theatre and theatrical production in Greece and Rome, with consideration of the social significance of drama in antiquity. The course will also include archaeological material.
Three lectures; one term
Prerequisite: COM 3T03 or six units of Classics
Cross-list: CLASSICS 3T03
This course is administered by the Department of Classics.

COM 3TT3: MODERN JAPANESE LITERATURE IN TRANSLATION
This is a survey course of major works in 20th-century Japanese literature with an emphasis on fiction published since the Second World War. Readings include Soseki, Toson, Masuji Ibuse, Kenzaburo Oe and Haruki Murakami.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: JAPAN ST 3TT3
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

COM 3V03: TOPICS IN NATIONAL CINEMAS I
This course examines films in relation to nations and national contexts. Areas of investigation may include filmic production of a particular country, national belonging and transnational identities.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03; and registration in Level III or IV of a Comparative Literature program
Cross-list: CMST 3T03, THTR&FLM 3V03 (formerly DRAMA 3T03)
Offered on an irregular rotation basis.
This course is administered by the School of the Arts.

COM 3V13: TOPICS IN NATIONAL CINEMAS II
This course examines film in relation to nations and national contexts. Areas of investigation include filmic production of a particular country, national belonging and transnational identities.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03
Cross-list: CMST 3TT3, THTR&FLM 3V03
Antirequisite: DRAMA 3T03
Offered on an irregular rotation basis.
This course is administered by the School of the Arts.

COM 3Y03: CLASSICAL LITERATURE AND BEYOND
A study of representative texts from the Greek and Roman literary traditions as well as their influence and afterlife in one or more later literary traditions.
Two hours; one term
Prerequisite: Registration in Level II or above of a program in Classics or Comparative Literature, or permission of the Director of Comparative Literature and the Chair of Classics
Cross-list: CLASSICS 3Y03
This course is administered by the Department of Classics.
COMPUTING AND SOFTWARE

COMP LIT 4A03 EUROPEAN ROMANTICISM
A study of selected literary texts of European Romanticism, including women's writing of the period. Attention is also given to Romantic aesthetic theory.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature program
Antirequisite: COMP LIT 4A0A

COMP LIT 4D03 LITERATURE AS PEACE RESEARCH
An exploration of new ways of thinking about war, peace, human security, and conflict transformation, with emphasis on a close study of selected literary texts.
Two hours; one term
Prerequisite: Registration in Level III or IV of a program in Comparative Literature or Peace Studies
Cross-list: PEACE ST 4D03

COMP LIT 4E03 TOPICS IN COMPARATIVE LITERATURE
Previous topics include: Twentieth-Century Women Writers, Literature and Ideology. Consult the Office of Interdisciplinary Studies concerning topics to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature program
COMP LIT 4E03 may be repeated, if on a different topic, to a total of six units.

COMP LIT 4F03 PSYCHE AND CULTURE
This course explores the psychoanalytic understanding of culture with reference to three main areas: Ideology, gender polarity and imaginative culture (the arts and literature).
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature program
Antirequisite: CSCT 4PC3, ENGLISH 4PC3
Not open to students with credit in COMP LIT 4C03, LITERATURE AND OTHER DISCIPLINES, if the topic was Psyche and Culture.

COMP LIT 4G03 BERLIN/VIENNA: THE CULTURAL LIFE OF A CITY
Students will embark on an interdisciplinary journey into the cultural history of a city from the 19th century to the present. Through literary texts, songs, films, works of art and architecture varied presentations of the city in high and popular culture will be examined.
Three hours; one term
Prerequisite: Registration in Level III or IV
Cross-list: GERMAN 4G03
Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

COMP LIT 4I13 INDEPENDENT STUDY
The student will prepare, under the supervision of a faculty member, a research paper involving independent study of an approved topic.
Prerequisite: Registration in Level IV of a Comparative Literature program and permission of the Director of Comparative Literature

COMP LIT 4J03 THE SPLIT SCREEN: RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA
This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social and cultural developments at the time of the films' production.
Two hours plus one film screening per week; one term
Prerequisite: Registration in Level III or IV
Cross-list: GERMAN 4J03, THTRFLM 4J03
Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

COMP LIT 4T03 SPECIAL TOPICS
Consult the Office of Interdisciplinary Studies concerning topics to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of a Comparative Literature program
COMP LIT 4T03 may be repeated, if on a different topic, to a total of six units.

COMPUTER ENGINEERING
(SEE ELECTRICAL AND COMPUTER ENGINEERING)

COMPUTER SCIENCE
(SEE COMPUTING AND SOFTWARE)

COMPUTING AND SOFTWARE

WEB ADDRESS: http://www.cs.mcmaster.ca
Information Technology Building, Room 202
Ext. 24514

Faculty as of January 15, 2005

Chair
Paul A. Taylor

Professors
František Franek/M.Sc., R.N.Dr. (Charles, Prague), Ph.D. (Toronto)
Ryszard Janicki/M.Sc. (Warsaw), Ph.D., D.Heab. (Polish Acad. Sci.)
David L. Parnas/B.S., M.S., Ph.D. (Carnegie), Dr.h.c. (ETH Zürich), Dr.h.c. (Louvain), F.R.S.C., F.A.C.M., P.Eng.
Sanzheng Qiao/B.S., M.S. (Shanghai Teacher's College) M.S., Ph.D. (Cornell)
Paul A. Taylor/B.Sc., Ph.D. (Univ. of Wales), P.Eng.
Tamás Terlaky/M.Sc., Ph.D. (Loránd Eötvös)
Jeffery I. Zucker/B.Sc. (Witwatersrand), Ph.D. (Stanford)

Associate Professors
Ivan Bruha/Dipl. Ing. (CVUT, Prague), RNDr (Charles, Prague), Ph.D. (CVUT, Prague)
Antoine Dezah/M.Sc. (Ecole Nationale des Ponts et Chaussées), Ph.D. (Tokyo Institute of Technology)
Wolfram Kahl/M.Sc. (Oxford), Dr.rer.nat. (University of the German Armed Forces, Munich)
W.F. Skipper Poehman/B.S. (Niagara), B.Sc. (Brock), M.Sc., Ph.D. (McMaster), P.Eng.
Martin von Mohrenshchild/Dipl.Math., Dr.Sc.Math. (ETH-Zürich)
Emil Sekerinski/Dipl.Inf., Dr.rer.nat. (Karlsruhe)
Alan Wassung/B.Sc., B.Sc., Ph.D. (Witwatersrand)

Assistant Professors
Christopher Anand/B.Math. (Waterloo), M.Sc., Ph.D. (McGill)
Jacques Carette/B. Math. (Waterloo), M.Sc. (Montreal), Ph.D. (Paris-Sud)
George Karakostas/Dipl. Eng. (Patras), M.S.A., Ph.D. (Princeton)
Ridha Khedri/B.Eng. (Tunis), M.Sc., Ph.D. (Laval)
Stavros G. Koliospolous/M.Sc., Ph.D. (Dartmouth College)
Mark S. Lawford/B.Sc. (Queen's), M.A.Sc., Ph.D. (Toronto), P.Eng.
Ryan Leduc/B.Eng (Victoria), M.A.Sc., Ph.D. (Toronto)
Ned Nedialkov/B.Sc. (St. John's), M.Sc., Ph.D. (Toronto)
Jiming Peng/B.Sc. (Xiang Tan University), M.Sc. (Chinese Academy of Sciences), Ph.D. (Delft University of Technology)
Kamran Sartipi/B.Sc., M.Sc. (Tehran), Ph.D. (Waterloo)
Spencer Smith/B.Eng., M.Eng., Ph.D. (McMaster)
Michael Sojoty/B.Sc., M.Sc., Ph.D. (Toronto)

COMPUTER SCIENCE...

Department Notes:
1. While the Faculty of Engineering is responsible for all Computer Science courses, Computer Science Programs are administered by the Faculty of Science.
2. Students wishing to pursue a Computer Science Minor are referred to the Department of Computing and Software in the Faculty of Science section of this Calendar.
3. MATH 1N03 and 1N10 or ARTS&SCI 1D06 or ARTS&SCI 1D07 can serve as an equivalent prerequisite for upper level Computer Science courses in which MATH 1A03, 1AA3 or 1C03 is a prerequisite.
### Courses

If no prerequisite is listed, the course is open.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP SCI 1B3</td>
<td>INTRODUCTION TO COMPUTING AND COMPUTER USE FOR BUSINESS</td>
<td>Organization of microcomputers and introduction to computer communications; introduction to operating systems; basics of word processing/desktop publishing and information exchange using the Internet; problem solving using electronic spreadsheets; elementary database concepts. Three lectures, one tutorial; one term.</td>
</tr>
<tr>
<td>COMP SCI 1FC3</td>
<td>MATHEMATICAL FOUNDATIONS FOR COMPUTER SCIENCE</td>
<td>Basic logic and proof techniques; functions, relations, and sets; basics of counting; trees and graphs. Use of computational tools to illustrate these concepts. Three lectures, one tutorial (two hours); one term.</td>
</tr>
<tr>
<td>COMP SCI 1MA3</td>
<td>COMPUTER SCIENCE I</td>
<td>A first course in computer science, focusing on the practice of problem solving, in the context of interesting software applications. Problem formulation, problem decomposition, procedural formulation of problem solution. Three lectures, one tutorial, one lab; one term.</td>
</tr>
<tr>
<td>COMP SCI 1SA3</td>
<td>COMPUTER SCIENCE II</td>
<td>Abstract and concrete data models, algorithms; abstract and concrete models of computation; service layers (compilers, operating systems, communication); limitations of computing; plus student selected topics. Three lectures, one tutorial, one lab; one term.</td>
</tr>
<tr>
<td>COMP SCI 1TA3</td>
<td>ELEMENTARY COMPUTING AND COMPUTER USE</td>
<td>Organization of microcomputers (hardware and operating systems) and overview of computer communications; introduction to information exchange using word processing/presentation software, the Internet and Web pages; problem solving using electronic spreadsheets and database applications. Three lectures, one tutorial; one term.</td>
</tr>
<tr>
<td>COMP SCI 2MD3</td>
<td>ADVANCED DATA STRUCTURES AND ALGORITHMS</td>
<td>Commonly used abstract data types such as lists, stacks, queues, sets, and trees and their applications and efficient implementations; fast sorting, matching, and graph algorithms and complexity; emphasis on theoretical analysis. Three lectures, one term.</td>
</tr>
<tr>
<td>COMP SCI 2ME3</td>
<td>SOFTWARE DESIGN I</td>
<td>Verification of sequential programs, abstraction in program development, modularization, implementation according to specifications, testing, software development and maintenance, requirements analysis, software documentation. Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 2MF3</td>
<td>INTRODUCTION TO COMPUTER ARCHITECTURE</td>
<td>A first course in computing-systems architecture: the functional organization of the CPU; memory and input/output subsystems; an introduction to programming in assembler language and debugging; elements of digital circuits Two lectures, one lab (two hours); one term.</td>
</tr>
<tr>
<td>COMP SCI 2SG3</td>
<td>ADVANCED IMPERATIVE PROGRAMMING</td>
<td>Data types, arithmetic/logical expressions, iterative constructs, pointers and pointer arithmetic. Modularization. Linked data structures and their applications. Program development and testing, programming style. Three lectures, one tutorial; one term.</td>
</tr>
<tr>
<td>COMP SCI 3EA3</td>
<td>SOFTWARE DESIGN II</td>
<td>Object-oriented modelling, design and implementation, fault tolerance and reliability, embedded software, configuration management. Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 3FA3</td>
<td>SYMBOLIC PROCESSING AND LOGIC PROGRAMMING</td>
<td>Methodologies, data and control structures for symbolic processing; symbolic expressions, lists, list processing functions, backtracking, matching procedures; resolution principle; elements of logic programming (Prolog). Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 3MD3</td>
<td>COMPUTER SYSTEM ARCHITECTURE</td>
<td>Major components of a computer and their design issues; instruction set, data path, control, memory, and I/O. Principles of computer arithmetic, pipelining, memory hierarchy, and virtual memory. Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 3MH3</td>
<td>PRINCIPLES OF OPERATING SYSTEMS</td>
<td>Concepts of operating systems; process coordination, memory management, file systems; introduction to distributed systems and computer networks. Involves group projects. Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 3SH3</td>
<td>DESIGN OF VISUAL PROGRAMMING ENVIRONMENTS</td>
<td>A comparative study of programming languages, emphasizing functional languages. Introduction to formal methods of language definition. Three lectures; one term.</td>
</tr>
<tr>
<td>COMP SCI 3SE3</td>
<td>ORGANIZATION OF PROGRAMMING LANGUAGES</td>
<td>A study of visual programming environments: events, procedures, objects and attributes; paradigms: event-driven, object-oriented, www, markup languages; applications: graphical user interfaces, human factors, cognitive engineering and visualization techniques. Three lectures; one term.</td>
</tr>
</tbody>
</table>
COMP SCI 3SH3 OPERATING SYSTEM CONCEPTS
Design principles of major components of an operating system: Management of processes, threads, memory, files, and I/O systems; network communication protocols, security, and command interpreter systems. Three lectures and small projects; one term
Prerequisite: COMP ENG 2D14 or ELEC ENG 2D14; and one of COMP ENG 3SL4, SFWR ENG 3K04, 3L04, 3M04
Antirequisite: COMP SCI 3F4N4, 3P03, COMP SCI 3MH3, 4SH3

COMP SCI 3TA3 AUTOMATA, COMPUTATION AND LANGUAGES
Automata, transition systems and machines. Grammars and rewriting systems. Languages, their classification and properties. The bound of computability. Computational complexity. Elements of recursion theory. Three lectures; one term
Prerequisite: COMP SCI 2MD3, 2MJ3; or permission of the instructor
Antirequisite: SFWR ENG 2D03

COMP SCI 4CC3 ADVANCED OPERATING SYSTEMS
Modern operating systems: large scale distributed to small real-time operating systems; microcomputer/mainframe interconnections; message passing techniques; networks; distributed deadlocks and shared memory models; extended file systems and shared resources. Two lectures; one lab; one term
Prerequisite: COMP SCI 3MH3 or SFWR ENG 3BB4
Offered in alternate years.

COMP SCI 4CD3 DISTRIBUTED SYSTEM ARCHITECTURES
Distributed systems: real-time, agent-oriented, heterogeneous, multi-computer, multi-processor, coupling schemes: loose, tight, networking, ATM, frame relay, clustering, software protocols; communication strategies, client/server approaches. Two lectures; one lab; one term
Prerequisite: COMP SCI 3MG3 or SFWR ENG 3G03; or credit or registration in either PHYSICS 4D06 or both PHYSICS 4DA3 and 4DB3

COMP SCI 4EB3 DATABASE MANAGEMENT SYSTEM DESIGN
Concepts and structures for the design of database management systems. Topics include: data models, data normalization, data-description languages, query facilities, file organization and security. Three lectures; one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04; or permission of the instructor

COMP SCI 4F03 ARTIFICIAL INTELLIGENCE AND KNOWLEDGE-BASED SYSTEMS
Artificial intelligence: pattern recognition, machine learning, neural nets, image processing, scene analysis, speech processing; problem solving, production systems, backtracking, graph search techniques, planners; PROLOG. Architectures and applications of expert systems. Three lectures; one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4G03 COMPILATION TECHNOLOGY
Principles of compiling and interpreting; Computer number systems, floating-point arithmetic, and computational errors. Computer methods and software for scientific and engineering applications: Solving linear and nonlinear systems and small projects: one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4M03 INTRODUCTION TO SCIENTIFIC COMPUTING
Principles of floating point computing; Computer number systems, floating-point arithmetic, and computational errors. Computer methods and software for scientific and engineering applications: Solving linear and nonlinear systems and small projects: one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4T03 COMPILER CONSTRUCTION
Lexical analysis; syntax analysis; type checking; syntax-directed translation; implications of computer architecture; mapping of programming language concepts; intermediate code generation; code generation and optimization. Three lectures; one term
Prerequisite: COMP SCI 3TA3 and credit or registration in COMP SCI 3MG3; or SFWR ENG 3F03 and credit or registration in SFWR ENG 4103

COMP SCI 4TC3 RECURSIVE FUNCTION THEORY AND COMPUTABILITY
Recursive and primitive recursive functions, computability, decidability and undecidability, Church-Turing Thesis. Three lectures; one term
Prerequisite: COMP SCI 3M03 or permission of the instructor
Antirequisite: MATH 4S03

COMP SCI 4TD3 DESIGN AND ANALYSIS OF ALGORITHMS
Techniques for the design and analysis of algorithms, especially divide-and-conquer, greedy, and dynamic programming algorithms. An introduction to computational complexity. Analysis of particular algorithms of practical or theoretical importance in computer science. Three lectures; one term
Prerequisite: COMP SCI 2MD3, 2MJ3; and MATH 2C04 or 2P03

COMP SCI 4TE3 CONTINUOUS OPTIMIZATION ALGORITHMS
Fundamental algorithms and duality concepts of continuous optimization. Optimization, applicability, information requirements and computational cost of the algorithms is discussed. Practical problems will illustrate the power of continuous optimization techniques. Three lectures; one term
Prerequisite: MATH 2R03; and one of MATH 2A03, 2M06 or 2P04
Cross-list: SFWR ENG 4TE3

COMP SCI 4TF3 DATA MINING: CONCEPTS AND ALGORITHMS
Introduction to Data Mining. Fundamental concepts and main tasks: classification, association, prediction and clustering. Algorithms based on decision trees, Bayes’ model, instance-based learning and numeric classifiers. Preprocessing and postprocessing. Three lectures; one term
Prerequisite: SFWR ENG 3H03; or COMP SCI 4EB3 and one of COMMERCE 2Q03, ECON 2B03, STATS 1CC3; or permission of the instructor.

COMP SCI 4TG3 COMPUTATIONAL GEOMETRY
Discrete geometry from an algorithmic point of view. Searching, subdivision, proximity and intersection. Applications to problems in object modeling, computer graphics, and computer vision.

COMP SCI 4TH3 DATABASE MANAGEMENT SYSTEM DESIGN
Concepts and structures for the design of database management systems. Topics include: data models, data normalization, data-description languages, query facilities, file organization and security.

COMP SCI 4TI3 ARTIFICIAL INTELLIGENCE AND KNOWLEDGE-BASED SYSTEMS
Artificial intelligence: pattern recognition, machine learning, neural nets, image processing, scene analysis, speech processing; problem solving, production systems, backtracking, graph search techniques, planners; PROLOG. Architectures and applications of expert systems.

COMP SCI 4TJ3 COMPILERS AND LANGUAGES
Principles of compilation and interpretation; Computer number systems, floating-point arithmetic, and computational errors. Computer methods and software for scientific and engineering applications: Solving linear and nonlinear systems and small projects: one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4TK3 INTRODUCTION TO SCIENTIFIC COMPUTING
Principles of floating point computing; Computer number systems, floating-point arithmetic, and computational errors. Computer methods and software for scientific and engineering applications: Solving linear and nonlinear systems and small projects: one term
Prerequisite: One of COMP SCI 2MD3, SFWR ENG 2C03, 2C04

COMP SCI 4TL3 COMPILER CONSTRUCTION
Lexical analysis; syntax analysis; type checking; syntax-directed translation; implications of computer architecture; mapping of programming language concepts; intermediate code generation; code generation and optimization.

Department Note:
All software engineering courses are open to students registered in a software engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for other students. Since the Software Engineering program is a CEAB accredited program, Software Engineering students are not allowed to substitute any of the required courses with Engineering Science or Engineering Design content by any courses offered by a non-CEAB accredited Engineering program.

Courses
SFWR ENG 2AA4 SOFTWARE DESIGN I - SOFTWARE COMPONENT DESIGN
Development of small software units. Precise specifications expressed using logic and discrete mathematics. Design methods and design patterns. Implementation and testing.

Three lectures, one tutorial (two hours); second term
Prerequisite: SFWR ENG 2E03, 2F03, 2S03
Antirequisite: SFWR ENG 2A04
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFWR ENG 2C03</td>
<td>DATA STRUCTURES AND ALGORITHMS</td>
<td>Data structures: queues, stacks, lists, hasps, trees, balanced trees, sorting, searching, graph algorithms; general techniques of design and analysis of algorithms. Three lectures, one tutorial (one hour); second term. Prerequisite: SFWR ENG 2E03, 2S03. Antirequisite: COMP ENG 2S14, COMP SCI 2M03, ELEC ENG 2S14, SFWR ENG 2C04.</td>
</tr>
<tr>
<td>SFWR ENG 2DA3</td>
<td>DIGITAL SYSTEM PRINCIPLES AND LOGIC DESIGN FOR SOFTWARE ENGINEERING</td>
<td>Systematic design procedures; combinatorial circuit design, design of sequential machines; redundancy, binary number representations and arithmetic, organization of large logic circuits. Introduction to logic simulators. Software/hardware co-design. Three lectures, one lab (three hours every other week); second term. Prerequisite: SFWR ENG 2E03, 2F03. Antirequisite: COMP ENG 2D14, COMP SCI 2M03, ELEC ENG 2D14, SFWR ENG 2D03.</td>
</tr>
<tr>
<td>SFWR ENG 2E03</td>
<td>DISCRETE MATHEMATICS FOR SOFTWARE ENGINEERING</td>
<td>Sets, functions, relations, trees, graphs, algebras. Combinatorial methods, permutations, combinations, partitions, representation of discrete functions, introduction to finite state machines and formal languages. Interacting finite state machines. Three lectures, one tutorial (one hour); first term. Prerequisite: MATH 1H03. Antirequisite: COMP SCI 2M03.</td>
</tr>
<tr>
<td>SFWR ENG 2F03</td>
<td>LOGIC FOR SOFTWARE ENGINEERING</td>
<td>Foundations of propositional, predicate, higher-order, multiple-value logic; normal forms; deduction systems, models; practical examples of usage of logic in software engineering; introduction to automated theorem-proving systems. Three lectures, one tutorial (one hour); first term. Prerequisite: MATH 1H03. Antirequisite: SFWR ENG 2F04.</td>
</tr>
<tr>
<td>SFWR ENG 2M03</td>
<td>INTRODUCTION TO MATHEMATICAL MODELLING OF SYSTEMS</td>
<td>Linear systems, signals, filters; sampling theories; state and frequency domain; simple input-output systems; the relation of discrete and continuous space; introduction to mathematical models of systems. Three lectures, one tutorial (one hour); second term. Prerequisite: MATH 1H03, 1N03; and registration in MATH 2M06 or credit in MATH 2P04.</td>
</tr>
<tr>
<td>SFWR ENG 2S03</td>
<td>PRINCIPLES OF PROGRAMMING</td>
<td>Fundamental concepts of imperative programming languages. (Assertion, Assignment, Control flow, iteration, recursion, exceptions.) Data representations; Basic concepts of operating systems; Compiling and analyzing small programs. Three lectures, one tutorial (one hour); first term. Prerequisite: ENGINEER 1D04. Antirequisite: COMP ENG 2S14.</td>
</tr>
<tr>
<td>SFWR ENG 3A04</td>
<td>SOFTWARE DESIGN II - LARGE SYSTEM DESIGN</td>
<td>Software design process, design and architecture of large systems, design for change and expansion; Documentation, inspection, incremental design: Classes and objects, structured and object-oriented analysis and design; Revision and version control; Project organization. Three lectures, one tutorial (two hours); first term. Prerequisite: SFWR ENG 2A04, and SFWR ENG 2C03 or 2C04. Corequisite: SFWR ENG 3R03.</td>
</tr>
<tr>
<td>SFWR ENG 3B04</td>
<td>SOFTWARE DESIGN III - CONCURRENT SYSTEM DESIGN</td>
<td>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); second term. Prerequisite: SFWR ENG 3A04, 3E03.</td>
</tr>
<tr>
<td>SFWR ENG 3D03</td>
<td>DYNAMIC MODELS AND CONTROL OF PHYSICAL SYSTEMS</td>
<td>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. Data analysis, empirical modeling. Three lectures, one tutorial (one hour); second term. Prerequisite: SFWR ENG 3X03. Antirequisite: ENGINEER 3L03.</td>
</tr>
<tr>
<td>SFWR ENG 3E03</td>
<td>DESIGN AND SELECTION OF PROGRAMMING LANGUAGES</td>
<td>Fundamental structure of programming languages, language design and implementation, promote student awareness of the range of available languages and their uses. Acquire programming skills in selected programming languages. Three lectures, one tutorial (one hour); first term. Prerequisite: SFWR ENG 2A04, 2C03.</td>
</tr>
<tr>
<td>SFWR ENG 3F03</td>
<td>MACHINE-LEVEL COMPUTER PROGRAMMING</td>
<td>Use of assembler language, I/O and storage devices. Highly optimized code. Low level representation of control and data structures. Device drivers. Three lectures, one tutorial (one hour); second term. Prerequisite: SFWR ENG 2D03, 3A04, 3G03. Antirequisite: COMP ENG 3D04.</td>
</tr>
<tr>
<td>SFWR ENG 3G03</td>
<td>COMPUTER ARCHITECTURE AND GRAPHICS PROCESSORS</td>
<td>Measures of performance, instruction set architecture, computer arithmetic, datapath and control, pipelining, the memory hierarchy, I/O systems, basics of multiprocessor systems, multimedia extensions and graphic processors. Three lectures, one tutorial (two hours every other week); first term. Prerequisite: SFWR ENG 2D03 or 2D03. Antirequisite: COMP ENG 4D04, COMP SCI 3M03, SFWR ENG 3G03.</td>
</tr>
<tr>
<td>SFWR ENG 3H03</td>
<td>4D MODELLING FOR VIRTUAL REALITY</td>
<td>Design of time-evolution of four/three dimensional spaces. Dynamical systems (discrete and continuous). Physical and artificial systems. Design patterns of 4D modelling. Three lectures, one tutorial (two hours every other week); first term. Prerequisite: MMEDIA 2B03 and registration in Software Engineering and Game Design. First offered in 2006-2007.</td>
</tr>
<tr>
<td>SFWR ENG 3I03</td>
<td>REAL-TIME ANIMATION FOR COMPUTER GAMES</td>
<td>Introduction to graphical languages. Reactive systems. Rendering of meshes. Rigid and soft skeletons, hard and soft skinning. Real-time forward and inverse kinematics. Three lectures, one tutorial (two hours every other week); second term. Prerequisite: MMEDIA 2H03, SFWR ENG 3G03 and registration in Software Engineering and Game Design. First offered in 2006-2007.</td>
</tr>
<tr>
<td>SFWR ENG 3J03</td>
<td>DATA BASES</td>
<td>Physical organization of data, file structures, need for database management systems, entity-relationship design, the relational data model, concurrent access, mechanisms for data recovery. Assorted applications. Three lectures, one tutorial (one hour); second term. Prerequisite: SFWR ENG 2E03. Antirequisite: COMP SCI 4E03, SFWR ENG 4M03.</td>
</tr>
<tr>
<td>SFWR ENG 3K03</td>
<td>COMMUNICATION SKILLS</td>
<td>Writing technical (reference) documentation and user (introductory) software documentation; document structure, scientific writing. The language of legal contracts. Oral presentation methodologies. Three hours (lectures, discussion, group project, seminars); first term. Prerequisite: ENGINEER 1C03 or 1C04.</td>
</tr>
</tbody>
</table>
SFWR ENG 3R03 SOFTWARE REQUIREMENTS, INSPECTION AND TESTING
Software requirements gathering. Verification, validation, and documentation techniques. Use of formal specification languages. Software testing techniques. Inspection.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3A04
Antirequisite: COMP SCI 4E03, SFWR ENG 3R03, 4E03
SFWR ENG 3R03 SOFTWARE REQUIREMENTS AND SECURITY CONSIDERATIONS
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3A04
Antirequisite: COMP SCI 4E03, SFWR ENG 3R03, 4E03
SFWR ENG 3S03 SOFTWARE TESTING AND MANAGEMENT
Measurement, unit testing, slicing and debugging, inspection, integration testing, regression testing, testing strategies, software metrics, software project management.
Three lectures, one tutorial (two hours every other week); second term
Prerequisite: SFWR ENG 3A04
SFWR ENG 3X03 SCIENTIFIC COMPUTATION AND MATHEMATICAL SIMULATION
Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 2M03; and either MATH 2M06 or both MATH 2P04 and 2Q04
Antirequisite: COMP SCI 3S04, COMP SCI 4M03
SFWR ENG 4AA3 REAL-TIME SYSTEMS AND CONTROL APPLICATIONS
Three lectures, one lab (three hours every other week); first term
Prerequisite: SFWR ENG 3B04, 3D03
Antirequisite: SFWR ENG 4A03, 4G03
SFWR ENG 4G03 COMPUTER NETWORKS AND COMPUTER SECURITY
Physical networks, internets, the TCP/IP protocol suite, common network services. Principles of information security, computer and network security threats, defense mechanisms, encryption.
Three lectures; one lab (three hours every other week); second term
Prerequisite: SFWR ENG 4E03; and one of SFWR ENG 4A03, 4AA3 or 4GA3
SFWR ENG 4O03 DESIGN OF HUMAN COMPUTER INTERFACES
Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 3B04 or 3B94
SFWR ENG 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, loss, critical sections, concurrency. Introduction to analytical system reliability.
Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 3B04 or 3B94; and STATS 3N03 or 3Y03
SFWR ENG 4F03 DESIGN OF PARALLEL/DISTRIBUTED COMPUTER SYSTEMS AND COMPUTATIONS
Design of multi-computer systems for computation-intensive applications and high-reliability applications, array processing systems. Application of multi-computer systems to finite element methods, simulators, optimization problems.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3G03; and SFWR ENG 3B04 or 3B94
SFWR ENG 4G03 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.
Three hours (lectures, discussion, group project, seminars); two terms
Prerequisite: Registration in final level of a Software Engineering program Antirequisite: SFWR ENG 4G03, 4GP6, 4H03
SFWR ENG 4G03 SENSORY PERCEPTION, COGNITION AND HUMAN/COMPUTER INTERFACES FOR GAME DESIGN
Three lectures, one tutorial (three hours every other week); second term
Prerequisite: SFWR ENG 4B04, 4C03, 4D03 and registration in Software Engineering and Game Design
Antirequisite: SFWR ENG 4A03, 4AA3
SFWR ENG 4G06 SOFTWARE DESIGN IV - CAPSTONE COMPUTER GAME DESIGN PROJECT
Student teams prepare the requirements, design, documentation and implementation of a computer game taking economic, health, safety, legal and marketing factors into account. Students must demonstrate a working system and convincing test results. Software project management.
Three hours (lectures, discussion, group project, seminars); two terms
Prerequisite: Registration in Level IV of Software Engineering and Game Design
Antirequisite: SFWR ENG 4G03, 4G05, 4H03
SFWR ENG 4G03 THEORETICAL FOUNDATIONS OF COMPUTATION
Models of computers and their implications. Theoretical capabilities of computers. Compatibility, complexity. Language classifications and reductions to automata. Limitations of schemes such as neural networks or fuzzy logic.
Three lectures, one tutorial (one hour); first term
Prerequisite: SFWR ENG 2E03; and SFWR ENG 2C03 or 2C04; and SFWR ENG 2F03 or 2F04
Antirequisite: COMP SCI 3T03
SFWR ENG 4J03 COMMUNICATIONS SYSTEMS
Fundamental communications concepts: information, entropy, channel capacity, codes, data compression, adaptive channel equalizers, modulation/demodulation of signals, tracking, Kalman filtering, use of specialized signal processing hardware. Software in communication systems.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 4E03; and one of SFWR ENG 4A03, 4AA3 or 4GA3
Antirequisite: COMP SCI 3E03
THE HISTORY OF CRITICAL THEORY

in developments in critical theory from Plato to the end. Areas of investigation may include: art, aesthetics, sensation, ethics and knowledge.

term

stratification in a program in Comparative Literature, Cultural Theory, or permission of the English and Cultural Studies Department. (JT 3Q03, ENGL 3Q03)

CONTEMPORARY CRITICAL THEORY

renes selected issues in contemporary critical theory. Students may include: representation, power/knowledge, liveliness, and the body.

term

stratification in a program in Comparative Literature, Cultural Theory or permission of the English and Cultural Studies Department. (JT 3Q03, ENGL 3Q03)

POSTCOLONIAL CULTURES: THEORY AND PRACTICE

ory texts including literature, film, art and other forms that engage the implications of living in a postcolonial era will be given to issues of imperialism, globalization, ethnicity, nation, language and representation.

terms

stratification in a program in Comparative Literature, Cultural Theory, or permission of the English and Cultural Studies Department. (JT 3R06, ENGL 3R06, PEACE ST 3E06)

CONTEMPORARY NATIVE LITERATURE IN CANADA

ont works by Native writers who give voice to their cultures. Issues examined include appropriation of voice, men in Indigenous societies, and stereotyping. (i.e. and seminars). one term

nits of Level II Indigenous Studies or six units of Level III of the instructor

H 3W03, INDIG ST 3D03, PEACE ST 3W03

ministered by Indigenous Studies.

CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

ory works by Native writers in the United States and American society and Post-Modern and Post-Colonial. (i.e. and seminars). one term

nits of Level II Indigenous Studies or six units of Level III of the instructor

H 3X03, INDIG ST 3E03, PEACE ST 3X03

ministered by Indigenous Studies.

CHILDREN'S LITERATURE

on of literary works from approximately 1700 to the present for children.

term

stratification in Level II or above

H 3Y03

nts with credit in ENGLISH 3I03, TOPICS IN PROSE, CHILDREN'S LITERATURE.

CONTEMPORARY YOUTH CULTURE

contemporary youth culture through dominant repertoires. Themes include: violence, sex/sexuality, age, identity, music and dance, countercultures, subcultures, pr

term

stratification in Level II or above

H 3Y3Y3

HONOURS ESSAY

members of the Cultural Studies and Critical Theory English and Cultural Studies Department, students will on an approved topic. This course is normally substitu-
ted in Level IV seminar work in the second term. Students interested in taking CSCT 4X03 should contact the faculty of the Course Committee early in first term.

stratification in Level IV of a Combined Honours program in Critical Theory. Departmental permission required.

Note:

Level IV Seminars are open only to Honours students registered in Level IV of a Cultural Studies and Critical Theory or English program. Enrolment will be limited to 15 students per seminar. The Department of English and Cultural Studies is able to offer only a selection of the seminars listed below every year. A list of seminars to be offered will be available prior to registration, which takes place through the Department in March.

CSCT 4AA3 AFRICAN-AMERICAN WOMEN WRITERS

A study of a selection of African-American women writers, including Hurston, Walker, Morrison and Naylor, with a consideration of gender and race in literary theory. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AA3

Enrolment is limited. Departmental permission required.

CSCT 4AR3 RHETORIC, CULTURE, CATASTROPHE

AIDS and its representations

An examination of selected novels, films, autobiographical writings and theoretical texts about AIDS, with an emphasis on the cultural discourses surrounding the AIDS crisis. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AR3

Enrolment is limited. Departmental permission required.

CSCT 4AS3 THE AESTHETICS OF SEX IN THE 1800s

The course will focus on the ideologically related struggles of 1890s men and women to express radical forms of sexuality in literature and on the aesthetics and politics that enforced divisions along gender lines. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AS3

Enrolment is limited. Departmental permission required.

CSCT 4AW3 ASIAN AMERICAN WRITING

As an examination of selected prose texts by American writers of Asian origin. Issues of immigration, multiculturalism, race, and gender will be given close attention. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4AW3

Enrolment is limited. Departmental permission required.

CSCT 4BB3 BLACK POPULAR CULTURE

This course focuses on the production and reception of black popular culture (particularly the entertainment industry and professional sports) in ways that problematize the racialization of cultural forms of expression. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4BB3

Enrolment is limited. Departmental permission required.

CSCT 4CB3 READING THE BESTSELLER: CONTEMPORARY BRITISH FICTION

An examination of possible critical vocabularies for the analysis of recent British fiction in light of how bestseller lists, prizes, publicity and media adaptability now shape the writing, marketing and reading of fiction. Seminar (two hours); one term

Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4CB3

Enrolment is limited. Departmental permission required.

CSCT 4CF3 CONTEMPORARY FICTION

A 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: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory

Cross-list: ENGLISH 4CF3

Enrolment is limited. Departmental permission required.
CULTURAL STUDIES AND CRITICAL THEORY

Courses in Cultural Studies and Critical Theory are administered within the Department of English and Cultural Studies of the Faculty of Humanities. For information and counselling, please contact the Department of English and Cultural Studies in Chooster New Hall, Room 321.

Courses

If no prerequisite is listed, the course is open.

CSCT 1B03 CULTURAL STUDIES AND VISUAL CULTURE
An introduction to cultural studies focusing on the critical and conceptual tools for the analysis of various forms of visual culture (e.g., photography, film, television, advertising, new media technologies). Considerable emphasis is placed on the development of effective writing skills.

Three lectures, one tutorial; one term
Cross-list: ENGLISH 1B03

CSCT 1BB3 CULTURAL STUDIES AND CONSUMER CULTURE
An overview of the development of cultural studies as an interdisciplinary field of academic inquiry through an exploration of the history of mass and consumer culture. Considerable emphasis will be placed on the development of critical skills in reading and writing.

Two lectures, one tutorial; one term
Cross-list: ENGLISH 1BB3

CSCT 2J03 CONTEMPORARY POPULAR CULTURE
A study of one or more selected forms of popular culture, drawing on models of analysis from the field of cultural studies. Areas of investigation may include: television, magazines, advertising, computer culture, film, popular fiction, the culture of everyday life.

Three hours; two terms
Prerequisite: Registration in Level II or above
Cross-list: CMST 2J03, ENGLISH 2J03

CSCT 2K06 STUDIES IN WOMEN WRITERS
A 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: Registration in a program in Cultural Studies and Critical Theory, Women's Studies, or permission of the English and Cultural Studies Departmental Counsellor
Cross-list: ENGLISH 2K06, WOMEN ST 2K06

CSCT 2M03 CONCEPTS OF CULTURE
An analysis of the development 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: Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, or permission of the English and Cultural Studies Departmental Counsellor
Cross-list: CMST 2M03, COMP LIT 2E03, ENGLISH 2M03

CSCT 2M05 MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g., literature, art, photography, film, music) produced by avant-garde and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixties, situationism, and punk.

Three hours; one term
Cultural Studies and Critical Theory

CSCT 4E13  ENVIRONMENTAL LITERATURE
A study of the ways in which literary texts mediate between culture and nature using traditional, scientific, environmentalist, eco-feminist, native American, and deep ecologist approaches.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4E13
Enrolment is limited. Departmental permission required.

CSCT 4F3  THE FAIRY TALE
A study of the fairy tale from the structuralist, psychoanalytic, and sociological points of view, concentrating on the tales of the Brothers Grimm in translation and considering the importance of fairy tales in acculturation and their symbolic significance.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4F3
Enrolment is limited. Departmental permission required.

CSCT 4FT3  DISLOCATION AND BELONGING: CANADIAN WRITINGS OF IMMIGRATION AND DIASPORA
This course examines how gender expectations shaped women's contributions to popular and elite culture in early modern England.
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4FT3
Enrolment is limited. Departmental permission required.

CSCT 4HC3  THE HISTORY OF CULTURAL STUDIES
A study of the history of cultural studies from its origins in the Frankfurt School through the Birmingham Centre for Contemporary Cultural Studies, to its dispersal into distinct modes of academic practice.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4HC3
Enrolment is limited. Departmental permission required.

CSCT 4J03  CROSSING BORDERS: GLOBAL FEMINISMS
This course examines how women's lives are being transformed in a changing global society and the implications of women's changing places in society for feminist theory and practice.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4J03, WOMEN ST 4J03
Enrolment is limited. Departmental permission required.

CSCT 4ON3  MICHAEL ONDAATJE
This course explores various approaches to Michael Ondaatje's poetry and prose: gender, postcolonialism, and interdisciplinarity. Ondaatje's engagement with film, photography, painting and music are topics of particular interest.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4ON3
Enrolment is limited. Departmental permission required.

CSCT 4PC3  PSYCHE AND CULTURE
This course explores the psychoanalytic understanding of culture with reference to three main areas: ideology, gender polarity, and imaginative culture (the arts and literature).
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4PC3
Antirequisite: COMPLIT 4C03, 4F03
Enrolment is limited. Departmental permission required.

Cultural Studies and Critical Theory

CSCT 4PD3  THE PRIMA DONNA IN VICTORIAN FICTION
This course scrutinizes the ideological and practical work of the Victorian prima donna in society and on stage by considering her representation in a variety of media.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4PD3
Enrolment is limited. Departmental permission required.

CSCT 4RR3  THE ROMANCE OF ROMANCE
Pairs of medieval and modern romances will be studied in the light of critical theories of romance, gender and reading.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4RR3
Enrolment is limited. Departmental permission required.

CSCT 4RT3  TELEVISION AND CONTEMPORARY CULTURE
This seminar studies the cultural artefact called television, providing a comprehensive overview of various approaches to its study and the requisite theoretical tools to read this important element of contemporary culture.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4RT3
Enrolment is limited. Departmental permission required.

CSCT 4S3  SHAKESPEARE AND SHAKESPEARE'S SISTERS
By examining works from different genres, this course explores the ways gender expectations shaped women's and men's contributions to popular and elite culture in early modern England.
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4S3
Enrolment is limited. Departmental permission required.

CSCT 4TS3  TORTURED SUBJECTS OF ROMANTICISM
This course explores what the Romantics meant when they spoke of the "self," and how they began to rethink it as both a glowing ideal and a source of cultural antagonism and resentment.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4TS3
Enrolment is limited. Departmental permission required.

CSCT 4UT3  UTOPIAN LITERATURE
A study of the genre through English literature, from its roots in Plato's Republic, through the Middle Ages and the Renaissance to contemporary literature.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4UT3
Enrolment is limited. Departmental permission required.

CSCT 4W3  GLOBALIZATION AND POSTCOLONIAL FICTION
This course examines fictional representations of the ideology and processes of globalization, while also considering how globalization shapes the production and consumption of postcolonial culture.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4W3
Enrolment is limited. Departmental permission required.

DRAMA

Former Drama courses are now listed as Theatre & Film (THTR&FLM) courses. Students having credit in Drama courses may not take the corresponding course under the Theatre & Film designation. To determine the Theatre & Film designation of a former Drama course, please see below.
Faculty as of January 15, 2005

Chair
Michael R. Veall

Associate Chair
Jeremiah E. Hurley

Professors
Kenneth S. Chan/B.Sc. (Toronto), M.A., Ph.D. (Brown)
Martin Dooley/B.A. (Indiana), M.S., Ph.D. (Wisconsin-Madison)
Peter J. George/C.M.A., B.A., Ph.D. (Toronto), D.U. (Ottawa), D. Hon. C. (L'viv), D. Litt. (Nipissing)
Jeremiah E. Hurley/B.A. (John Carroll), M.A., Ph.D. (Wisconsin-Madison)
Atif A. Kubursi/B.A., (American University, Beiruit), M.S., Ph.D. (Purdue)
John E. Leach/B.A. (Alberta), M.A., Ph.D. (Queen's)
Wayne Lewchuk/Labour Studies M.A. (Toronto), Ph.D. (Cambridge)
Lonnie J. Magee/B.Math. (Waterloo), M.A., Ph.D. (Western Ontario)
Stuart Mestelman/B.A. (Pittsburgh), M.S., Ph.D. (Purdue)
R. Andrew Muller/B.A. (McGill), M.A., Ph.D. (Toronto)
Kenneth H. Norrie/B.A. (Saskatchewan), M.Phil., Ph.D. (Yale)
Jeffrey S. Racine/B.A., M.A. (McMaster), Ph.D. (Western Ontario)/Senator William McMaster Chair in Econometrics

William M. Scarth/B.A. (Queen's), M.A. (Essex), Ph.D. (Toronto)
Byron G. Spencer/B.A. (Queen's), Ph.D. (Rice)
Michael R. Veall/B.A. (McMaster), M.A. (Western Ontario), Ph.D. (M.I.T.)

ECONOMICS

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 handbook for information on current offerings.
2. Students with strong academic records, particularly those from other departments, may be permitted to enrol in courses for which they have not completed all prerequisites. In cases where prerequisites are incomplete, consultation with a departmental counsellor is required. If approval is granted, the counsellor will arrange for permission from the Department Chair.
3. Students with credit in ECON 2X03 who transfer into Economics from other programs may substitute ECON 2X03 for ECON 2G03.
4. Students who complete ECON 2103 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).
5. ECON 2C03 and 2L03 may not be used to satisfy Economics unit requirements by students in Economics programs or a minor in Economics, but may be used as an elective by students in Economics programs.

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. Three lectures; one term
Antirequisite: ECON 1A06

ECON 1BB3 INTRODUCTORY MACROECONOMICS
An introduction to the method and theory of macroeconomics, and their application to the analysis of contemporary economic problems. Three lectures; one term
Antirequisite: ECON 1A06

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: ECON 1A05; or ECON 1B03 and 1B33
Cross-list: LABR ST 3A03
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: ECON 1A06 or both ECON 1B03 and 1BB3; and MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U or (OAC Calculus); and one of STATS 1103 or Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics)
Antirequisite: COMMERCE 2Q3A, ECON 3C06, GEO 2S03, POL SCI 3N06, PSYCH 2G03, 2R03, 2R05, SOC SCI 2J03, 2J05, 2J06; or if COMMERCE 2Q3A is a program requirement.

ECON 2C03 | ASIAN-PACIFIC ECONOMIES
Economic conditions and factors influencing economic growth in selected countries in the Asian-Pacific region. Topics include government policies related to exchange rates and trade and development, as well as the Japanese style of management, the bonus system and job tenure.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3
Cross-list: JAPAN ST 2C03

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: Registration in Level II or above
Cross-list: HEALTH ST 2C03
Not open to students with credit or registration in CHEM ENG 2C03, 3C06, STAT 1CC3, 2D03, 2MA3, 2MB3, 2R06, 3N03, 3Y03.

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: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2F03 | THE POLITICAL ECONOMY OF DEVELOPMENT
Topics include trade and economic protection, financial development and investment, income distribution, and the role of globalization and international political competition.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2G03 | INTERMEDIATE MICROECONOMICS I
Elements of production and cost; price and output determination under competitive and non-competitive market structures; the role of taxes and subsidies.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and one of Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus), MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent
Antirequisite: ECON 2L06, 2X03

ECON 2GG3 | INTERMEDIATE MICROECONOMICS II
Theory of consumer choice and applications to intertemporal choice and labour supply decisions; theory of exchange, welfare economics and general equilibrium analysis.
Three lectures; one term
Prerequisite: ECON 2G03 or 2X03; and MATH 1M03 or equivalent
Antirequisite: ECON 2L06

ECON 2H03 | INTERMEDIATE INCOME AND EMPLOYMENT THEORY I
Determinants of national income, employment, the rate of interest and the price level; introduction to the open economy.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and one of Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus), MATH 1K03 or equivalent. Students without credit in MATH 1M03 or equivalent are strongly advised not to take it concurrently with ECON 2H03.
Antirequisite: ECON 2M06

ECON 2HH3 | INTERMEDIATE INCOME AND EMPLOYMENT THEORY II
Selected topics from macroeconomics policies, issues in unemployment and inflation in open and closed economies, components of aggregate demand and supply and economic growth.
Three lectures; one term
Prerequisite: ECON 2H03
Antirequisite: ECON 2M06

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: ECON 1A06; or ECON 1B03 and 1BB3
Not open to students with credit or registration in COMMERCE 2FA3.

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: ECON 1A06 or 1B03

ECON 2K03 | ECONOMIC HISTORY OF CANADA
A 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.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3

ECON 2L03 | PEACE, HUMAN SECURITY AND ECONOMIC DEVELOPMENT
The methods and concepts of economic analysis applied to economic development, human security, human rights and peace and conflict resolution.
Three lectures; one term
Prerequisite: Registration in Level II or above. (See Note 5 above.)

ECON 2N03 | PUBLIC POLICY TOWARD BUSINESS
The economic effects of federal competition policy and the regulation of business at all levels of government.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3
Antirequisite: 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.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03

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 unionism and the state.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3
Cross-list: LABR ST 3B03

ECON 2X03 | APPLIED BUSINESS ECONOMICS
The economic analysis of the strategy of managerial decision-making. The role of technology, costs, government intervention and market structure on output and pricing decisions.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and one of Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus), MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent
Antirequisite: ECON 2G03, 2L06
Not open to students registered in Economics programs.

ECON 3B03 | PUBLIC SECTOR ECONOMICS: EXPENDITURES
Theory and practice of public finance. Topics are selected from growth of government programs; the role of technology, costs, government intervention and market structure on output and pricing decisions.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06
Antirequisite: ECON 3C06

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: One of ECON 2G03, 2X03, 2L06
Antirequisite: ECON 3C06
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: One of ECON 2G03, 2X03, 2L06

ECON 3F03  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: ECON 2B03 and registration in Level III or Level IV of an Honours Economics program

ECON 3G03  INTRODUCTION TO ADVANCED ECONOMIC THEORY
An introduction to the application of mathematics in economic theory.
Three lectures; one term
Prerequisite: One of Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics), MATH 1B03 or STATS 1L03; and MATH 1M03 or equivalent; and an average of at least 7.0 in ECON 2G03 (or 2X03), 2G03 (or 2L06), 2H03, 2L1H3 or 2M06.
Not open to students with credit or registration in MATH 2A03 or 2Q04.

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: ECON 2H03 or 2M06

ECON 3H13  INTERNATIONAL TRADE
Real theory of International trade; interregional and international specialization; effect of commercial and industrial policies.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06

ECON 3I03  ECONOMIC HISTORY OF THE UNITED STATES
Economic analysis of the development of the U.S. economy. Topics include the colonial economy, slavery, transportation, income distribution, foreign trade, technical and institutional change and the Great Depression.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06. ECON 2H03 or 2M06 is recommended

ECON 3K03  TOPICS IN MONETARY ECONOMICS
Analysis of monetary theory and policy. Topics include money demand and supply, money and inflation, rational expectations, monetary policy and asset market analysis.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06

ECON 3L13  HISTORY OF ECONOMIC THEORY
Economic thought from earliest times, with emphasis on the major schools from Adam Smith to Alfred Marshall, selected modern trends and controversies.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06; and registration in Level III or above of an Honours program

ECON 3M03  INTRODUCTION TO GAME THEORY
An introduction to the theory of games, including strategic, extensive and coalitionary games. Applications in economics, political science and evolutionary biology are discussed.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03; and MATH 1K03 (or equivalent)
Not open to students with credit in ECON 3Y03 if the topic was Introduction to Game Theory.

ECON 3O03  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: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06

ECON 3P03  INDUSTRIAL ORGANIZATION
A study of the structure, conduct and performance of industrial markets.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06
Antirequisite: ECON 3N06

ECON 3T03  TOPICS IN 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: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06
Antirequisite: ECON 3J06

ECON 3U03  ECONOMETRICS I
Elaboration of regression techniques developed in ECON 2B03: Problems of inference and interpretation in the analysis of economic data. Introduction to forecasting in economic.
Three lectures; one term
Prerequisite: One of ECON 2G03, 2X03, 2L06; and ECON 2H03 or 2M06; and ECON 2B03 or one of CHEM ENG 4C03, COMMERCE 2A3, GEO 2G03, GEOG 2L03, 2N03, POL SCI 2F06, 2N06, PSYCH 2G03, 2R03, 2FR03, SOC SCI 2L03, SOCIOL 2Y03, 3H06, STATS 1CC3, 2D03, 2R06 or another course that is approved by a departmental counsel as equivalent to ECON 2B03.
Not open to students with credit in ECON 3C06, STATS 2MA3, 2MB3, 3D03, or 3D33 or credit or registration in ECON 4G03.

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: MATH 1M03 and one of ECON 2G03, 2J03, 2X03, 2L06; or permission of the instructor

ECON 3Y03  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: One of ECON 2CC3, 2G03, 2L06, 2X03, HEALTHST 2C03.
ECON 2B03 or another course in statistics is recommended.

ECON 4A03  HONOURS SEMINAR IN ECONOMICS
Students prepare, present and discuss papers under supervision of a faculty member. Several sections will normally be offered. Topics for each section will be announced in January.
Three hours (seminars); one term
Prerequisite: ECON 2G03, 2H03, 5F03; and ECON 3U03 or 3C06; and registration in an Honours Economics program.

ECON 4B03  SELECTED TOPICS II
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: Permission of the Department

ECON 4C03  ECONOMETRICS II
Development of regression models appropriate to economics. Illustrations from applied micro- and macroeconomics.
Three lectures; one term
Prerequisite: ECON 2G03 or 2X03 (or 2L06); and ECON 2H03 (or 2M06); and at least C- in ECON 3O06 or 3U03 or an average of 4.0 in both STATS 2D03 and 2M03 (or 2M03)

ECON 4M06  DIRECTED RESEARCH I
A reading and/or research program supervised by a Department member. A major paper is required. Interested students should consult the Department concerning admission.
Prerequisite: Permission of the Department

ECON 4N03  DIRECTED RESEARCH II
As per ECON 4M06.
Prerequisite: 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: ECON 3G03 and one of MATH 1M03, 2A03 or 2G04; and an average of at least 7.0 in ECON 2G03 (or 2X03), 2G03 (or 2L06), 2F03, 2H1H3 or 2M06.
Antirequisite: ECON 3A03

ECON 4T33  ADVANCED ECONOMIC THEORY II
Analysis of dynamic macroeconomic models including models of endogenous growth and other selected topics.
Three lectures; one term
Prerequisite: ECON 3G03 and one of MATH 1M03, 2A03 or 2G04; and an average of at least 7.0 in ECON 2G03 (or 2X03), 2G03 (or 2L06), 2H1H3 or 2M06.
Antirequisite: ECON 3A3A3
ELECTRICAL AND COMPUTER ENGINEERING

WEB ADDRESS: http://www.ece.mcmaster.ca
Information Technology Building, Room A111
Ext. 24347

Faculty as of January 15, 2005

Chair
K. Max Wong

Associate Chair (Undergraduate Programs)
James P. Reilly

Associate Chair (Graduate Studies)
T. Krubaraaj

Distinguished University Professor
Simon Haykin/B.Sc., Ph.D., D.Sc. (Birmingham), F.R.S.C., F.I.E.E.

Professors
M. Jamal Deen/B.Sc. (Guelph), M.S., Ph.D. (Case Western Reserve), F.I.E.E., F.E.I.C.
Alex B. Gershman/M.Eng., Sc.D. (Nizhny Novgorod)
Wei-Ping Huang/B.Sc. (Shandong), M.S. (Science and Technology of China), Ph.D. (M.I.T.)
X. Wu/B.Sc. (Wuhan, China), Ph.D. (Calgary)

Adjunct Professor
Jim Lee/B.Sc. (Calgary), M.A.Sc. (Toronto), Ph.D. (Carleton)

Associate Professors
T. Davidson/B.Eng. (Western Australia), D. Phil. (Oxford)
Hubert deBruin/B.Eng., M.Eng., Ph.D. (McMaster), P.Eng.
X. Li/B.S. (Shandong), M.S. (Wuhan Research Inst. of Posts & Telecommunications), Ph.D. (Northern Jiaotong)
N. Nikolaou/Dipl. Ing. (Technical University of Varna), Ph.D. (University of Electrocommunications, Tokyo), R.Eng.

Adjunct Associate Professors
Eloi Bosse/B.Sc.A., M.Sc. (Laval), Ph.D. (Carleton, Ottawa, Laval)
Z. (Jack) Ding, B.Sc., M.A.Sc., Ph.D. (Northwestern Polytechnic University, P.R. China)

Assistant Professors
M. Bakir/B.Sc., M.Sc. (Cairo), Ph.D. (McMaster), P.Eng.
I. Bruce/B.Eng., M.Eng. (Melbourne)
C.H. Chen/B.A.Sc. (National Central Univ., Taiwan), M.A.Sc. (Simon Fraser), Ph.D. (McMaster)
S. Dumitrascu/B.Sc., Ph.D. (Bucharest)
Y. Haddara/B.Eng., M.Eng., Ph.D. (Stanford)
S. Hranilovic/B.A.Sc. (Waterloo), M.A.Sc., Ph.D. (Toronto)
J. Jones/B.Sc. (Western Ontario), Ph.D. (Stanford)
S. Kumar/B.S. (Mysore University, India), M.S., Ph.D. (Indian Institute of Science), Ph.D. (Osaka)
Nicolae Nicoloiu/B.Eng. (Technical University Timisoara), Ph.D. (Southampton)
S. Shirani/B.Sc. (Isfahan University of Technology), M.Sc. (Amirkabir University of Technology), Ph.D. (British Columbia), P.Eng.
S. Sirouspour/B.Sc., M.Sc. (Sharif University of Technology, Iran), Ph.D. (British Columbia)
D. Zhao/B.S. (Northern Jiaotong, Beijing), Ph.D. (Waterloo)

Adjunct Assistant Professors
Javier F. Do la Hidalga/W.B.Sc., M.Sc., Ph.D. (UNAM, Puebla, Mexico)
Qiu Lin/B.Eng., M.Eng. (Dalian Maritime), Ph.D. (McMaster)
Derek C. Schuurman/B.A.Sc., M.A.Sc., (Waterloo), Ph.D. (McMaster)

Associate Members
Gary Bonel(Mechanical Engineering) B.Sc.App.Sc. (Queen's), M.Eng., Ph.D. (McMaster)
Jan I. Huizinga(Medicine) B.Sc., M.Sc., Ph.D (Groningen, Netherlands)
Markad V. Kamath(Medicine) M.S., Ph.D. (Indian Inst. of Tech., Madras), Ph.D. (McMaster)
Allan D. Speno(Chemical Engineering) B.Math., M.A.Sc. (Waterloo), Ph.D. (British Columbia), P.Eng.
Tamás Terékay (Computing and Software) M.Sc., Ph.D. (Loránd Eötvös)

Lecturer

COMPUTER ENGINEERING...

Department Note:
Computer Engineering is a multi-disciplinary program that includes a combination of Computer Engineering, Electrical Engineering and Software Engineering courses. In their senior year, students have the opportunity to customize their program by selecting from a wide range of elective courses. All Electrical and Computer Engineering courses are open to students registered in an Electrical or Computer Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for students from other Engineering departments or faculties.

Courses

COMP ENG 2D14 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, lab every other week; first term
Prerequisite: Registration in a program in Computer Engineering. Antirequisite: COMP SCI 2MF3, ELEC ENG 2D14, SFWR ENG 2D03, 2D04, 2D3

COMP ENG 2S14 PRINCIPLES OF PROGRAMMING
Fundamental concepts of programming languages: (Assignment, Assignment, Control Flow, Iteration, Recursion, Exceptions); Data Representations; Basic concepts of operating systems; Composing and analyzing small programs. Three lectures, one tutorial, one lab every other week; first term
Prerequisite: Registration in a program in Electrical and Computer Engineering. Antirequisite: SFWR ENG 2S03

COMP ENG 2S14 DATA STRUCTURES, ALGORITHMS AND DISCRETE MATHEMATICS
Application of logic and finite state machines programming; data types; data abstraction and algorithms for sorting and searching; application of graph algorithms and combinatorics in programming; estimating program resource utilization. Three lectures, one tutorial (two hours); second term
Prerequisite: ENGINEER 1D04
Antirequisite: COMP SCI 2MD3, ELEC ENG 2S14, SFWR ENG 2C03, 2C04

COMP ENG 2D14 DIGITAL SYSTEMS DESIGN
CAD tools for digital circuits; hardware description language; programmable logic and applications; algorithmic static machine design; microprocessor-based system design including memory and peripheral interfaces; machine-level programming. Three lectures, one tutorial, one lab every other week; first term
Prerequisite: COMP ENG 2D14 or ELEC ENG 2D14
Antirequisite: PHY 3110, 3111, SFWR ENG 3F03

COMP ENG 3S1K COMPUTER-AIDED ENGINEERING
Numerical analysis; linear and nonlinear systems; least squares and QR factorization; optimization; numerical integration and differentiation; sensitivity analysis; finite differences and finite elements; engineering applications. Three lectures, one tutorial; second term
Prerequisite: ELEC ENG 2C14 or 2C15; and MATH 2P04, 2P04
Antirequisite: COMP ENG 3S1K, SFWR ENG 3X13
ELECTRICAL AND COMPUTER ENGINEERING

COMP ENG 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: ELEC ENG 37Q4

COMP ENG 4DL4 REAL-TIME AND DISTRIBUTED COMPUTING SYSTEMS
Computing systems design for real-time applications in control and communications; data acquisition, file management, memory management and multitasking in a real-time environment; distributed computing systems; synchronization, fault tolerance. Three lectures, one tutorial, one lab every other week; second term. Prerequisite: COMP ENG 4DQ4

COMP ENG 4DM4 COMPUTER ARCHITECTURE
Overview of CISC/RISC microprocessors and their evolution; performance metrics; instruction set design; microprogramming and hardened control; processor and memory acceleration techniques; memory hierarchies; multiprocessor structures and their performance. Three lectures, one tutorial, one lab every other week; first term. Prerequisite: COMP ENG 4DQ4. Antirequisite: SFWR ENG 3G03, 3G0A

COMP ENG 4DN4 ADVANCED INTERNET COMMUNICATIONS
Advanced internet protocols; routing, security, encryption; quality of service; ATM, RSVP, video and voice over IP; terminals, gateways and gatekeepers; wireless networks; WDM systems; optical crossconnects. Three lectures, one tutorial, one lab every other week; second term. Prerequisite: COMP ENG 4DK4

COMP ENG 4EK3 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, one lab every other week; first term. Prerequisite: ELEC ENG 3EJ4. Antirequisite: ELEC ENG 4EK3

COMP ENG 40J4 ENGINEERING DESIGN
The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students. Lectures, tutorials, one capstone project; first term or second term. Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program. Antirequisite: ELEC ENG 4BJ4, 40J4

COMP ENG 40J3 RESEARCH PROJECT
A research-oriented project under the direct supervision of a faculty member to foster initiative and independent creativity while working on an advanced topic. First term or second term. Prerequisite: Prior arrangement with an Electrical and Computer Engineering faculty member, inclusion on the Dean’s Honour List, registration in Level IV or V or permission of the instructor. Antirequisite: ELEC ENG 40J3

COMP ENG 4TL4 DIGITAL SIGNAL PROCESSING
Classical filter theory; DFT and FFT; FIR and IIR 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: ELEC ENG 37Q4. Antirequisite: ELEC ENG 4TL4

COMP ENG 4TN3 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. Two lectures, one tutorial, one lab every other week; second term. Prerequisite: ELEC ENG 37Q4. Antirequisite: ELEC ENG 4BF3

ELECTRICAL ENGINEERING ... Department Note:
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.

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.

Courses

ELEC ENG 2C15 INTRODUCTION TO ELECTRICAL ENGINEERING
Electric and magnetic fields; current, potential, dielectric; Kirchhoff’s laws; Ohm’s Law; circuit elements; first and second order circuits; complex arithmetic; phasors, impedance and admittance; operational amplifiers. Three lectures, one tutorial, one lab every week; first term. Prerequisite: Registration in a Computer Engineering or Electrical Engineering program. Antirequisite: ELEC ENG 2C14

ELEC ENG 2C14 CIRCUITS AND SYSTEMS
Mesh/mesh analysis of electrical circuits; Laplace transforms with applications; responses of linear systems; coupled circuits; power relationships; dependent sources; magnetic and nonlinear circuits. Three lectures, one tutorial (two hours); second term. Prerequisite: ELEC ENG 2C14 or 2C15. Antirequisite: ELEC ENG 2C15

ELEC ENG 2D14 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 week; second term. Prerequisite: Registration in a program in Electrical Engineering, Engineering Physics, Photonics Engineering or Physics. Antirequisite: COMP ENG 2D14, COMP SCI 2MF3, SFWR ENG 2A03, 2A04, 2A0A

ELEC ENG 2E15 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 week; second term. Prerequisite: ELEC ENG 2E14 or 2E15. Antirequisite: ELEC ENG 2E14

ELEC ENG 2E14 DATA STRUCTURES, ALGORITHMS AND DISCRETE MATHEMATICS
Application of logic and finite state machines programming; data types; data abstraction and algorithms for sorting and searching; application of graph algorithms and combinatorics in programming; estimating program resource utilization. Three lectures, one tutorial (two hours); first term. Prerequisite: ENGINEER 1D04. Antirequisite: COMP ENG 2E15, COMP SCI 2E15, 2F11, 2F12, 2F13, 2F14

ELEC ENG 2B13 STRUCTURE OF BIOLOGICAL MATERIALS
Structure of proteins, nucleic acids, connective tissue and bone from molecular to microscopic levels; principles and applications of instruments for imaging identification and measurement of biological materials. Three lectures; first term. Prerequisite: Registration in Level III Electrical and Biomedical Engineering.

ELEC ENG 3B83 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; second term. Prerequisite: Registration in Level III Electrical and Biomedical Engineering.

ELEC ENG 3E14 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; second term. Prerequisite: ELEC ENG 2E14 or 2E15. Antirequisite: ELEC ENG 2E14

ELEC ENG 3B14 ELECTROMAGNETIC FIELDS
Electrostatics, magnetostatics, ferromagnetism; Maxwell’s equations; plane and spherical waves; wave and intrinsic impedance; phase and group velocity; energy; Poynting’s theorem; propagation and reflection. Three lectures, one tutorial, one lab every other week; second term. Prerequisite: ELEC ENG 2C14 or 2C15; and MATH 3P04, 3P05
ELEC ENG 3PH  POWER DEVICES AND SYSTEMS
Power circuits; transformers; magnetic circuits; three phase connections; single phase motors; polyphase machines; synchronous generators and motors, induction motors; d.c. motors; design of industrial systems.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 2CJ4 or 2CJ5; and ELEC ENG 2C14 or 2C15

ELEC ENG 3TP4  SIGNALS AND SYSTEMS
Time and frequency domain descriptions of continuous-time and discrete-time signals and linear systems, including convolution; Fourier transforms, impulse response and frequency response; applications to control and communication systems.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 2CJ4 or 2CJ5
Antirequisite: MECH ENG 4R03

ELEC ENG 3TQ4  PROBABILITY AND RANDOM PROCESSES
Probability theory, random variables, expectations; random processes, autocorrelation, power spectral densities; filtering of random processes; noise in communication systems.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: MATH 2P04, 2CQ4

ELEC ENG 3TR4  COMMUNICATION SYSTEMS
Review of continuous-time signals and systems; analysis and implementation of amplitude modulation (DSB-SC, SSB), phase and frequency modulation schemes; digital modulation; noise performance.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3TP4, 3TQ4; or ENG PHYS 3W04

ELEC ENG 4BC3  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; first term
Prerequisite: Registration in Level IV Electrical and Biomedical Engineering

ELEC ENG 4BD4  BIOMEDICAL INSTRUMENTATION
Generation and nature of bioelectric potentials; electrodes and other transducers; principles of instrumentation; electrical safety; neuromuscular and cardiovascular instrumentation; ultrasonics and other medical imaging.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: One of ELEC ENG 3E4J, ENGINEER 3N03 or PHYSICS 3806
Antirequisite: ELEC ENG 4EL3

ELEC ENG 4BE4  MEDICAL ROBOTICS
Fundamentals of robotics and telerobots; feedback from the environment using sensors and machine vision; applications of robotics to medicine and surgery.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: Registration in Level IV Electrical and Biomedical Engineering

ELEC ENG 4BF3  MEDICAL IMAGE PROCESSING
Physical principles of medical image formation; imaging technology for X-ray, ultrasound, magnetic resonance; image quality descriptions and enhancement; 3D imagery.
Two lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3TQ4
Antirequisite: COMP ENG 4T03

ELEC ENG 4Bi4  BIOMEDICAL DESIGN PROJECT
The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students.
Three lectures, two tutorials, one capstone project; second term
Prerequisite: Registration in Level IV Electrical and Biomedical Engineering
Antirequisite: COMP ENG 4014, ELEC ENG 4B14

ELEC ENG 4Fl4  MICROWAVE ENGINEERING
Principles of transmission lines, impedance matching and Smith charts; scattering parameters; waveguides and resonant cavities; stripline and microstrip; antenna radiation; radio-wave propagation.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3F14

ELEC ENG 4H13  COMMUNICATION SKILLS
Organizational behaviour; conflict resolution; barriers to communications; oral communications; interpersonal, group and team skills; technical writing; public presentations.
Two lectures, one tutorial (three hours) per week; first term
Prerequisite: Registration in Level IV Electrical or Computer Engineering
Not open to students registered in an Engineering and Management or Engineering and Society program.

ELEC ENG 4H14  HEALTH AND SAFETY, LAW AND ETHICS
The Engineering Act; principles of ethics and ethical dilemmas; health and safety in the workplace; safety hazards in the workplace; electrical shock hazards; safety in the software industry.
Eight seminars (one hour); first term
Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program

ELEC ENG 4014  ENGINEERING DESIGN
The design process; establishing objectives; preliminary design; planning; scheduling; decision matrices; modelling tools; economic impact; optimization methods; reliability; safety; a term project composed of small teams of students.
Lectures, tutorials, one capstone project; first or second term
Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program
Antirequisite: COMP ENG 4014, ELEC ENG 4B14

ELEC ENG 403J  RESEARCH PROJECT
A research-oriented project under the direct supervision of a faculty member to foster initiative and independent creativity while working on an advanced topic.
First term or second term
Prerequisite: Prior arrangement with an Electrical and Computer Engineering faculty member; inclusion on the Dean's Honour List; registration in Level IV or V or permission of the instructor
Antirequisite: COMP ENG 403J

ELEC ENG 4PK4  POWER ELECTRONICS
Power circuits with switches; basic rectifier circuits; commutation; choppers; inverters; harmonic suppression techniques; generation and control of rotating fields; variable speed drives; system design.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 4EJ4, 3TP4

ELEC ENG 4PL4  ENERGY SYSTEMS AND MANAGEMENT
Elements of generation, transmission, and distribution systems; system-wide energy flow and control: modelling and simulation; economics and management; fault prediction and management.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 4P14

ELEC ENG 4TK4  DIGITAL COMMUNICATIONS SYSTEMS
Digital modulation systems, intersymbol 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 tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 4T04

ENGINEERING (GENERAL)

WEB ADDRESS: http://www.eng.mcmaster.ca/

Note:
Enrolment in these courses is limited to students registered in an Engineering program.

Courses  If no prerequisite is listed, the course is open.

ENGINEER 1A00  SAFETY TRAINING
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).
One hour, first week; first term
Prerequisite: Registration in any Engineering program
Antirequisite: SCIENCE 1A00
This course must be successfully completed before registering in Level II Engineering.
ENGINEER 1C03  ENGINEERING DESIGN AND GRAPHICS
Graphical communication: sketching, 2D and 3D computer-aided design. Design skills workshops and group design project.
One lecture, one lab (three hours), one tutorial (two hours); first or second term
Prerequisite: Registration in any Engineering program
Antirequisite: ENGINEER 1C04

ENGINEER 1D04  ENGINEERING COMPUTATION
Disciplined design of sequential programs for engineering applications. Development, analysis, testing, and documentation of trustworthy programs. Use of the state concept and abstraction in programming.
Three lectures, one tutorial (two hours); first or second term
Prerequisite: Registration in any Engineering program
Antirequisite: COMP SCI 1MA3, 1MC3, 1SA3

ENGINEER 1E00  INTRODUCTION TO THE ENGINEERING CO-OP PROGRAM
Orientation to Engineering Co-op programs and the workplace; self-assessment and goal setting; application procedures and materials; occupational health and safety.
Five sessions; first or second term
Prerequisite: Registration in a Co-op program in the Faculty of Engineering
Not open to students in their final level.

ENGINEER 1P03  INTRODUCTION TO PROFESSIONAL ENGINEERING
Introduction to professional engineering. Ethics, health and safety, societal role and responsibility, engineering disciplines, careers.
One lecture first term; one lecture, one tutorial (two hours) second term; both terms
Prerequisite: Registration in any Engineering program

ENGINEER 2C03  ELECTRICITY, THERMOPHYSICS AND ENERGY
An exposure of electrical and thermophysics fundamentals having civil engineering applications. Topics: electrostatics, electrical circuits, transistors, and transistors and transistors; electrical power engineering, energy efficiency, heat transfer mechanisms.
Two lectures, one tutorial (two hours); first term
Prerequisite: PHYSICS 1E03 and registration in MATH 2M06

ENGINEER 2E00  FIRST CO-OP SUMMER EXPERIENCE
Minimum of 15 weeks of full-time employment in a professional environment. Credit may also be earned through successful completion of one UROP - Undergraduate Research Opportunities Program (Level I and II students only).
Prerequisite: ENGINEER 1E00
Not open to students in their final level.

ENGINEER 2H03  THERMODYNAMICS
An introduction to thermodynamics and its statistical basis at the microscopic level, with applications to problems originating in a modern laboratory or engineering environment.
Three lectures; second term
Prerequisite: Registration in Level II or above of any Engineering program except Engineering Physics or Photonics
Antirequisite: ENGINEER 2V04, ENG PHYS 2H04, MECHENG 2W04, PHYSICS 2H04

ENGINEER 2M03  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 or second term
Prerequisite: PHYSICS 1E03; and registration in either MATH 2M06 or both MATH 2P04 and 2P04.
Antirequisite: ENGINEER 3M03

ENGINEER 2P04  ENGINEERING MECHANICS 'A'
Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behaviour of simple members under axial force, bending and torsion. Principal stresses; deflection of beams; statical indeterminacy.
Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term
Prerequisite: PHYSICS 1D03

ENGINEER 2E00  SECOND CO-OP SUMMER EXPERIENCE
Minimum of 15 weeks of full-time employment in a professional environment. Credit may also be earned through successful completion of one UROP - Undergraduate Research Opportunities Program (Level I and II students only).
Prerequisite: ENGINEER 2E00
Not open to students in their final level.

ENGINEER 3K03  INTRODUCTION TO THERMODYNAMICS AND HEAT TRANSFER
Fundamentals of thermodynamics. Principles of conductive, radiant and convective heat transfer. Examples from chemical, mechanical and electrical systems.
Three lectures; first term
Prerequisite: Completion of Level II of any Software Engineering program

ENGINEER 3N03  ELECTRONICS AND INSTRUMENTATION
Two lectures, one tutorial (two hours) or one lab (three hours); second term
Prerequisite: One of ENGINEER 2M04, 2M03 or 3M03

ENGINEER 4A03  ENGINEERING AND SOCIAL RESPONSIBILITY
The historical development of the engineering profession's concern for social responsibility. Engineering as a cultural activity. The scope and limitations of engineering ethics. The role of the engineering profession in the social control of technological change.
One lecture, one tutorial, one seminar; second term
Prerequisite: Registration in Level III or above of any Engineering program except Engineering and Society.
Antirequisite: ENGINEER 4H03, ENG PHYS 4C03

ENGINEER 4B03  ENGINEERING ECONOMICS
Personal financing. Total project investment. Production and operations costs.
Economic analysis. Financial attractiveness.
Two lectures, one tutorial; second term
Prerequisite: Registration in final level of an Engineering program
Antirequisite: CHEMENG 4N04, ENGINEER 2B03
Not open to students registered in an Engineering and Management program.

ENGINEER 4E00  THIRD CO-OP SUMMER EXPERIENCE
Minimum of 15 weeks of full-time employment in a professional environment.
Prerequisite: ENGINEER 3E00
Not open to students in their final level.

ENGINEER 4H03  ENGINEERING: ITS HISTORY AND CONTEMPORARY CONTEXT
Three lectures; first term
Prerequisite: Registration in Level III, IV, or V of any Engineering program except Engineering and Society.
Antirequisite: ENGINEER 4A03, ENG PHYS 4C03

ENGINEER 4J03  MATERIALS FABRICATION
Offered jointly by the Departments of Mechanical Engineering and Materials Science and Engineering. Processing methods for a wide range of materials, including metals, ceramics and plastics. The analytical basis for understanding and optimizing materials processes. Exercises in mathematical modelling and the use of software packages to optimize processes.
Three lectures; first term
Prerequisite: One of MATLS 3M03, 3P03 or MECH ENG 3A03

ENGINEER 4J03  UNIT OPERATIONS AND PROCESSES IN ENVIRONMENTAL ENGINEERING
The process capabilities, hardware and design equations, of the physical, chemical and biological processes used to improve water. Emphasis on processes such as bio-oxidation, clarification, coagulation, sludge dewatersing and disinfection.
Two lectures, one tutorial (two hours); second term
Prerequisite: One of CHEM 3004, CIV ENG 3M04 or MECH ENG 3Q04; and registration in Level IV or above of any Engineering program
ENGINEERING AND MANAGEMENT

WEB ADDRESS: http://www.eng.mcmaster.ca/engandmg/index.html

John Hodgins Engineering Building, Room A214-K
Ext: 27009

The Engineering and Management Programs are described in the Faculty of Engineering section in this Calendar. These programs are administered jointly by the Faculty of Business and the Faculty of Engineering and lead to the B.Eng. Mgt. degree. An Industrial Advisory Council also participates in the education process.

Program Director
Kenneth S. Coley (Materials Science and Engineering) B.Sc. (Strathclyde), Ph.D., D.I.C. (Imperial College, London)

Courses

If no prerequisite is listed, the course is open.

ENGN MGT 2AA2 COMMUNICATION SKILLS
Writing skills: interpersonal communications, business letters, formal reports. Speaking, listening and presentation skills: oral communications, speeches, technical presentations. Communication technology.
One lecture, one tutorial (two hours); first term
Prerequisite: Registration in any Engineering and Management program

ENGN MGT 3AA1 PROJECT MANAGEMENT AND TEAMWORK SKILLS
Project Management: project phases; project monitoring/scheduling/scheduling software; project meetings, teamwork evaluation. Teamwork Skills: working in groups, communications in groups. Leadership: leading a group, negotiating.
One seminar/class; second term
Prerequisite: One of CHEM 2G03, CIV ENG 2G03 or ENGN MGT 2AA2; and registration in any Engineering and Management program

ENGN MGT 4A01 ENGINEERING AND MANAGEMENT REPORT
Students prepare a written report and make an oral presentation on an engineering and management problem encountered during summer work experience. Written and oral communications are assessed. Guidelines must be obtained from the Program Director before the end of Level III.
One seminar/class; first term
Prerequisite: ENGMG T 3AA1 and registration in any Engineering and Management program

ENGN MGT 5B03 ENGINEERING AND MANAGEMENT PROJECTS
Capstone course: Students work in multidisciplinary teams to solve an integrated engineering and business problem in an organization. Project management skills are taught and project management software is used.
One lecture, two tutorials (two hours); first term
Prerequisite: ENGMGT 4A01 and registration in any Engineering and Management program

ENGINEERING AND SOCIETY

WEB ADDRESS: http://www.eng.mcmaster.ca/engandsoc/

John Hodgins Engineering Building, Room A214-D
Ext. 27679

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.

Program Director
B. Baetz (Civil Engineering) B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Duke), P.Eng.
Operating Committee, as of July 1, 2004:

Chair
B. Baetz (Civil Engineering)
M. Elbestawi (Dean of Engineering)
P.M. Smith (Associate Dean of Engineering)
I. Bruce (Electrical and Computer Engineering)
D. Conochie (Materials Science and Engineering)
K. Garay (History)
A. Garth (Civil Engineering and Society, Student)
A. Gottfried (Civil Engineering and Society, Student)
A. Knights (Engineering Physics)
J. Main (Civil Engineering (Structural/Geotechnical) and Society, Student)
T.E. Martin (Chemical Engineering)

L. Nayef (Chemical Engineering and Society, Student)
J. Peng (Computing and Software)
S.S. Timon (Mechanical Engineering and Society, Student)
S. Veldhuis (Mechanical Engineering)
M. Zakuzik (Mechanical Engineering and Society, Student)

Courses

If no prerequisite is listed, the course is open.

ENGSOCY 2X03 INQUIRY IN AN ENGINEERING CONTEXT I
Inquiry is a non-disciplinary approach to the study of issues of public concern. It involves teaching how to use the university and community resources in research, how to write a research paper, and how to express ideas orally. The theme for 2005-2006 is sustainable society.
Three hours (lectures, discussion, group work); second term
Prerequisite: Registration in any Engineering and Society program

ENGSOCY 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); first term
Prerequisite: Registration in any Engineering and Society program

ENGSOCY 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: automation and employment, technology and the quality of life, the deteriorating environment, or the information society.
Three hours (lectures, discussion, group presentations); first term
Prerequisite: ENGSOCY 2X03
Antirequisite: LABR ST 3W03
Offered in alternate years.

ENGSOCY 3Y03 THE CULTURE OF TECHNOLOGY
A 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.
Three hours (lectures, discussion, group work, seminars); first term
Prerequisite: ENGSOCY 2Y03

ENGSOCY 3Z03 PREVENTIVE ENGINEERING: ENVIRONMENTAL PERSPECTIVES
The basic concepts of preventive engineering are studied and applied to specific case studies. The focus is on sustainability and the natural environment.
Three hours (lectures, discussion, group projects); second term
Prerequisite: Registration in Level III or IV of an Engineering and Society program or the Honours Environmental Science (B.Sc.) Program

ENGSOCY 4X03 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 practicing engineer.
Prerequisite: ENGSOCY 3X03 or LABR ST 3W03

ENGSOCY 4Y03 THE SOCIAL CONTROL OF TECHNOLOGY
The dominant mechanisms of the social control of technology are studied, with a specific emphasis on the role of the engineering profession. Includes an examination of assessment methods and the role of ethics as one approach to social responsibility in engineering.
Three hours (lectures, discussion, group projects, seminars); first term
Prerequisite: Registration in Level V of an Engineering and Society program

ENGINEERING PHYSICS

WEB ADDRESS: http://engphys.mcmaster.ca/

John Hodgins Engineering Building, Room A315
Ext. 24545

Faculty as of January 15, 2005

Chair
Paul E. Jessop

Professors
Alexander A. Berezin/B.Sc., M.Sc., Ph.D. (Leningrad State)
Daniel T. Cassidy/B.Eng. (McMaster), M.Sc. (Queen’s), Ph.D. (McMaster), P.Eng.
Harold K. Haugen/B.Sc. (Acadia), M.Eng., (McMaster), Ph.D. (Aarhus)
Paul E. Jessop/B.Sc. (Waterloo), M.A., Ph.D. (Harvard)
Adrian H. Kitali/B.Eng (McMaster), Ph.D. (Cornell), P.Eng.
Rafael N. Kleiman, SB (MIT), Ph.D. (Cornell)
John C. Lukat, B.Sc. (Cape Town), Ph.D. (Windsor), P.Eng.
Peter Macchi/M.Eng., Ph.D. (Technical University of Graz), P.Eng.
John S. Preston/B.Eng (McMaster), M.Sc., Ph.D. (Toronto), P.Eng.
David A. Thompson/B.Sc., (Reading), C.Eng.
Chang O. Xu/B.Sc., M.Sc. (University of Science and Technology of China), D.Eng. (Tokyo)

Adjunct Associate Professor
Glenn D. Harbel/B.Eng., M.Eng., Ph.D. (McMaster)

Assistants
Andrew P. Knights/B.Sc., Ph.D. (University of East Anglia), Ray R. LaPierre/B.Sc. (Dalhousie), M.Eng., Ph.D. (McMaster)

Adjunct Professors
Denis J. Corr/B.Sc., Ph.D. (Queen's, Belfast)
David P. Jackson/B.Sc., M.A., M.A.Sc., Ph.D. (Toronto)
Krish V.S. Krishnan/B.Tech. (Madras), M.S., Ph.D. (Rochester)
Nikola K. Popov/B.Sc. (Kiev and Moscow), M.Sc. (Beograd), Ph.D. (Zagreb)
Victor G. Snell/B.Sc. (Manitoba), M.Sc., Ph.D. (Toronto)

Associate Members
Chan Y. Ching/(Mechanical Engineering)/B.S. (Peradeniya), Ph.D. (Syracuse), M. Jamal Deen/(Electrical and Computer Engineering)/B.Sc. (Gyana), M.Sc., Ph.D. (Case Western Reserve)
Joseph E. Hayden/(Radiology)/B.Eng., M.Eng., Ph.D. (McMaster)
Fred M. Hoppe/(Mathematics and Statistics)/B.Sc. (Toronto), M.Sc. (Weizmann Institute of Science), M.A., Ph.D. (Princeton)
Jan Dirk Huizinga/(Medicine)/B.Eng., M.Sc., Ph.D. (Groningen)
Peter Kruehl/(Chemistry)/B.Sc. (FSU-Jena), Ph.D. (California-San Diego), Marilyn F. Lightstone/(Mechanical Engineering)/B.A.Sc. (Queen's), M.A.Sc., Ph.D. (Waterloo), P.Eng.
Skipper Poehlman/(Computing and Software)/B.S. (Niagara), B.Sc. (Brock), M.Sc., Ph.D. (McMaster), P.Eng.

Department Note:
All Engineering Physics courses are open to students registered in Engineering Physics unless otherwise stated. Prior permission of the Department is necessary for students from other engineering departments and other faculties.

Courses
If no prerequisite is listed, the course is open.

ENG PHYS 2A04 ELECTRICITY AND MAGNETISM
Development of electromagnetic theory - electrostatics, charge, Gauss's Law, electric energy, DC circuits, magnetic fields, Ampère's law, AC circuits. Development of Maxwell's equations via vector calculus.
Three lectures, one tutorial, one lab (three hours), every other week; first term
Prerequisite: PHYSICS 1E03 and credit or registration in MATH 2P04
Antirequisite: ENG PHYS 2A03

ENG PHYS 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); second term
Prerequisite: ENG PHYS 2A03 or 2A04

ENG PHYS 2H04 THERMODYNAMICS
An introduction to thermodynamics and its statistical basis at the microscopic level, with applications to problems originating in a modern laboratory or engineering environment.
Three lectures, one tutorial; one lab every other week; second term
Prerequisites: Registration in Level II Engineering Physics Cross-list: PHYSICS 2H04
Antirequisite: ENGINEER 2H03, 2V04, MATHS 2B03

ENG PHYS 2M03 INTRODUCTION TO QUANTUM MECHANICS
Wave-particle duality, uncertainty principle, Hydrogen atom, Schrödinger Equation for 1D systems, barriers and tunnelling, probability; properties of insulators, semiconductors and metals. Examples from experiments.
Three lectures; second term
Prerequisite: Registration in an Engineering Physics program

ENG PHYS 2S03 ENGINEERING PHYSICS AND EMERGING TECHNOLOGIES
An inquiry-based course on the societal impact of emerging technologies associated with Engineering Physics. Topics include alternative energy sources, nuclear power, new information technologies, and new developments in biomedical engineering.
Two lectures first term, one lecture second term; both terms
Prerequisites: Registration in an Engineering Physics program

ENG PHYS 3A03 APPLICATIONS OF PHOTONICS
This course will provide an introduction to industrial, commercial and medical applications of photonics. Will include lecture-based instruction and design projects.
Two lectures, one lab; first term
Prerequisite: Credit or registration in ENG PHYS 3E03

ENG PHYS 3D03 PRINCIPLES OF NUCLEAR ENGINEERING
Introduction to fission and fusion energy systems. Energetics of nuclear reactions, interactions of radiation with matter, radioactivity, design and operating principles of fission and fusion reactors.
Three lectures, two labs (three hours each); second term
Prerequisite: Registration in Level III or above of any program in Engineering or Physics

ENG PHYS 3E03 FUNDAMENTALS OF PHYSICAL OPTICS
Reflection and refraction; geometrical optics; interference and diffraction; optical constants of media; optical design software; introduction to design of optical systems.
Two lectures, one tutorial, one lab (three hours every other week); first term
Prerequisites: ENG PHYS 2A03 or 2A04; and ENG PHYS 2E04

ENG PHYS 3E03 INTRODUCTION TO ENERGY SYSTEMS
A 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: Registration in an Engineering Physics program

ENG PHYS 3F03 FUNDAMENTALS OF SOLID STATE ELECTRONICS
Two lectures, one tutorial, one lab (three hours every other week); second term
Prerequisites: ENG PHYS 2A03, 2E04; or PHYSICS 1E03 and either MATH 2M06 or both MATH 2P04 and 2Q04; or PHYSICS 2B06
Last offered in 2005-2006.

ENG PHYS 3F04 ADVANCED APPLICATIONS OF QUANTUM MECHANICS
Application of quantum mechanics to the electronic, optical, and mechanical behaviour of materials.
Two lectures, both terms; four labs (three hours each); second term
Prerequisite: ENG PHYS 2M03 or PHYSICS 3M03
Antirequisite: ENG PHYS 3F03

ENG PHYS 3G03 OPTICAL INSTRUMENTATION
Design of optical equipment (including reflective and refractive optical systems, interferometers and spectrometers). Optical sources and power measurements. Detectors (photographic, photoelectric, etc.), including use in the infrared and ultraviolet, and at low intensity levels.
Three lectures; second term
Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03
Antirequisite: ENG PHYS 3G03, PHOTONIC 4G03

ENG PHYS 3M03 INTRODUCTION TO MICROSYSTEM DEVICES
New materials, phenomena, and platforms for the design, fabrication, and application of modern and emerging technologies, including MicroElectroMecanicalSystems (MEMS), microfluidic, electronic, and photonic devices.
Three lectures; first term
Prerequisite: Registration in an Engineering Physics program

ENG PHYS 3P03 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 electromagnetic flow. Conduction and convection heat transfer.
Two lectures, one tutorial, one lab (three hours every other week); first term
Prerequisites: Credit or registration in MATH 2M06, or MATH 2P04 and 2Q04
ENG PHYS 3PN3  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; two terms
Prerequisite: Registration or credit ENG PHYS 3F03 or 3F04
Antirequisite: ENG PHYS 4E03

ENG PHYS 3W04  ACQUISITION AND ANALYSIS OF EXPERIMENTAL INFORMATION
A systems approach to measurement in which synthesis of topics such as Fourier transforms, signal processing and enhancement, data reduction, modelling and simulation is undertaken. Two lectures; both terms
Prerequisite: Registration in Level III or above of any Engineering or Science program.

ENG PHYS 3X03  HUMAN PHYSIOLOGY
Basic introduction and working knowledge of the human body. Includes study of the cellular level of organization. Three lectures; second term
Prerequisite: Completion of a minimum of 30 units above Level II in any Engineering program.
Antirequisite: BIOLOGY 2A03, 3U03, 3U06; 3U03, 4G08

ENG PHYS 4A04  DESIGN AND SYNTHESIS PROJECT
Design and synthesis projects supervised by a faculty member in the Department of Engineering Physics. Two labs (three hours); both terms
Prerequisite: Registration in final level of an Engineering Physics program

ENG PHYS 4A06  DESIGN AND SYNTHESIS PROJECT
Design and synthesis projects supervised by a faculty member in the Department of Engineering Physics. Two labs (three hours); both terms
Prerequisite: Registration in the final level of an Engineering Physics program.
Antirequisite: ENG PHYS 4A04

ENG PHYS 4D03  NUCLEAR REACTOR ANALYSIS
Introduction to nuclear energy; nuclear physics and chain reactions; reactor statics and kinetics; multiphase analysis; core thermalhydraulics; reactor design. Three lectures (including field trip); first term
Prerequisite: ENG PHYS 3D03

ENG PHYS 4E03  SOLID STATE DEVICES I
Electronic properties of semiconductors, contact phenomena; p-n junctions; Schottky diodes, photodiodes, bipolar transistors, field effect transistors. Three lectures; first term
Prerequisite: ENGINEER 3003 or ENG PHYS 3F03
Antirequisite: ENG PHYS 3PN3

ENG PHYS 4E53  SPECIAL TOPICS IN ENERGY SYSTEMS
Various topics will be examined and critically evaluated to consolidate the student's knowledge and analytical skills in the area of energy systems. Three lectures; second term
Prerequisite: ENG PHYS 3ES3

ENG PHYS 4F03  SOLID STATE DEVICES II
Physical principles underlying operation of selected devices, and their characteristics; optical devices, avalanche devices, Gunn Effect devices, Read diodes, charge coupled devices, integrated circuits, Josephson junctions. Three lectures; second term
Prerequisite: Credit or registration in ENG PHYS 3PN8 or 4E03

ENG PHYS 4H04  SPECIAL STUDIES IN ENGINEERING PHYSICS
A special program of studies to be arranged by mutual consent of a professor and the student with approval of the department chair, to carry out experiments and/or theoretical investigations. A written report and oral defence are required. Two tutorials, one lab (three hours); both terms
Prerequisite: Registration in final level of an Engineering Physics program and a CA of at least 95

ENG PHYS 4K03  OPTICAL COMMUNICATIONS SYSTEMS
Propagation of light in an optical fibre. Semiconductor lasers and detectors for optical communications. Analogue and digital coding. Signal to noise considerations. System design. Three lectures; first term
Prerequisite: Registration in Level IV or V of any Engineering or Physics program
Antirequisite: PHOTONIC 4K03

ENG PHYS 4L03  INDUSTRIAL MONITORING AND DETECTION TECHNIQUES
Single and two-phase flow diagnostics and monitoring techniques for industrial and power plant operations; radiation monitoring; pollutant monitoring and analyses; nuclear instrumentation for industrial processes. Two lectures, one lab; first term
Prerequisite: CIV ENG 2004 or ENG PHYS 3003

ENG PHYS 4L04  INDUSTRIAL MONITORING AND DETECTION TECHNIQUES
Single and two-phase flow diagnostics and monitoring techniques for industrial and power plant operations; radiation monitoring; pollutant monitoring and analyses; nuclear instrumentation for industrial processes. Two lectures first term, lectures and labs second term; both terms
Prerequisite: CIV ENG 2004 or ENG PHYS 3003
Antirequisite: ENG PHYS 4L03

ENG PHYS 4M04  ADVANCED MATERIALS AND NEXT-GENERATION DEVICES
This course explores the relationship between material properties and device performance. In particular, the design challenges associated with employing properties such as magnetoresistance, superconductivity, and piezoelectricity in devices will be studied. Two lectures; both terms
Prerequisite: ENG PHYS 3F03 or 3F04; and ENG PHYS 3PN3 or 4E03

ENG PHYS 4NE3  ADVANCED NUCLEAR ENGINEERING
Prerequisite: ENG PHYS 3D03

ENG PHYS 4P03  NUCLEAR POWER PLANT SYSTEMS AND OPERATION
Systems and overall unit operations relevant to nuclear power plants; includes all major reactor and process systems; nuclear power plant simulator; self-study using Interactive CD-ROM. One term
Prerequisite: Registration in Level IV or above of any Engineering program

ENG PHYS 4S04  LASERS AND ELECTRO-OPTICS
Basic properties of electromagnetic radiation. Optical modulation and detection. Non-linear optics. Multiple-beam interference and coherence. Optical resonators. Laser systems. Two lectures; both terms
Prerequisite: ENG PHYS 3E03 or PHYSICS 3N03
Antirequisite: PHOTONIC 4S04

ENG PHYS 4U04  MODERN AND APPLIED PHYSICS LABORATORY
Selected advanced experiments in two areas of applied physics, chosen from among: lasers and optical communications; microelectronic devices; computer systems; nuclear engineering. Two labs (three hours); both terms
Prerequisite: ENG PHYS 3W04, PHYSICS 3B06

ENG PHYS 4Z03  SEMICONDUCTOR MANUFACTURING TECHNOLOGY
Detailed description of fabrication technologies used in the semiconductor industry; computer modelling of device fabrication; analysis of device performance. Two classroom-based lectures, one computer cluster-based lecture; second term
Prerequisite: ENG PHYS 3F03
Note:
Engineering Technology courses are open only to students registered in the Bachelor of Technology Degree Program in Manufacturing Engineering Technology and are subject to prerequisite requirements.

Courses

**ENG TECH 1MA3  MATHMATICS I**
Ordinary and partial differential equations; Laplace transforms; Fourier series; vector calculus; integral theorems, with engineering applications.
Three lectures, one term

**ENG TECH 1ML3  STRENGTH OF MATERIALS**
Stresses under combined loads, generalized Hook's Law; two and three dimensional stresses, stress transformation, principal stresses, Mohr's circle; deflections by integration; energy methods, Castigliano's theorem; columns; yield criteria.
Three lectures, one term

Corequisite: ENGTech 1MA3

**ENG TECH 1PG3  PROGRAMMING**
An overview of C, C++ programming; variables, constants and operators; program control statements; arrays and strings; pointers; classes; virtual functions; I/O system, preprocessor.
One lecture, one tutorial; one term

**ENG TECH 2CT3  SYSTEM ANALYSIS AND CONTROLS**
Mathematical foundation: differential equations, Laplace transforms, transform by partial-fraction expansion; transfer functions; modelling of physical systems; stability, Routh criteria; time and frequency domain, Root-locus technique; design of control systems.
Three lectures, one term

Prerequisite: ENGTech 1MA3, 1PG3

**ENG TECH 2FE3  FINITE ELEMENT ANALYSIS**
Matrix techniques; eigenvalue problem: 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.
Two lectures, one tutorial; one term

Prerequisite: ENGTech 1MA3, 1ML3

**ENG TECH 2MN3  MODELLING AND NUMERICAL SOLUTIONS**
Number systems and errors; the solution of nonlinear equations; interpolation by polynomial; matrices and systems of linear equations; differentiation and integration; the solution of differential equations; applications to mechanical systems.
Three lectures, one term

Prerequisite: ENGTech 1MA3, 1PG3

ENGLISH AND CULTURAL STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/~english/

Chester New Hall, Room 321 Ext 24491

Faculty as of January 15, 2005

Chair
Mary O'Connor

Distinguished University Professor
James King/B.A., M.A., Ph.D. (Princeton), F.R.S.C.

Professors

Joseph Adamson/B.A., M.A., Ph.D. (Toronto)
Sylvia Bowker/B.A., B.Ed. (Toronto), M.A., (Simon Fraser), Ph.D. (McMaster)
David L. Clark/B.A., M.A., Ph.D. (Western Ontario)
Henry Giroux/B.A., (Maine), M.A., (Appalachian State), D. Arts (Carnegie-Mellon)/Global Television Network Chair In Communications
Donald G. Goenacht/B.A. (Queen's), M.A., Ph.D. (McMaster)
Mary E. O'Connor/B.A., M.A., Ph.D. (Toronto)
Helen M. Ostovich/B.A., M.A., Ph.D. (Toronto)
Naazn Rahimieh/B.A., M.A. (Dalhousie), Ph.D. (Alberta)
Peter Walsley/B.A., M.A. (Toronto), Ph.D. (Cambridge)
Lorraine M. York/B.A., M.A., Ph.D. (McMaster)

Associate Professors

Daniel Coleman/B.Ed., M.A. (Regina), Ph.D. (Alberta), Canada Research Chair
Jeffery Donaldson/B.A., M.A., Ph.D. (Toronto)
Ronald Granofsky/B.A. (Trent), M.A. (Canterbury), Ph.D. (Queen's)
Roger L. Hyman/B.A. (York), M.A., Ph.D. (Toronto)
Grace Kohler/B.A. (Regina), M.A., Ph.D. (Western Ontario)
Susan O'Brien/B.A. (Queen's), M.A. (Queensland), Ph.D. (Queen's)
Anne Savage/B.A. (London)
Mary Silcox/B.A. (Western Ontario), M.A., Ph.D. (Queen's)
Imre Szeman/B.A. (Queen's), M.A. (Western Ontario), Ph.D. (Duke)

Assistant Professors

Sarah Brophy/B.A. (Wilfrid Laurier), M.A., Ph.D. (McMaster)
Catherine Gris/B.A., M.A., Ph.D. (Western Ontario)
Melinda Gough/B.A. (McGill), M.A., Ph.D. (Yale)
Jacques Khalip B.A., M.A., Ph.D. (McGill)
Julie Park/B.A. (Bryn Mawr), M.A., Ph.D. (Princeton)

Department Notes:
1. The following are courses open as electives to students registered in Level II and above of any university program.

**ENGLISH 1E03** Contemporary Canadian Fiction
**ENGLISH 2E03** Twentieth-Century British Literature
**ENGLISH 2F03** Studies in American Literature
**ENGLISH 2G03** Contemporary Popular Culture
**ENGLISH 2L03** Shakespeare: Selected Plays
**ENGLISH 2N03** Feminist Utopias
**ENGLISH 2P03** Monsters and Magic
**ENGLISH 2S03** Spectacular Bodies
**ENGLISH 3B03** The Cyborg in Fiction and Critical Theory
**ENGLISH 3D03** Science Fiction
**ENGLISH 3D03** Contemporary Canadian Drama
**ENGLISH 3E03** Women Poets of the Twentieth Century
**ENGLISH 3E03** African American Fiction
**ENGLISH 3H03** Jane Austen
**ENGLISH 3J03** The British Novel After World War II
**ENGLISH 3W03** Contemporary Native Literature in Canada (note prerequisite for this course)
**ENGLISH 3X03** Contemporary Native Literature in the United States (note prerequisite for this course)
**ENGLISH 3Y03** Children's Literature
**ENGLISH 3Y3** Contemporary Youth Culture

Please note that the Department is able to offer only a selection of elective courses each year.

2. Courses restricted to students registered in programs in English may be available to qualified students in other programs if space permits. Students interested in such courses should request permission from the departmental counselor.

3. Level IV seminars are open only to Honours students registered in Level IV of an English program. Enrollment will be limited to 15 students per seminar. A list of seminars to be offered will be available prior to registration.

Courses

**ENGLISH 1A03 **LITERATURE IN ENGLISH: SHORTER GENRES
A selection of shorter literary texts (short stories, poems, essays) will be studied. Students will be introduced to the elements of various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

Antirequisite: ENGLISH 1A04

**ENGLISH 1A02** LITERATURE IN ENGLISH: LONGER GENRES
A selection of longer literary texts - novels and plays - will be studied. Students will be introduced to the elements of the various genres and to a variety of interpretive approaches. Considerable emphasis will be placed on the development of critical skills in reading and writing.
Two lectures, one tutorial; one term

Antirequisite: ENGLISH 1A05

**ENGLISH 1B03 **CULTURAL STUDIES AND VISUAL CULTURE
An introduction to cultural studies focusing on the critical and conceptual tools for the analysis of various forms of visual culture (e.g., photography, film, television, advertising, new media technologies). Considerable emphasis is placed on the development of effective writing skills.
Two lectures, one tutorial; one term

Cross-list: CSCT 1803
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>ENGLISH 1BB3</strong></td>
<td>CULTURAL STUDIES AND CONSUMER CULTURE</td>
<td>An overview of the development of cultural studies as an interdisciplinary field of academic inquiry through an exploration of the history of mass and consumer culture. Considerable emphasis will be placed on the development of critical skills in reading and writing. Two lectures, one tutorial; one term. Cross-list: CSCT 1BB3</td>
</tr>
<tr>
<td><strong>ENGLISH 1C06</strong></td>
<td>A HISTORY OF ENGLISH LITERATURE</td>
<td>A survey centering on the history of English literature from its origins to the present, providing a grounding in literary historical periods, genres, and critical approaches to works by canonical and non-canonical authors. Emphasis will be placed on critical skills in reading and writing. Two lectures, one tutorial; two terms.</td>
</tr>
<tr>
<td><strong>ENGLISH 2A03</strong></td>
<td>CONTEMPORARY CRITICAL APPROACHES TO LITERATURE</td>
<td>This course will offer a grounding in reading literary texts from a range of contemporary critical approaches. Three hours; one term. Prerequisite: Registration in a program in English or permission of the Departmental Counsellor. Cross-list: COMP LIT 2F03</td>
</tr>
<tr>
<td><strong>ENGLISH 2B06</strong></td>
<td>THE DEVELOPMENT OF ENGLISH DRAMA</td>
<td>English drama from the medieval period to the close of the 19th century (excluding Shakespeare). Three hours; two terms. Prerequisite: Registration in a program in English or permission of the Departmental Counsellor.</td>
</tr>
<tr>
<td><strong>ENGLISH 2C03</strong></td>
<td>CONTEMPORARY CANADIAN FICTION</td>
<td>A 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: Registration in English or permission of the Departmental Counsellor.</td>
</tr>
<tr>
<td><strong>ENGLISH 2E03</strong></td>
<td>TWENTIETH-CENTURY BRITISH LITERATURE</td>
<td>A study of selected works of twentieth-century British literature with an emphasis on the historical, intellectual, ideological and aesthetic contexts. Three hours; one term. Prerequisite: Registration in English or permission of the Departmental Counsellor.</td>
</tr>
<tr>
<td><strong>ENGLISH 2F03</strong></td>
<td>STUDIES IN AMERICAN LITERATURE</td>
<td>A study of some of the most important writers who developed American literature as a distinctive mode of writing in English. Three hours; one term. Prerequisite: Registration in English or permission of the Departmental Counsellor.</td>
</tr>
<tr>
<td><strong>ENGLISH 2G06</strong></td>
<td>AMERICAN LITERATURE</td>
<td>A survey of significant American writers from the 17th century to the present, which emphasizes the interrelationship between the literature and its philosophical and historical background. Three hours; two terms. Prerequisite: Registration in a program in English or permission of the Departmental Counsellor.</td>
</tr>
<tr>
<td><strong>ENGLISH 2H06</strong></td>
<td>MODERN BRITISH LITERATURE</td>
<td>A study of representative literature by British writers of the 20th century. Through criticism of poems, plays, and fiction, an attempt is made to relate modern British literature to its social, intellectual and cultural context. Three hours; two terms. Prerequisite: Registration in a program in English or permission of the Departmental Counsellor.</td>
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<tr>
<td><strong>ENGLISH 2J03</strong></td>
<td>CONTEMPORARY POPULAR CULTURE</td>
<td>A study of one or more selected forms of popular culture drawing on models of analysis from the field of cultural studies. Areas of investigation may include: television, magazines, advertising, computer culture, film, popular fiction, the culture of everyday life. Three hours; one term. Prerequisite: Registration in Level II or above. Cross-list: CMST 2J03, CSCT 2J03</td>
</tr>
<tr>
<td><strong>ENGLISH 2K06</strong></td>
<td>STUDIES IN WOMEN WRITERS</td>
<td>A 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; two terms. Prerequisite: Registration in a program in English, Women's Studies, or permission of the Departmental Counsellor. Cross-list: CSCT 2K06, WOMEN ST 2K06</td>
</tr>
<tr>
<td><strong>ENGLISH 2L03</strong></td>
<td>SHAKESPEARE: SELECTED PLAYS</td>
<td>A study of a representative selection of plays. Three hours; one term. Prerequisite: Registration in Level II or above. Not open to students with credit or registration in ENGLISH 3K06.</td>
</tr>
<tr>
<td><strong>ENGLISH 2M03</strong></td>
<td>CONCEPTS OF CULTURE</td>
<td>An analysis of the development 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: Registration in a program in Communication Studies, Comparative Literature, English, or permission of the Departmental Counsellor. Cross-list: CMST 2M03, COMP LIT 2E03, CSCT 2M03</td>
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<tr>
<td><strong>ENGLISH 2MM3</strong></td>
<td>MODERN COUNTERCULTURES</td>
<td>An exploration of a variety of cultural forms (e.g. literature, art, photography, film, music) produced by avant-garde and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixties, situationism, and punk. Three semesters; one term. Prerequisite: Registration in a program in Communication Studies, Comparative Literature, English, or permission of the Departmental Counsellor. Cross-list: CMST 2MM3, COMP LIT 2E03, CSCT 2MM3</td>
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<tr>
<td><strong>ENGLISH 2N03</strong></td>
<td>FEMINIST UTOPIAS</td>
<td>The topic for the course may include: television, magazines, advertising, computer culture, film, popular fiction, the culture of everyday life. Three hours; one term. Prerequisite: Registration in Level II or above. WOMEN ST 1AO6 is recommended. Cross-list: WOMEN ST 2L03, WOMEN ST 2A06</td>
</tr>
<tr>
<td><strong>ENGLISH 2P03</strong></td>
<td>MODERNITY/POSTMODERNITY/VISUALITY</td>
<td>This course will examine modernity and postmodernity through an exploration of a variety of theoretical discourses and representational practices, with specific reference to visual culture. Three hours; one term. Prerequisite: Registration in a program in English or permission of the Departmental Counsellor. Cross-list: CSCT 2P03</td>
</tr>
<tr>
<td><strong>ENGLISH 2R03</strong></td>
<td>MONSTERS AND MAGIC</td>
<td>An examination of literary texts offering women's visions of social change. Three hours (seminar and discussion); one term. Prerequisite: Registration in Level II or above. WOMEN ST 1AO6 is recommended. Cross-list: WOMEN ST 2L03, WOMEN ST 2A06</td>
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<tr>
<td><strong>ENGLISH 2S03</strong></td>
<td>SPECTACULAR BODIES</td>
<td>This course examines the representations and constructions of the racialized, gendered, ethnic or othered human body in and through contemporary cultural texts. Three hours; one term. Prerequisite: Registration in Level II or above. Cross-list: CSCT 2S03</td>
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<tr>
<td><strong>ENGLISH 3A03</strong></td>
<td>CRITICAL RACE STUDIES</td>
<td>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: Registration in a program in Comparative Literature, English, Peace Studies, Women's Studies, or permission of the Departmental Counsellor. Cross-list: COMP LIT 3RR3, CSCT 3A03, PEACE ST 3A03, WOMEN ST 3H03</td>
</tr>
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</table>
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 masculinities studies.
Three hours; one term
Prerequisite: Registration in a program in Comparative Literature, English, Women’s Studies, or permission of the Departmental Counsellor
Cross-list: COMP LIT 3AA3, CSCT 3AA3, WOMEN ST 3HH3

ENGLISH 3BB3 THE CYBORG IN FICTION AND CRITICAL THEORY
A study of selected works of speculative fiction and critical theory exploring a crucial site of the intersection of culture, science, and technology.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3BB3
Not open to students with credit in ENGLISH 3II3, TOPICS IN PROSE, if the topic was The Cyborg in Fiction and Critical Theory.

ENGLISH 3CD5 MEDIEVAL LITERATURE IN ENGLAND, 1200-1500
Middle English literature in a range of genres, such as romance, lyric and chronicle, will be studied in the context of medieval English culture.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3CC3 READING FILM
A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.
Three hours, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, English or Theatre & Film Studies. It is recommended that students should already have completed DRAMA 2X05 or THTR&FLM 2703.
Cross-list: CMST 3CC3, COMP LIT 3CL3, CSCT 3CC3, THTR&FLM 3R05 (formerly DRAMA 3HH3)

ENGLISH 3DD3 SCIENCE FICTION
An examination of a number of standard science fiction tropes such as time travel, lost worlds, utopia/dystopia, totalitarian societies, alien races, and post hoc-American societies.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3DD3
Not open to students with credit in ENGLISH 3II3, TOPICS IN PROSE, if the topic was Science Fiction.

ENGLISH 3DD3 CONTEMPORARY CANADIAN DRAMA
A course on current Canadian drama focusing on Canadian dilemmas, readings of international politics, philosophical questions, innovation in staging, and performance histories.
Three lectures; one term
Prerequisite: Registration in Level II or above
Not open to students with credit in ENGLISH 3XX3, TOPICS IN DRAMA, if the topic was Contemporary Canadian Drama.

ENGLISH 3EE3 WOMEN POETS OF THE TWENTIETH CENTURY
A consideration of the distinctive contribution that women have made to the evolution of poetic invention, themes and form in the twentieth century.
Three lectures; one term
Prerequisite: Registration in Level II or above
Not open to students with credit in ENGLISH 3HH3: TOPICS IN POETRY, if the topic was Women Poets of the Twentieth Century.

ENGLISH 3EE3 AFRICAN AMERICAN FICTION
A study of selected fiction by African American writers published since 1900, considered in the context of African American history and literary tradition.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3EE3
Not open to students with credit in ENGLISH 3II3: TOPICS IN PROSE, if the topic was African American Fiction.

ENGLISH 3GG6 STUDIES IN EIGHTEENTH-CENTURY BRITISH LITERATURE AND CULTURE
A study of English literature during the period 1660-1800, with special attention to works by Dryden, Swift, Pope and Johnson.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3HH3 JANE AUSTEN
A critical evaluation of a selection of Jane Austen’s work with a focus on exploring late eighteenth- and early nineteenth-century British culture.
Three lectures; one term
Prerequisite: Registration in Level II or above
Not open to students with credit in ENGLISH 3II3, TOPICS IN PROSE, if the topic was Jane Austen.

ENGLISH 3IO5 THE AGE OF ELIZABETH I
A consideration of this tumultuous age, galvanized by revolutions in exploration, religion, and selfhood, and ruled by a female monarch. Authors include Spenser, Sidney and women writers.
Three hours; two terms
Prerequisite: Registration in a program in Comparative Literature, English or permission of the Departmental Counsellor
Cross-list: COMP LIT 3IO5

ENGLISH 3J05 ENGLISH HISTORICAL AND DESCRIPTIVE LINGUISTICS
A study of the origins and evolution of English followed by approaches such as language universals, generative grammar and sociolinguistics.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor
Antirequisite: LINGUIST 1A03, 1A06, 1AA3

ENGLISH 3K06 SHAKESPEARE
An extensive critical reading and discussion of selected plays.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3L05 THE EARLIEST ENGLISH LANGUAGE AND LITERATURE
Old English language and literature will be studied in the context of Anglo-Saxon culture, translation theory, and practice.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3M06 STUDIES IN NINETEENTH-CENTURY BRITISH LITERATURE AND CULTURE
A study of selected texts, genres, and issues of Nineteenth-Century British Literature, including reference to relevant social and political contexts.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3N06 THE BRITISH NOVEL
This course will trace the history of English fiction to the 20th century and will focus on the varieties of narrative forms, while also exploring the intellectual, cultural, and psychological contexts of fiction.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3O03 THE HISTORY OF CRITICAL THEORY
A survey of the main developments in critical theory from Plato to the end of the 19th century. Areas of investigation may include: art, aesthetics, civil society, representation, ethics, and knowledge.
Three hours; one term
Prerequisite: Registration in a program in Comparative Literature, English or permission of the Departmental Counsellor
Cross-list: COMP LIT 3O03, CSCT 3O03

ENGLISH 3P03 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: Registration in a program in Comparative Literature, English or permission of the Departmental Counsellor.
COMP LIT 3Q03, CSCT 3Q03 or ENGLISH 3Q03 is recommended.
Cross-list: COMP LIT 3Q03, CSCT 3Q03

ENGLISH 3Q06 POSTCOLONIAL CULTURES: THEORY AND PRACTICE
A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.
Three hours; two terms
Prerequisite: Registration in a program in Comparative Literature, English, Peace Studies, or permission of the Departmental Counsellor
Cross-list: COMP LIT 3R06, CSCT 3R06, PEACE ST 3E06
ENGLISH 3S03  BIBLICAL TRADITIONS IN LITERATURE
A study of the influence of the Bible on Western literature, especially English. Approaches may include the examination of symbolism, imagery, typology, doctrinal themes and narrative structures.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3H03

ENGLISH 3U03  THE BRITISH NOVEL AFTER WORLD WAR II
An exploration of the emerging world view in British fiction after the war through a consideration of approximately six novels from the 1940s and 1950s.
Three lectures; one term
Prerequisite: Registration in Level II or above
Not open to students with credit in ENGLISH 3II3, TOPICS IN PROSE, if the topic was The British Novel After World II.

ENGLISH 3V06  STUDIES IN 17TH-CENTURY LITERATURE
A detailed examination of prose and poetry of the period, with emphasis on the poetry of Donne, the "metaphysical school", Jonson and Milton.
Three hours; two terms
Prerequisite: Registration in a program in English or permission of the Departmental Counsellor

ENGLISH 3W03  CONTEMPORARY NATIVE LITERATURE IN CANADA
A 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: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor
Cross-list: CSCT 3W03, INDIG ST 3D03, PEACE ST 3W03
This course is administered by Indigenous Studies.

ENGLISH 3X03  CONTEMPORARY LITERATURE IN THE UNITED STATES
A study of contemporary works by Native writers in the United States within the context of American society and Post-Modern and Post-Colonial Literary Theory.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor
Cross-list: CSCT 3X03, INDIG ST 3E03, PEACE ST 3X03
This course is administered by Indigenous Studies.

ENGLISH 3Y03  CHILDREN'S LITERATURE
A critical evaluation of literary works from approximately 1700 to the present written primarily for children.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3Y03
Not open to students with credit in ENGLISH 3II3, TOPICS IN PROSE, if the topic was Children's Literature.

ENGLISH 3Y3Y  CONTEMPORARY YOUTH CULTURE
An examination of contemporary youth culture through dominant representations of identity. Themes include: violence, sex/sexuality, age, gender, technology, music and dance, countercultures, subcultures, private/public space.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3YY3

ENGLISH 4X03  HONOURS ESSAY
In consultation with members of the English Department, students will prepare an essay on an approved topic. This course is normally substituted for three units of Level IV seminar work in the second term. Students who are interested in taking 4X03 should contact the faculty member chairing the 4X03 committee early in the first term.
Prerequisite: Registration in Level IV of an Honours program in English
Departmental permission required.
Enrolment is limited.

Note:
Level IV seminars are open only to Honours students registered in Level IV of an English program. Enrolment will be limited to 15 students per seminar. The Department is able to offer only a selection of the seminars listed below every year. A list of seminars to be offered will be available prior to registration, which takes place through the Department in March.
ENGLISH 40N3  MICHAEL ONDAATJE
This course explores various approaches to Michael Ondaatje's poetry and prose; gender, postcoloniality, and interdisciplinarity (Ondaatje's engagement with film, photography, painting and music) are topics of particular interest.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 40N3
Enrolment is limited. Departmental permission required.

ENGLISH 4PC3  PSYCHE AND CULTURE
This course explores the psychoanalytic understanding of culture with reference to three main areas: ideology, gender polarity, and imaginative culture (the arts and literature).
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4PC3
Antirequisite: COMP LIT 4C03, 4F03
Enrolment is limited. Departmental permission required.

ENGLISH 4PD3  THE PRIMA DONNA IN VICTORIAN FICTION
This course scrutinizes the ideological and practical work of the Victorian prima donna in society and on stage by considering her representation in a variety of media.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4PD3
Enrolment is limited. 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: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4RM3  LITERARY REPRESENTATIONS OF MADNESS
This course will seek a partial answer to the question of how writers represent madness by examining texts from the 17th to the 20th centuries. Particular attention will be paid to the role of social pressures behind the transformation of concepts of madness.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4RQ3  THE ROMANCE OF ROMANCE
Pairs of medieval and modern romances will be studied in the light of critical theories of romance, gender, and reading.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4RQ3
Enrolment is limited. Departmental permission required.

ENGLISH 4RT3  TELEVISION AND CONTEMPORARY CULTURE
This seminar studies the cultural artefact called "television," providing a comprehensive overview of various approaches to its study and the requisite theoretical tools to "read" this important element of contemporary culture.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4RT3
Enrolment is limited. Departmental permission required.

ENGLISH 4SC3  WOMEN WRITERS OF THE 16TH AND 17TH CENTURIES
This seminar explores a variety of works written by women in 16th- and 17th-century England, with a consideration of their literary and cultural contexts, and the construction of female identity.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4SS3  SHAKESPEARE AND SHAKESPEARE'S SISTERS
By examining works from different genres, this course explores the ways gender expectations shaped women's and men's contributions to popular and elite culture in early modern England.
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4SS3
Enrolment is limited. Departmental permission required.
This course explores what the Romantics meant when they spoke of the "self" and how they began to rethink it as both a glowing ideal and a source of cultural antagonism and resentment.

Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4UT3
Enrolment is limited. Departmental permission required.

ENGLISH 4UT3 UTOPIAN LITERATURE
A study of the genre through English literature, from its roots in Plato's Republic, through the Middle Ages and the Renaissance to contemporary literature.

Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4UT3
Enrolment is limited. Departmental permission required.

ENGLISH 4WC3 THE WITCHCRAFT CONTROVERSY
IN PRINT AND ON STAGE, 1555-1656
An exploration of conflicting attitudes toward witches in England and Scotland, questioning ideological assumptions about gender, class, education, health, social welfare, marriage, and sexuality.

Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4UT3
Enrolment is limited. Departmental permission required.

ENGLISH 4WW3 WOMEN WRITERS OF THE EIGHTEENTH CENTURY
An exploration of poetry and fiction written by women in the 18th century, with particular attention to the social and philosophical concerns of these writers.

Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4UT3
Enrolment is limited. Departmental permission required.

ENVIRONMENTAL SCIENCE

Courses
If no prerequisite is listed, the course is open.

ENVIR SC 1A03 ATMOSPHERE AND HYDROSPHERE
An introduction to the processes involved in weather, climate and surface waters with a focus on the human impacts on these processes. Two lectures, one tutorial, one lab (one hour); second term.

ENVIR SC 1B03 THE LIVING ENVIRONMENT
Characteristics of the biosphere and introduction to major environmental processes and issues. Two lectures, one tutorial, one lab (two hours); second term.

ENVIR SC 1G03 EARTH AND THE ENVIRONMENT
An introduction to environmental geology and geomorphology through study of the processes that form the earth and its surface features. A mandatory Saturday field trip will be held. Two lectures, one tutorial, one lab (two hours); first term.

CHEM 2A03 ANALYTICAL CHEMISTRY II
An introduction to modern instrumental methods of analysis. Two lectures, one lab (three hours); first term
Prerequisite: CHEM 2A03 or 2N03; and CHEM 2PA3 or 2R03
Antirequisite: ENVIR SC 3A03

EUROPEAN STUDIES

(SEE MODERN LANGUAGES AND LINGUISTICS, EUROPEAN STUDIES)

FRENCH

WEB ADDRESS: http://www.humanities.mcmaster.ca/~french
Togo Salmon Hall, Room 612 Ext. 24470

Faculty as of January 15, 2005

Chair
Michael Klifier

Professors
Marie-Madeleine Ahmad/Las L., M. es L., D. de l’U. (Paris-Sorbonne)
Caroline Bayard/L. es L., M. es L. (Toulouse), M.A., Ph.D. (Toronto)
Suzanne Coste/B.A., M.A. (McMaster), Ph.D. (Toronto)
Madeleine Jea/L. es L. (Bordeaux), M.A., Ph.D. (Montréal)

Associate Professors
Michael Klifier/B.A. (British Columbia), M.A. (Michigan), Ph.D. (Cornell)
Dominique Lepicier/L. es L. (Caen), M.A. (Ottawa), Ph.D. (Toronto)
Gabriel Moya/B.A. (McGill), M.A., Ph.D. (Toronto)
Anita St. Leger Lucas/B.A. (Nottingham), M.A., Ph.D. (British Columbia)
John C. Stout/B.A. (British Columbia), Ph.D. (Princeton)

Assistant Professors
Jane A.C. Rus/B.A. (Toronto), M.A., Ph.D. (California-Los Angeles)
Alexandre Sévigny/B.A. (York), M.A., Ph.D. (Toronto)
Muriel Walker/L. es L., M. es L. (Bordeaux), M.A., Ph.D. (Toronto)

Program Coordinator, Continuing Education

ENTRY INTO LEVEL I COURSES AND FRENCH PROGRAMS

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* OAC French may be substituted for Grade 12 Core French U

Courses
If no prerequisite is listed, the course is open.

FRENCH 1A06 INTRODUCTION TO FRENCH STUDIES: ADVANCED LEVEL
Review of grammar, oral and written practice, and introduction to literary analysis.
Four hours (including one oral French tutorial); two terms
Prerequisite: Grade 12 Core French U (or OAC French) with a grade of at least 80%. The Department reserves the right to place students in the course most appropriate to their abilities. Immersion students should register in this course.
Antirequisite: FRENCH 1N06, 2M06

FRENCH 1N06 INTRODUCTION TO FRENCH STUDIES: INTERMEDIATE LEVEL
Review of grammar, composition, reading and oral practice. Computer-assisted instruction is used for work outside the classroom.
Three hours; two terms
Prerequisite: Grade 12 Core French U (or OAC French) with a grade of less than 80% or FRENCH 1Z06 with a grade of at least A-
Antirequisite: FRENCH 1A06, 1B06, 2Z06
Not open to students with Grade 12 français or OAC français, or to immersion students. Not open to students with credit or registration in FRENCH 2M06. The Department reserves the right to place students in the course most appropriate to their abilities.
FRENCH 1206 BEGINNER’S INTENSIVE FRENCH I
An intensive course for developing basic skills in both written and spoken French. The normal sequel to this course is FRENCH 2206.
Five hours (including three computer labs); two terms
Antirequisite: Grade 12 Core French U or OAC French. Not open to Francophones.
Enrolment is limited.
Students with prior knowledge of the language, as determined by a placement test, may be required to enroll in an appropriate alternative.

FRENCH 2B03 FRENCH LANGUAGE PRACTICE I
A course designed to improve competence in oral and written expression. Written proficiency includes the study of vocabulary, grammar and composition. The oral component will stress listening, comprehension and conversational proficiency.
Four hours (including one oral French tutorial); one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06
Antirequisite: FRENCH 2A03, 4R06

FRENCH 2BB3 FRENCH LANGUAGE PRACTICE II
Continuation of FRENCH 2B03.
Four hours (including one oral French tutorial); one term
Prerequisite: FRENCH 2B03 with a grade of at least C-
Antirequisite: FRENCH 2A03, 4R06

FRENCH 2E03 LITERATURE OF QUEBEC
Selected novels, plays, and poems representative of the main currents of Quebec literature.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2G03 FRENCH LANGUAGE PRACTICE: ELEMENTARY TRANSLATION
An introduction to translation techniques (French to English and English to French) and to the use of pertinent reference material.
Three hours; one term
Prerequisite: A grade of at least B- in FRENCH 1A06 or 2M06 or B+ in FRENCH 1N06

FRENCH 2H03 INTRODUCTION TO FRENCH LINGUISTICS I
A view of language as system (Saussete, Jakobson, Martinet). Descriptive vs. prescriptive approaches to language studies will be considered, with stress on the French-speaking world. Speech sounds (phonetics) and their systematic patterning (phonology), mainly with application to French, will also be examined.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2I03 19TH-CENTURY FRENCH LITERATURE I
Aspects of the development of 19th century French literature up to 1848.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2J03 19TH-CENTURY FRENCH LITERATURE II
Aspects of the development of 19th century French literature after 1848.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2M06 INTRODUCTION TO FRENCH STUDIES: ADVANCED LEVEL
Review of grammar, oral and written practice, and introduction to literary analyses.
Four hours (including one oral French tutorial); two terms
Prerequisite: FRENCH 1N06 or 2Z06
Antirequisite: FRENCH 1A06
Not open to students with credit or registration in FRENCH 2B03.

FRENCH 2N03 INTRODUCTION TO THE CIVILIZATION OF FRANCE
The study of contemporary France through a selection of texts and audiovisual materials.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2W03 20TH-CENTURY FRENCH LITERATURE I
Aspects of the development of 20th-century literature to the end of the Second World War.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2WW3 20TH-CENTURY FRENCH LITERATURE II
Aspects of the development of 20th-century literature since the Second World War.
Three hours; one term
Prerequisite: One of FRENCH 1A06, 1N06 or 2M06

FRENCH 2Z06 BEGINNER’S INTENSIVE FRENCH II
A sequel to FRENCH 1Z06. Review of grammatical structures. Expansion of vocabulary. Conversation practice. Study of texts with class discussions. The normal sequel to this course is FRENCH 2M06. This course cannot be applied toward a Minor in French.
Five hours (including three computer labs); two terms
Prerequisite: FRENCH 1Z06
Antirequisite: FRENCH 1N06
Not open to students with credit or registration in FRENCH 1A06, 1B06, 2B03, 2M06.
Enrolment is limited.

FRENCH 3A03 EVOLUTION OF THE FRENCH LANGUAGE
This course will be based on treaties of the French language dating from the Middle Ages to the present and will show how French has changed over the centuries. The subject matter is divided into four modules treating vocabulary, syntax, verb tenses and spelling from a historical point of view.
Three hours; one term
Prerequisite: FRENCH 2BB3
Alternates with FRENCH 3S03.

FRENCH 3A06 THE MODERN FRENCH-CANADIAN NOVEL
Representative novels by contemporary authors with emphasis upon the relationship between technique and meaning.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 3B03 CONTEMPORARY QUEBEC THEATRE
Contemporary experimental theatre and representative playwrights such as Marcel Dubé and Michel Tremblay.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 3C03 FRENCH LANGUAGE PRACTICE: WRITTEN
Advanced grammar and composition; introduction to stylistics.
Three hours; one term
Prerequisite: A grade of at least C- in FRENCH 2BB3
Antirequisite: FRENCH 4R06

FRENCH 3C03 FRENCH LANGUAGE PRACTICE: INTERMEDIATE TRANSLATION
A course designed for the systematic translation of texts from English to French, including comparative stylistics, with special reference to problems in the translation of texts of a general nature.
Three hours; one term
Prerequisite: A grade of at least B- in each of FRENCH 2BB3 and 2G03

FRENCH 3C03 FRENCH LANGUAGE PRACTICE: FRENCH CIVILIZATION AND CULTURE
An introduction to contemporary French society through oral discussions and presentations.
Three hours; one term
Prerequisite: FRENCH 2BB3. Not available to Francophone students with native fluency.

FRENCH 3G03 FRENCH LANGUAGE PRACTICE: TRANSLATION FROM FRENCH TO ENGLISH
The emphasis will be on inferencing strategies and stylistic comparisons between the two languages. Translation materials will be drawn from contemporary magazines such as L’Express, Le Nouvel Observateur and L’Actualité.
Three hours; one term
Prerequisite: FRENCH 2G03

FRENCH 3H03 INTRODUCTION TO FRENCH LINGUISTICS II
The study of word formation (morphology), sentence structure (syntax) and meaning (semantics). Contemporary French will be the primary data for all three components. Both functional and formal approaches will be examined.
Three hours; one term
Prerequisite: FRENCH 2BB3. FRENCH 2H03 and/or LINGUIST 1A03 and 1AA3 (or 1A06) are recommended.

FRENCH 3K03 18TH-CENTURY FRENCH LITERATURE I
The early 18th century with emphasis on Montaigu, Mauvoux and Prevost, and on the early writings of Voltaire.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06
FRENCH 3K3

REVOLUTIONARY LITERATURE BEFORE THE REVOLUTION: VOLTAIRE, ROUSSEAU, AND BEAUMARCHÉ

Texts representing the main aspects of Enlightenment thought and literature from Candide to the Revolution.
Three hours; one term
Prerequisite: Six units of French above Level 1, excluding FRENCH 2M06 and 2206

FRENCH 3Q3

17TH-CENTURY FRENCH LITERATURE I

A study of selected plays by Corneille, Molière and Racine.
Three hours; one term
Prerequisite: Six units of French above Level 1, excluding FRENCH 2M06 and 2206

FRENCH 3Q3

17TH-CENTURY FRENCH LITERATURE II

A consideration of selected themes as they appear in the works of major French writers of the 17th century.
Three hours; one term
Prerequisite: Six units of French above Level 1, excluding FRENCH 2M06 and 2206

FRENCH 3S3

STUDIES IN MEDIEVAL LANGUAGE AND CIVILIZATION

An exploration of the particular characteristics of Old French through a selection of Medieval texts representative of the civilization of the period (chivalry, courtly love, feasts and rituals).
Three hours; one term
Prerequisite: FRENCH 28B3
Alternates with FRENCH 3A03

FRENCH 3Z3

AFRICAN AND CARIBBEAN FRENCH LITERATURES

Three hours; one term
Prerequisite: One of FRENCH 1A06, 2M06 or registration in a French program

FRENCH 4A3

FRENCH LANGUAGE PRACTICE

Advanced stylistics and composition.
Three hours; one term
Prerequisite: A grade of at least B- in FRENCH 3C03 and registration in an Honours program in French

FRENCH 4B3

FRENCH LANGUAGE PRACTICE: ADVANCED TRANSLATION

Practice in the translation into French of texts of a specialized nature (e.g., administration, business, politics).
Three hours; one term
Prerequisite: FRENCH 3C03, 3CC

FRENCH 4F3

TOPICS IN 18TH-CENTURY FRENCH LITERATURE

Previous topics include: Voltaire, Theatre and Performance. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: 12 units of French above Level 1, excluding FRENCH 2M06 and 2206
FRENCH 4F3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4H3

TOPICS IN LINGUISTICS

Previous topics include: Lexicology; Pragmatics; Sociolinguistics. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: FRENCH 2H03
FRENCH 4H3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4I3

TOPICS IN FRENCH POETRY

Previous topics include: Poets and Humour, Love Poetry, Women Poets, Poètes maudits. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: 12 units of French above Level 1, excluding FRENCH 2M06 and 2206
FRENCH 4I3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4I3

FRENCH SOCIOGLINGUISTICS

The study of linguistic variations within French-speaking communities with special emphasis on sociolinguistic issues arising in multilingual societies (Africa, America, Europe...).
Three lectures; one term
Prerequisite: FRENCH 2H03
Antirequisite: FRENCH 3I03

FRENCH 4J3

FRENCH LITERATURE OF THE RENAISSANCE

Characteristic themes of Renaissance humanism as they appear in works of Rabelais, Montaigne, and selected poets.
Three hours; one term
Prerequisite: 12 units of French above Level 1, excluding FRENCH 2M06 and 2206
FRENCH 4J3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4M3

SEX, VIOLENCE AND ELEGANCE: THE 18TH-CENTURY NOVEL

A study of the genesis and themes of representative 18th-century novels.
Seminar (two hours); one term
Prerequisite: 12 units of French above Level 1, excluding FRENCH 2M06 and 2206
Enrolment is limited.

FRENCH 4N3

TOPICS IN THE FRENCH NOVEL

Previous topics include: Emile Zola; Balzac's Novels: History and Fiction. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: 12 units of French above Level 1, excluding FRENCH 2M06 and 2206
FRENCH 4N3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4Q3

TOPICS IN 17TH-CENTURY FRENCH LITERATURE

Previous topics include: Racine, Molière, and Molière. Consult the Department concerning topic to be offered.
Seminar (two hours); one term
Prerequisite: FRENCH 3Q3
FRENCH 4Q3 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

FRENCH 4R6

FRENCH READING COURSE

(TAUGHT IN ENGLISH)

Students intending to enter graduate programs will be provided with reading skills and techniques which will enable them to comprehend academic texts. Reading materials are selected to practice textual analysis, study grammatical usage and aid in vocabulary development. Credit obtained in this course may be accepted in fulfilment of the second language reading requirement for graduate programs.
Four hours, four days per week; one term
Offered during the first term of summer session only.
Prerequisite: FRENCH 1Z06 and registration in any Level IV Honours Program or permission of the French Department
Antirequisite: FRENCH 1Z06, 3BB, 3C03
Not open to students registered in a program in French.

FRENCH 4S3

MIDDLE AGES LITERATURE

A study of selected texts of Medieval French Literature: songs and poetry of the troubadours and trouvères, Arthurian romance, comic and satiric narratives. Modern French translations will be used.
Three hours; one term
Prerequisite: FRENCH 2BB3

FRENCH 4T3

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.
Prerequisite: Registration in Level IV of an Honours program in French and permission of the FRENCH 4T03 Committee
Faculty as of January 15, 2005

Director
John J. Drake

Associate Director
Richard S. Harris

Distinguished University Professor

Professors
Vera Chouinard/B.A. (Western Ontario), M.A. (Toronto), Ph.D. (McMaster)
Alan P. Dicken/M.A. (Cambridge), D.Phil. (Oxford)
John J. Drake/M.A. (Oxford), M.Sc., Ph.D. (McMaster)
Susan J. Elliott/M.A., Ph.D. (McMaster)
Carolyn H. Eyles/B.Sc. (East Anglia), M.Sc., Ph.D. (Toronto)
Frederick L. Hall/A.B. (Ann Arbor), M.Sc. (MIT), Ph.D. (Chicago)/Professor of Civil Engineering and Engineering Mechanics
Richard S. Harris/B.A. (Cambridge), M.A. (Ohio), Ph.D. (Queen's)
Pavel S. Kanoaroglou/B.Sc. (Athens), M.A., M.Sc., Ph.D. (McMaster)/Senior Canada Research Chair
Kao-Lee Liaw/B.Sc. (National Taiwan), M.A. (Kanasa State), Ph.D. (Clark)
William A. Moris/B.Sc. (Leeds), Ph.D. (Open University)
Ming-Lou Woo/M.A. (Hong Kong), Ph.D. (British Columbia)

Associate Professors
Michael Jerrett/B.Sc. (Trent), M.A., Ph.D. (Toronto)
Bruce Newbold/B.A., Ph.D. (McMaster)
Edward Reinhardt/B.A., Ph.D. (Carleton)
W. Jack Rinkle/B.Sc., Ph.D. (Florida State)
James Smith/B.Sc., M.Sc (Guelph), Ph.D. (Waterlo)
J. Michael Waddington/M.Sc., Ph.D. (York)
Lesley A. Warren/B.Sc., Ph.D. (Toronto)
Allison Williams/M.A. (Toronto), Ph.D. (York)
Robert D. Wilton/B.A. (Hull), M.A., Ph.D. (Southern California)

Assistant Professors
Allaf Arain/B.E. (Pakistan), M.S., Ph.D. (Arizona)
Joe Boyce/B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)
Paulin Coulalaly/B.A.Sc., M.A.Sc. (Nice), Ph.D. (Laval)
Antonio Paez/B.Sc. (Mexico), M.Sc., Ph.D. (Tokohu)
Darren Scott/B.A. (St. Mary's), M.A. (Western Ontario), Ph.D. (McMaster)
Greg Slater/B.Sc., M.Sc., Ph.D. (Toronto)/Canada Research Chair

School Notes:
1. The Honours Earth and Environmental Sciences programs allow students to select a specialist stream in geochromy (formerly biogeoscience), geosciences or hydrosciences at the end of Level II. Specialist streams aim to fulfill the academic requirements for professional registration of Geoscientists in Ontario. Students should seek academic advice from the School during March counselling in Level II to ensure that their course choices are appropriate.
2. Course codes including the letter H indicate a non-science course.
3. Students are advised that not all courses will be offered in every year.

Courses

ENVIR SC 1A03 ATMOSPHERE AND HYPEDROSPHERE
An introduction to the processes involved in weather, climate and surface waters with a focus on the human impacts on these processes.
Two lectures, one tutorial, one lab (one hour); second term

ENVIR SC 1B03 THE LIVING ENVIRONMENT
Characteristics of the biosphere and introduction to major environmental processes and issues.
Two lectures, one tutorial, one lab (two hours); second term

ENVIR SC 1G03 EARTH AND THE ENVIRONMENT
An introduction to environmental studies including the processes that form the earth and its surface features. A mandatory Saturday field trip will be held.
Two lectures, one tutorial, one lab (two hours); first term

GEO 1HS3 GEOGRAPHY OF THE HUMAN ENVIRONMENT
Introduction to human-environment relations and spatial analysis with special emphasis on urban, social, health, and cultural environments.
Two lectures, one lab (one hour); first term and second term

GEO 1HU3 URBAN ECONOMIC GEOGRAPHY
Basic principles in spatial analysis and location theory applied to the changing urban, economic and environmental patterns of development and urbanization at the local, national and international scales.
Two lectures, one lab (two hours); second term

GEO 2A03 INTRODUCTION TO ENVIRONMENTAL ISSUES
An introduction to issues, perspectives and models in environmental studies at federal, regional, national and international scales.
Two lectures, one lab (two hours); one term
Prerequisite: One of ENVIR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3

GEO 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: One of ENVIR SC 1A03, 1B03, 1G03

GEO 2C03 SURFACE CLIMATE PROCESSES AND ENVIRONMENTAL INTERACTION
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: One of ENVIR SC 1A03, 1B03, 1G03

Notes: If no prerequisite is listed, the course is open.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 2E03</td>
<td>EARTH HISTORY</td>
<td>Geological evolution of the Earth and palaeontological evidence for the evolution of marine life, with emphasis on the geological history of North America. Two lectures, one lab (three hours); one term. Prerequisite: ENVIR SC 1G03</td>
</tr>
<tr>
<td>GEO 2G03</td>
<td>EARTH SURFACE PROCESSES</td>
<td>An examination of the many dynamic processes that shape the face of the earth, including fluvial, eolian, coastal, mass wasting, karst and weathering processes. Two lectures, one lab (two hours); one term. Prerequisite: ENVIR SC 1A03 or 1G03</td>
</tr>
<tr>
<td>GEO 2G03</td>
<td>NATURAL DISASTERS</td>
<td>A study of natural processes including plate tectonics, earthquakes, volcanoes, landslides, river erosion and climate change and their impacts on human populations. Three lectures; one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>URBAN ECONOMIC GEOGRAPHY</td>
<td>Economic-geographical analysis applied to urban problems at different scales of aggregation. Topics include urbanization, urban spatial structure, major urban externalities and urban size. Two lectures, one lab (two hours); one term. Prerequisite: GEO 1H03 or 1U03</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>CANADA</td>
<td>The geography of Canada emphasizing the economic and social geography of regions and current development issues. Three lectures; one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>POPULATION, SOCIETIES, AGING AND THE ENVIRONMENT</td>
<td>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 environmental and societal including aging, are emphasized. Three lectures, one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>RESEARCH METHODS IN SOCIAL GEOGRAPHY</td>
<td>An introduction to research methods in social geography. Emphasis is placed on the application of various methods to understanding human spatial behaviour. Two lectures, one lab (one hour); one term. Prerequisite: GEO 1H03 or 1U03 Antirequisite: ANTHROP 2Z03, CMST 2A03, GERONTOL 2C03, HEALTHST 2B03, SOCIOLOG 2Z03</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>THE UNITED STATES OF AMERICA</td>
<td>The physical and economic geography of the United States. Three lectures; one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>CITIES IN A CHANGING WORLD</td>
<td>Key themes, perspectives and concepts in urban social geography are examined. Emphasis is placed on the relationship between processes of economic, political and cultural change and people’s everyday lives in urban settlements. Two lectures, one lab (one hour); one term. Prerequisite: GEO 1H03 or 1U03</td>
</tr>
<tr>
<td>GEO 2H03</td>
<td>GIS AND DIGITAL CARTOGRAPHY</td>
<td>An introduction to the principles and techniques underlying the use of a GIS (Geographic Information Systems) for storing, managing, analyzing and visualizing geographic data. Cartographic principles are also introduced emphasizing the production of effective thematic maps using a GIS. Two lectures, one lab (two hours); one term. Prerequisite: One of MATH 1AA3, 1B03, SOC SCI 2J03, STATS 1CC3</td>
</tr>
<tr>
<td>GEO 2K03</td>
<td>OPTICAL CRYSTALLOGRAPHY AND MINERALOGY</td>
<td>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 (two hours); one term. Prerequisite: ENVIR SC 1G03</td>
</tr>
<tr>
<td>GEO 2M03</td>
<td>GEMSTONES: ORIGINS AND CHARACTERISTICS</td>
<td>An examination of gemstones focusing on their geologic origin, mineralogy, chemical composition, economic value and historical significance. Three lectures; one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 2N03</td>
<td>INTRODUCTION TO ENVIRONMENTAL GEOCHEMISTRY</td>
<td>Chemical principles applied to the understanding of processes in aquatic and environmental systems. Two lectures, one lab (three hours); one term. Prerequisite: CHEM 1A03</td>
</tr>
<tr>
<td>GEO 2P03</td>
<td>PHYSICAL HYDROLOGY: SURFACE</td>
<td>Hydrological processes including precipitation, snowmelt, slope runoff, streamflow and hydrological data analysis. Two lectures, one lab (two hours); one term. Prerequisite: One of MATH 1AA3, 1B03, SOC SCI 2J03, STATS 1CC3; and one of ENVIR SC 1A03, 1G03, 1I03</td>
</tr>
<tr>
<td>GEO 2R03</td>
<td>WATER AND THE ENVIRONMENT</td>
<td>Selected environmental issues related to water, including floods and droughts, irrigation, effects of water management projects and pollution. Examples from Canada and the world. Three lectures; one term. Prerequisite: Registration in Level II or above</td>
</tr>
<tr>
<td>GEO 3A03</td>
<td>ENVIRONMENTAL POLICY AND PLANNING</td>
<td>A theoretical and practical exploration of environmental policy, planning and decision-making, as well as the relationships between science, society, and policy design. Two lectures, one lab (two hours); one term. Prerequisite: GEO 2A03; or registration in an Honours Biology, an Engineering and Society program or an Honours program in the School of Geography and Earth Sciences Not offered in 2005-2006.</td>
</tr>
<tr>
<td>GEO 3A03</td>
<td>GEO SCIENCE EXPLORERS AND ADVENTURERS</td>
<td>An examination of the discoveries made by geoscience explorers of modern times including those made on the moon and in Mars, in the deep and shallow seas, and in the landscapes inhabited by the earliest life forms, dinosaurs and the first humans. Three lectures; one term. Prerequisite: Registration in Level III or above</td>
</tr>
<tr>
<td>GEO 3A03</td>
<td>EARTH'S CHANGING CLIMATE</td>
<td>The earth's climatic history including natural causes of past climate change and human influences on climate will be explored. Three lectures; one term. Prerequisite: Registration in Level III or above</td>
</tr>
<tr>
<td>GEO 3A03</td>
<td>GEARCHAEOLOGY OF THE UNDERWATER REALM</td>
<td>Methods in underwater exploration; geoarchaeological record of human interaction with the marine environment and the effects of climate and sea level changes. Three lectures; one term. Prerequisite: Registration in Level III or above</td>
</tr>
<tr>
<td>GEO 3A03</td>
<td>SEDIMENTARY ENVIRONMENTS</td>
<td>Sedimentary processes, stratigraphy and depositional environments of clastic and carbonate systems. Two lectures, one lab (two hours); one term. Prerequisite: GEO 2E03</td>
</tr>
</tbody>
</table>
| GEO 3A03 | FIELD CAMP                                      | A 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 and the regular tuition fees. Prerequisite: GEO 2E03 and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences
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GEO 3HD3 TRANSPORTATION GEOGRAPHY

Principles and techniques applied to understanding, predicting and optimizing movement for transportation systems at various geographical scales. Problems arising from movement are also discussed.

Two lectures; one lab (two hours); one term
Prerequisite: One of ECON 1A05, 1B03, GEO 1H53, 1HU3

GEO 3HE3 ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

An introduction to the methods and tools of resource management and economics, focusing on the development of resource systems and the environmental implications.

Three lectures; one term
Prerequisite: GEO 1HU3

GEO 3HF3 FIELD STUDY IN HUMAN GEOGRAPHY

Introduction to field research in Human Geography, usually in the Hamilton area.

Two lectures (two hours); one term
Prerequisite: GEO 2HR3 and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences

GEO 3HG3 POPULATION DISTRIBUTION AND MIGRATION

Introduction of important theories, models and facts in the fields of population distribution and internal and international migration processes.

One lecture (three hours); one term
Prerequisite: GEO 1HS3 or 1HU3; and one of COMMERCE 2A03, HTH SCI 1F03, 2A03, KINESIOL 3C03, MATH 1A03, 1B03, SOC SCI 2J03, STATS 1A03, 1C03; and registration in Level III or above

GEO 3HH3 GEOGRAPHY OF HEALTH AND HEALTH CARE

An understanding of traditions in health geography and an exploration of the determinants of health including the physical environment and health care services.

Three lectures; one term
Prerequisite: GEO 1HS3 or 1HU3

GEO 3HJ3 GEOGRAPHY OF JAPAN

Human and physical geography of Japan with emphasis on historical, international, demographic and economic aspects.

One lecture (three hours); one term
Prerequisite: Registration in Level III or above

GEO 3HR3 GEOGRAPHY OF A SELECTED WORLD REGION

The study of an area outside of North America which will include topics in physical and human geography.

Three lectures; one term
GEO 3HR3 may be repeated, if on a different topic, with permission of the School of Geography and Earth Sciences during March counselling.

GEO 3HT3 GEOGRAPHY OF PLANNING

A review of historical and contemporary approaches to city and regional planning problems.

One lecture (three hours); one term
Prerequisite: One of GEO 2H3, 2H83, 2HY3

GEO 3HU3 URBAN ISSUES IN THEORY AND PRACTICE

Critical evaluation of the role that volunteerism and the non-profit sector play in responding to social and environmental problems facing contemporary urban society. Students will undertake a ten-week (four hours per week) volunteer placement. Details and application for the course are available in October.

One lecture (two hours), week placement commitment; one term
Prerequisite: Registration in Level III of an Honours B.A. program in the School of Geography and Earth Sciences

GEO 3HZ3 URBAN SOCIAL GEOGRAPHY

The social geography of North American cities. Topics include commuting, segregation, inner-city gentrification, suburban development.

Lectures and seminars (two hours, twice weekly); one term
Prerequisite: GEO 2HD3. GEO 2HR3 and 2HY3 are recommended.

GEO 3I03 APPLIED GIS (GEOSPATIAL INFORMATION SYSTEMS)

Advanced principles and techniques in GIS applied to real-world problems.

Two lectures, one lab (two hours); one term
Prerequisite: A minimum grade of C+ in GEO 2103

GEO 3J03 CLIMATE CHANGE AND ECOSYSTEM IMPACTS

Past, present and future climate change is examined in terms of the underlying physical and global biogeochemical processes. The Kyoto Protocol and impacts of climate change on ecosystems are examined.

Two lectures, one lab (two hours); one term
Prerequisite: One of BIOLOGY 2F03, GEO 2B03, 2003
Antirequisite: GEO 3B03

GEO 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 (two hours); one term
Prerequisite: GEO 2K03

GEO 3L03 PHYSICAL AND CHEMICAL PROCESSES IN FRESHWATER ENVIRONMENTS

A multidisciplinary course emphasizing the interactions of chemical, physical, geological and biological factors in controlling the chemical distribution, composition and structure of freshwater systems. A mandatory weekend field trip will be held in September. Students enrolling in this course must pay both the incidental fees as prescribed by the School and regular tuition fees.

Two lectures, one lab (four hours); one term
Prerequisite: GEO 2C03; and one of GEO 2E03, 2G03, 2W03; and permission of the School of Geography and Earth Sciences. Application must be received by March 31 of the academic year prior to registration.
Antirequisite: GEO 4L03
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 3NN3 NORTHERN ENVIROMENTS

An appreciation of northern environments including climatic and hydrological setting, landforms, vegetation and associated development problems.

Three lectures; one term
Prerequisite: Registration in Level III or above

GEO 3PO3 ENVIRONMENTAL ORGANIC GEOCHEMISTRY

Primary factors controlling the distribution, transport and fate of organic compounds in the environment. Topics include sources, partitioning processes (sorption, volatilization, dissolution), transport, degradation (biotic, abiotic) and analytical techniques.

Two lectures, one lab (three hours); one term
Prerequisite: GEO 2003 or registration in an Honours Chemistry program; and permission of the School of Geography and Earth Sciences.

GEO 3PO3 ENVIRONMENTAL PALEONTOLOGY

Paleontology as a paleoenvironmental indicator. Important fossil groups, paleoecology and taphonomy will be emphasized.

Two lectures, one lab (three hours); one term
Prerequisite: GEO 2E03

GEO 3Q03 ENVIRONMENTAL RECONSTRUCTION USING STABLE ISOTOPES

Principles of stable isotope geochemistry and its application to modern and fossil environmental reconstructions. Topics include isotope stratigraphy and its application to palaeoclimatology, palaeoceanography and palaeobiology.

Two lectures; one lab (three hours); one term
Prerequisite: GEO 2E03

GEO 3R03 RESEARCH DESIGN AND DISSEMINATION

Description of some of the changed and changing paradigms in the discipline; formulation of a research proposal; communication of research results.

Two lectures, one lab (two hours); one term
Prerequisite: Registration in Level III or above of an Honours program in the School of Geography and Earth Sciences.

GEO 3S03 INTRODUCTION TO SPATIAL STATISTICS

An introduction to the nature of geographic data and organization, descriptive spatial statistics and inferential statistics.

Two lectures, one lab (two hours); one term
Prerequisite: GEO 2S03, 2G03

GEO 3U03 ENVIRONMENTAL SYSTEMS

Use of simple numerical models applied to solving environmental problems related to anthropogenic perturbations. Introduction to STELLA numerical simulator, statement of the problem and "what if" scenarios.

One lecture (three hours); one term
Prerequisite: MATH 1A03; and registration in B.Sc. Geoscience, or any Level III Honours program in the Faculties of Science and Engineering.
Antirequisite: CIV ENG 2J04
GEO 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: ENVR SC 1G03, PHYSICS 1B03

GEO 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: One of GEO 2B03, 2G03, 2W03; and one of MATH 1A03, 1B03, 1K03, 1N03, 1N13, 1Z03

GEO 3Y03  REMOTE SENSING
Aerial photography. Passive and active satellite direction systems. Image processing and interpretation procedures. Application to resource exploration and environmental management.
Two lectures; one lab (two hours); one term
Prerequisite: GEO 2I03

GEO 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: GEO 2E03

GEO 4A03  ENVIRONMENTAL ASSESSMENT
Technical and policy issues involved in the production and the appraisal of environmental impact assessments.
Two lectures; one lab; one term
Prerequisite: GEO 2A05; or registration in Honours Biology, a Civil Engineering program, an Engineering and Society program or an Honours program in the School of Geography and Earth Sciences

GEO 4B03  WATERSHED ECOHYDROLOGY
A discussion of the interactions of hydrological and biogeochemical processes at the watershed level to examine the impact of natural and human disturbances on water quality in streams and wetland ecosystems.
One lecture (two hours), one lab (two hours); one term
Prerequisite: One of GEO 2W03, 3B03, 3F03

GEO 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: GEO 2C03 or 2W03

GEO 4CC3  REVIEW PAPER
The student will conduct a comprehensive review of a selected topic. The review paper is due before the final examination period.
One seminar (two hours); first term
Prerequisite: GEO 3F03 and registration in Level IV of an Honours program in the School of Geography and Earth Sciences
Antirequisite: GEO 4F06

GEO 4D03  ANALYSIS OF TRANSPORTATION SYSTEM
An introduction to the use of models in transportation planning. Topics include data issues, the four-stage approach to modelling transportation systems, discrete choice models and contextual factors such as land use.
Three lectures; one lab (two hours); one term
Prerequisite: GEO 3H03
Cross-list: CIV ENG 4H03

GEO 4E03  COASTAL ENVIRONMENTS
Coastal systems and their response to sea level change with an emphasis on the Holocene. A mandatory local field trip to collect data followed by laboratory analysis will be included.
Three lectures; one lab (three hours); one term
Prerequisite: GEO 3E03

GEO 4F03  FIELD COURSE
Detailed study of a particular aspect of physical geography, earth sciences or environmental science in the field. Held immediately after the end of Level III or prior to Fall registration in Level IV; report to be submitted before the end of first term. Various topics and locations: details announced in March. Students enrolling in this course must pay both the incidental fees, as prescribed by the School, and the regular tuition fees.
Prerequisite: Registration in Level III or above of an Honours B.Sc. program in the School of Geography and Earth Sciences

GEO 4F03  TOPICS OF FIELD RESEARCH
Selected topics in field research in the Earth Sciences. Topics may vary from year to year, and the timing of the course will depend on the offerings. Details will be posted in the School. Students enrolling in this course must pay the incidental fees, as prescribed by the School, and the regular tuition fees.
Prerequisite: Registration in Level III or above of an Honours B.Sc. program and permission of the instructor
GEO 4F03 may be repeated, if on a different topic, with the permission of the School of Geography and Earth Sciences

GEO 4G03  GLACIAL SEDIMENTS AND ENVIRONMENTS
The development and movement of glaciers, glacial depositional processes and sedimentary successions in terrestrial, lacustrine and marine environments.
Two lectures; one lab (two hours); one term
Prerequisite: GEO 2E03 or 2G03
Antirequisite: GEO 3G03

GEO 4H03  FIELD RESEARCH IN THE HUMAN ENVIRONMENT
Selected topics in field research in human geography and environmental studies. 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, and the regular tuition fees.
Prerequisite: Registration in Level III or above of an Honours program in the School of Geography and Earth Sciences and permission of the instructor

GEO 4H03  ENVIRONMENT AND HEALTH
Models and methods for research and policy on environment and health. One lecture/seminar (three hours); one term
Prerequisite: One of GEO 3A03, 3H03 or permission of the instructor
Cross-list: HEALTH ST 4E03

GEO 4H32  URBAN PLACES AND URBAN DREAMS
The ideas of planning visionaries and the designs of city planners will be explored as responses to forces shaping cities and regions.
Three lectures; one term
Prerequisite: One of GEO 2H03, 2HY3, 3HT3

GEO 4H33  URBAN DEVELOPMENT AND POLICY ISSUES
Current debates on urban development and policy issues. Emphasis on the political economy of urban change.
Three lectures; one term
Prerequisite: GEO 2HY3 or permission of the instructor

GEO 4H34  URBAN HOUSING
The geography of housing, including the effects of land development, construction, municipal planning and public policy on the urban landscape of housing and homelessness.
One lecture/seminar; one term
Prerequisite: GEO 3H32

GEO 4I03  ADVANCED GIS (GEOGRAPHIC INFORMATION SYSTEMS)
Advanced methods in GIS using ARC/INFO. Topics will include raster based analysis, working with linear features, surface modelling and AML programming.
Three lectures, one lab (two hours); one term
Prerequisite: GEO 3I03

GEO 4J03  MINERALOGY
Advanced topics in crystal chemistry and mineralogy, with emphasis on mineral spectroscopy.
Two lectures, one tutorial; one term
Prerequisite: GEO 2K03 or 2KK3

GEO 4K03  ENVIRONMENTAL ISOTOPIC GEOCHEMISTRY
Application of isotopic analysis to environmental systems, both natural and impacted. Topics include sampling and analytical techniques, principles of isotopic fractionation, and applications of light and transition metal isotopes to hydrogeology, microbiology and geochemistry.
Two lectures, one lab (three hours); one term
Prerequisite: GEO 3O03

GEO 4Q03  SEDIMENTARY GEochRONOLOGY
Geological age determination techniques for the near-surface sedimentary record focusing on the last five million years of earth history. Geochemical perspectives on the fundamentals of radioactive decay and radiation effects in datable minerals.
Two lectures, one tutorial; one term
Prerequisite: GEO 3Q03
GERONTOLOGY

GEO 4R06 SENIOR THESIS
Students will select research topics and prepare a thesis either individually or in teams.

One seminar (two hours); two terms
Prerequisite: Registration in Level IV or above in an Honours program in the School of Geography and Earth Sciences; and a SA in the previous session of 6.5 or higher; and permission of the instructor. Students intending to enrol in this course must submit an application to the instructor by March 1 of the academic year prior to registration. Application forms are available from the School of Geography and Earth Sciences main office after February 1. Students will be informed of acceptance of their application on March 15 subject to fulfillment of the SA requirement.

Antirequisite: GEO 4C03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

GEO 4G03 ADVANCED TOPICS IN SPATIAL STATISTICS
This course explores concepts and methods in visualisation, exploration and modelling of point pattern, spatially continuous data and area data.

Three hours; one term
Prerequisite: GEO 3S03

GEO 4T03 PLATE TECTONICS AND ORE DEPOSITS
Synthesis of plate tectonics, with application to crustal evolution and genesis of ore deposits.

Three lectures; one term
Prerequisite: GEO 2E03 and credit or registration in GEO 3K03

GEO 4W03 HYDROLOGIC MODELLING
Principles of numerical modelling and examination of selected hydrologic models.

Two lectures, one lab (two hours); one term
Prerequisite: GEO 2W03 or 3W03

GEO 4WW3 CONTAMINANT HYDROGEOLOGY
Physical and chemical aspects of the fate and transport of contaminants in soils and groundwater, including multiphase flow.

Two lectures, one lab (two hours); one term
Prerequisite: Credit or registration in GEO 3W03

GEO 4Z03 EXPLORATION GEOPHYSICS
Principles of subsurface exploration using seismic, magnetic and borehole geophysical methods. Applications in geological research and oil and gas exploration.

Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E03, 3V03
Antirequisite: GEO 4Z23
Not offered in 2009-2010.

GERMAN

(SEE MODERN LANGUAGES AND LINGUISTICS, GERMAN)

GERONTOLOGY

WEB ADDRESS: http://www.socsci.mcmaster.ca/gerontology
Kenneth Taylor Hall, Room 226
Ext. 24449

Faculty as of January 15, 2005

Director
Margaret A. Denton

Professors
Margaret A. Denton (Sociology) B.A., M.A., Ph.D. (McMaster)
Ellen B. Ryan (Psychology) B.A., M.A. (Brown), Ph.D. (Michigan)

Associate Professor
Arju Joshi B.A., M.A. (Dalhousie)

Adjunct Associate Professor
Sherry Dupuis/Watertree) B.Mus. (Queen's), M.A. (Waterloo), Ph.D. (Guelph)

Assistant Professors
Lori Campbell (Sociology)/B.A., M.A. (Western Ontario), Ph.D. (Guelph)
Michel Grignon (Economics) M.A. (ENSSE), Ph.D. (HEHESS)
Martin Heering (Political Science) B.A., M.A. (Philipps-Universität Marburg, Germany), Ph.D. (Johns Hopkins)

Associate Members
Jana Harison (Social Work) B.Sc. (New University of Ulster), B.S.W., M.S.W., (McGill), Ph.D. (Toronto)
Laurie C. Doering (Pathology and Molecular Medicine) B.Sc. (Queen's), M.Sc., Ph.D. (Saskatchewan)
James W. Gladstone (Social Work) B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)
Carrie McAloney (Psychiatry and Behavioural Neurosciences) B.A., M.A., Ph.D. (Waterloo)
Anna Ploeg (Nursing) B.Sc.N., M.Sc. (Western Ontario), Ph.D. (Toronto), R.N.
Byron G. Spencer (Economics) B.A. (Queen's), Ph.D. (Rice)

Notes:
1. Not all Gerontology courses may be offered every year. Students are urged to contact the McMaster Centre for Gerontological Studies after May 1 to determine which courses will be offered in the following academic year.
2. Gerontology students are strongly recommended to complete GERONTOL 2E03 prior to GERONTOL 3S03.
3. GERONTOL 1A03, 2B03, 2F03, 3F03, 3H03, 3J03, 3K03 and 3M03 are available for students enrolled in a non-Gerontology program. In the case of GERONTOL 2F03, 3F03, 3H03, 3J03, 3K03 and 3M03, enrolment for non-Gerontology students is limited and priority sequence for registration will be:
   a) students completing the Minor in Gerontology
   b) students registered in a Health Studies program
   c) all other students.
4. Students completing a Minor in Gerontology must contact the Office of Gerontological Studies to request permission for their Fall/Winter Gerontology courses by May 31.

Courses

GERONTOL 1A03 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, inquiry and experiential components); one term
Prerequisite: GERONTOL 1A06
Enrolment is limited.

GERONTOL 2B03 THE AGING BODY
An examination of age-related changes in biology and physiology of the human body.

Three hours (lectures); one term
Prerequisite: GERONTOL 1A03 or 1A06
Not open to students with credit or registration in KINESIOLOG 4S3.

GERONTOL 2C03 RESEARCH METHODS IN SOCIAL GERONTOLOGY
A systematic investigation of research methods in social gerontology. Topics covered include research design, measurement, techniques of data collection and data analysis. Special attention will be given to how research methods may be applied in the study of aging. This course uses an inquiry based approach.

Three hours (lectures and practice); one term
Prerequisite: Registration in any Gerontology program
Antirequisite: ANTHROP 2Z03, CMST 2A03, GEO 2H03, GERONTOL 3C03, HEALTH 2B03, SOCIOLOG 2Z03

GERONTOL 2D03 SOCIAL ASPECTS OF AGING
A systematic investigation of research methods in social gerontology. Topics covered include research design, measurement, techniques of data collection and data analysis. Special attention will be given to how research methods may be applied in the study of aging. This course teaches an inquiry based approach.

Three hours (lectures and practice); one term
Prerequisite: Registration in any Gerontology program; or admission to the Minor in Gerontology and permission of the Director. (See Note 4 above.)
Antirequisite: GERONTOL 2A03, 2A04

Courses: If no prerequisite is listed, the course is open.
GERONTOLOGY 219

GERONTOLOGY 2203 COMMUNICATION AND COUNSELLING WITH OLDER ADULTS
Focuses on the unique communication and counselling needs of older adults. Explores various communication issues and approaches and enables students to apply client-centred communication techniques.
Three hours (lectures and discussion); includes experiential component; one term
Prerequisites: Registration in any Gerontology program. (See Note 2 above.)
Antirequisites: GERONTOLOGY 4B03
Enrollment is limited.

GERONTOLOGY 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.
Three hours (lectures and discussion); one term
Prerequisites: GERONTOLOGY 1A03 or 1A06
This course may be taken by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited. Priority will be given to students completing a Minor in Gerontology or registered in a Health Studies program.
Not open to students with credit in GERONTOLOGY 3I03, if the topic was Aging and Health Care Systems.

GERONTOLOGY 3B03 GERONTOLOGY FIELD OBSERVATION
Directed observation of 40 hours in an approved field setting and a weekly seminar focusing on integration of theoretical knowledge and observation.
Approximately four hours field observation per week, and two hours weekly seminar; one term
Prerequisites: Registration in Level III or IV of any Gerontology program. (See Note 2 above.)
Antirequisites: GERONTOLOGY 4B03
Enrollment is limited.

GERONTOLOGY 3B04 ADVANCED GERONTOLOGY PLACEMENT
A supervised experience linking classroom knowledge to a practice setting. Seminars focus on integration of theoretical knowledge and observation. Placement consists of approximately 60 hours of contact time.
Six hours field practicum per week, and two hours bi-weekly seminar; one term
Prerequisites: GERONTOLOGY 3B03 and registration in Level III or IV of any Gerontology program and permission of the Instructor. (See Note 2 above.)
Antirequisites: GERONTOLOGY 4B04
Enrollment is limited.

GERONTOLOGY 3E03 THE AGING MIND
An examination of psychological aspects of aging: sensation, perception, attention, memory, intelligence, communication, personality, attitudes and mental health.
Three hours (lectures and discussion); one term
Prerequisite: Registration in any Gerontology program; or admission to the Minor in Gerontology and permission of the Director. (See Note 4 above.)
Not open to students with credit in PSYCH 3D03.

GERONTOLOGY 3E03 INDEPENDENT STUDY IN GERONTOLOGY
The student will select a topic in gerontology for an in-depth investigation under the supervision of a faculty member and write a paper. This investigation could take several forms such as library research, field study, or a supervised experience in an applied setting.
The study will normally extend over two terms.
Prerequisite: Registration in Level III or IV of any Gerontology program and permission of the Program Chair.
GERONTOLOGY 3E03 may be repeated, if on a different topic, to a total of six units.

GERONTOLOGY 3F03 GERONTOLOGICAL PRACTICE
Principles and methods of gerontological practice. The students will take part in the McMaster Summer Institute of Gerontology as partial fulfillment of course requirements, when offered in Term 1 of the Spring/Summer Session.
One term
Prerequisites: GERONTOLOGY 3B03 and registration in Level III or IV of any Gerontology program; or GERONTOLOGY 1A03 or 1A06 and an equivalent placement course and permission of the instructor.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited.

GERONTOLOGY 3H03 DIVERSITY AND AGING
Examines issues in gerontology related to the diversity of contemporary western societies. Aspects of diversity such as ethnicity, race, culture, disability, gender, sexual orientation, rural and urban life, and social class will be addressed.
Three hours (lectures and discussions, includes experiential component); one term
Prerequisite: GERONTOLOGY 1A03 or 1A05
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited.

GERONTOLOGY 3I03 SPECIAL TOPICS IN GERONTOLOGY
Topics may vary from year to year. Students should consult the McMaster Centre for Gerontological Studies prior to registration, concerning topics to be examined.
Three hours (lectures and discussion); one term
Prerequisites: Registration in any Gerontology program
GERONTOLOGY 3I03 may be repeated, if on a different topic, to a total of six units.

GERONTOLOGY 3J03 AGING, WORK, RETIREMENT AND PENSIONS
An examination of the issues and concepts related to work, retirement and pensions and their implications for aging individuals and society.
Three hours (lectures and discussions); one term
Prerequisites: Registration in Level III or IV of any Gerontology program; or with permission of the instructor, registration in a Labour Studies program or GERONTOLOGY 1A03 or 1A06 and registration in Level II or above of any program
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited.

GERONTOLOGY 3K03 IMAGES OF AGING
Explores themes in aging through critical analysis of representations in English literature, selected works of art, music, painting, photography and film, and with emphasis on English literature. Themes may include institutionalization, loss of autonomy, loneliness, intergenerational and other relations.
Three hours (lectures and discussion); one term
Prerequisite: GERONTOLOGY 1A03 or 1A05
Not open to students with credit in GERONTOLOGY 3I03, if the topic was Images of Aging.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program.
However, enrollment for such students is limited.

GERONTOLOGY 3L03 LONG-TERM CARE FACILITIES: ISSUES AND CHALLENGES
Humanizing care for older adults living in long-term care facilities and other issues and challenges, including the structure and organization of long-term care facilities, policy, quality of life, and quality of care.
Three hours (lectures and discussion); one term
Prerequisite: GERONTOLOGY 1A03 or 1A05
This course may be taken by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited. Priority will be given to students completing a Minor in Gerontology or registered in a Health Studies program.
Not open to students with credit in GERONTOLOGY 3L03, if the topic was Long-Term Care Facilities: Issues and Challenges.

GERONTOLOGY 3M03 AGING IN A FAMILY CONTEXT
Examines a diversity of topics related to family relationships and life transitions of older adults from a life course perspective. Topics may include diversity in families, marital status and parent status, adult child/parent relationships, sibling ties, and grandparent/grandchild relationships.
Three hours (lectures and discussions, includes experiential component); one term
Prerequisite: GERONTOLOGY 1A03 or 1A05
Antirequisites: SOCIOLOGY 3C03
Not open to students with credit in GERONTOLOGY 4C03, if the topic was Aging in a Family Context.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited.

GERONTOLOGY 3N03 AGING AND MENTAL HEALTH
This course will examine the topics of mental health from a variety of perspectives. Topics will include: definitions, theories, assessment protocols and interventions related to mental health in older adults will be explored.
Three hours (lectures and discussions); one term
Prerequisite: GERONTOLOGY 1A03 or 1A05
Not open to students with credit in GERONTOLOGY 4C03, if the topic was Aging and Mental Health.
This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrollment for such students is limited.
## HEALTH SCIENCES

### GERONTOL 3R03 RESEARCH METHODS IN SOCIAL GERONTOLOGY II

An advanced systematic investigation of research methods in social gerontology. Topics include research design, measurement, data collection and analysis. Special attention will be given to how research methods may be applied in the study of aging. This course uses an inquiry-based approach.

Prerequisite: GERONTOL 2C03 and registration in Level III or IV of any Gerontology program

Antirequisite: SOCIOLE 3R03, 3Q03

### GERONTOL 4A05 GERONTOLOGY THESIS

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.

Prerequisite: GERONTOL 2C03 (or 3Q03), 3R03 (or 3G03 or another approved statistics course) and registration in Level IV of any Honours Gerontology program; or GERONTOL 2C03 (or 3Q03), 3P03 (or 3G03 or another approved statistics course) and registration in Level III of any B.A. Gerontology program and permission of the Program Chair

### GERONTOL 4C03 SPECIAL TOPICS IN GERONTOLOGY

Topics may vary from year to year. Students should consult the Gerontological Studies Office prior to registration, concerning topics to be examined.

Prerequisite: Registration in Level IV of any Honours Gerontology program or registration in Level III of any B.A. Gerontology program and permission of the Program Chair

GERONTOL 4C03 may be repeated, if on a different topic, to a total of six units.

### GERONTOL 4G03 INDEPENDENT STUDY IN GERONTOLOGY II

The student will select a topic in gerontology for an in-depth investigation under the supervision of a faculty member and write a paper. This investigation could take several forms such as laboratory research, field study, or a supervised experience in an applied setting.

Prerequisite: Registration in Level III or IV of any Gerontology program and permission of the supervising instructor

### GERONTOL 4H03 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 (problem-based tutorial); one term

Prerequisite: Registration in Level IV of any Honours Gerontology or Honours Health Studies program or registration in Level III of any B.A. Gerontology program

This course may be taken by undergraduate students registered in an Honours Health Studies program. However, enrollment for such students is limited.

Not open to students with credit in GERONTOL 4D03, if the topic was Aging and Health.

### GERONTOL 4J03 AGING AND DISABILITY

Multidisciplinary models of successful aging are applied to older adults with mobility, sensory, and cognitive impairments. Psychological, communication, and spiritual issues are emphasized.

Three hours (seminar); one term

Prerequisite: Registration in Level IV of any Honours Gerontology program

Enrollment is limited.

Not open to students with credit in GERONTOL 4C03, if the topic was Aging and Disability.

### GERONTOL 4K03 ISSUES IN THE SOCIAL ASPECTS OF AGING

An advanced exploration of social aspects of aging including gender and health, family relationships and retirement.

Three hours (seminar); one term

Prerequisite: Registration in any Gerontology program

Antirequisite: SOCIOLE 4PP3

### GERONTOL 4R03 SOCIAL POLICY AND THE AGING POPULATION

Critical examination of the social and economic implications of the aging population and the nature of social welfare policy with respect to the elderly.

Three hours (problem-based tutorial); one term

Prerequisite: Registration in Level IV of any Honours Gerontology program or registration in Level III of any B.A. Gerontology Program and permission of the Instructor

Not open to students with credit in SOC WORK 4A03.

### NON-CREDIT PLACEMENTS...

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>GERONTOL 2P00</td>
<td>PROFESSIONAL DEVELOPMENT IN THE FIELD OF AGING I</td>
<td>This non-credit course enhances gerontology students' learning experience by providing a formal mechanism to recognize participation and learning in related extracurricular activities. Students will create a learning portfolio to evaluate their participation and their progress towards their learning objectives. Two terms</td>
</tr>
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<td>GERONTOL 3P00</td>
<td>PROFESSIONAL DEVELOPMENT IN THE FIELD OF AGING II</td>
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</tr>
<tr>
<td>GERONTOL 4P00</td>
<td>PROFESSIONAL DEVELOPMENT IN THE FIELD OF AGING III</td>
<td>This non-credit course enhances gerontology students' learning experience by providing a formal mechanism to recognize participation and learning in related extracurricular activities. Students will create a learning portfolio to evaluate their participation and their progress towards their learning objectives. Two terms</td>
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### GREEK

(SEE CLASSICS, GREEK)

### HEALTH AND SOCIETY

(SEE MINOR IN HEALTH STUDIES, FACULTY OF SOCIAL SCIENCES)

### HEALTH SCIENCES

Faculty Note:

This course listing is divided into two parts:

1. Bachelor of Health Sciences (Honours) program courses.
2. Health Sciences courses normally available only to students registered in Engineering (Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering), Nursing (A), (B), (C) or (D) Streams, Oncology, Psychiatric-Mental Health Nursing or Midwifery, as applicable.

### BACHELOR OF HEALTH SCIENCES (HONOURS)...

**WEB ADDRESS:** [http://www.fhs.mcmaster.ca/bhscc](http://www.fhs.mcmaster.ca/bhscc)

**Michael G. DeGroote Centre for Learning and Discovery, Room 3308**

**Ext. 22815**

**Assistant Dean, Bachelor of Health Sciences (Honours)**

Delesworth G. Harmish/ B.Sc., M.Sc. (Queen's), Ph.D. (McMaster), 3M Teaching Fellow

**Note:**

Detailed course descriptions are available on the program web site at [http://www.fhs.mcmaster.ca/bhscc/](http://www.fhs.mcmaster.ca/bhscc/)

### Courses

**HTH SCI 1ED6 INQUIRY**

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: Registration in the B.H.Sc. (Honours) program

Antirequisite: HTH SCI 1E03, 1EE3

**Note:** Students entering the B.H.Sc. (Honours) program after completion of Level I in another program may be required to complete HTH SCI 1ED6 at the discretion of the Assistant Dean of the program.
HITH SC1G03 \textbf{PSYCHOBIOLOGY} \\
This course introduces essential components of the central and peripheral nervous systems as well as key regulatory systems. Concepts such as plasticity, homeostasis, compensation and adaptation and ways in which failure of these regulatory systems can lead to illness states are examined.

Two lectures, one tutorial; one term  
Prerequisite: Credit or co-registration in BIOLOGY 1A03 or HITH SC1 I06  
Not open to students with credit or registration in PSYCH 1A03.

HITH SC1I06 \textbf{CELLULAR AND MOLECULAR SYSTEMS AND PRACTICUM IN HEALTH SCIENCES} \\
A critical examination of nervous systems as specific to the central and peripheral nervous systems.  
Two tutorials or practicum per week (two hours each); two terms 
Corequisite: SCIENCE 1A00. Students registering in HITH SCI 1I06 must also register in SCIENCE 1A00 when completing their registration.  
Antirequisite: BIOLOGY 1A03

HITH SC2A03 \textbf{STATISTICS} \\
Basic statistical methods and their application to the analysis of biological and psychosocial data. Manual calculations will be discouraged; use of the computer to do statistical analysis is an explicit goal of this course.  
Two lectures, one tutorial; one term  
Prerequisite: Registration in Level II or above and Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus)  
Antirequisite: HITH SCI 1F03, STATS 1C03  

HITH SC2E03 \textbf{INQUIRY II} \\
This course will use a problem-based format to introduce major illness categories such as infectious disease, genetic diseases, cancer, and occupational/environmental.  
One term 
Prerequisite: HITH SCI 1E03 and 1E03; or HITH SCI 1E06

HITH SC2F03 \textbf{HUMAN PHYSIOLOGY AND ANATOMY I} \\
An introduction to the principal organ systems including the endocrine, skin, CNS and locomotion.  
Two lectures, one tutorial, one lab; one term  
Prerequisite: Registration in Level II of the B.H.Sc. (Honours) program; or permission of the Assistant Dean, B.H.Sc. (Honours) Program  
Cross-list: HITH SCI 1H03, 2L03  
Antirequisite: BIOLOGY 1U03, 3K03, 3U03, 3U03, 3U03, HITH SCI 1D06, KINESIOL 1A06, 1X06, 1Y03, 1YY3

HITH SC2F03 \textbf{HUMAN PHYSIOLOGY AND ANATOMY II} \\
A continuation of HITH SCI 2F03 with an examination of the immune, Cardiovascular, Respiratory, Gastrointestinal and Uro-Genital Systems.  
Two lectures, one tutorial, one lab; one term  
Prerequisite: HITH SCI 2F03  
Cross-list: HITH SCI 1H03, 2L03  
Antirequisite: BIOLOGY 1U03, 3K03, 3U03, 3U03, HITH SCI 1D06, KINESIOL 1A06, 1X06, 1Y03, 1YY3

HITH SC2G03 \textbf{EPIDEMIOLOGY} \\
This course examines concepts of health from molecular, clinical, population to societal perspectives.  
Two lectures, one tutorial; one term 
Prerequisite: STATS 1C03 or registration in Level II of the B.H.Sc. (Honours) program

HITH SC2J03 \textbf{HEALTH PSYCHOLOGY} \\
This course will provide an overview of psychological factors as they influence or result from medical conditions. Topics will include stress, psychosomatic illness, illness behaviour, compliance, and cultural influences on health related behaviours.  
Two lectures, one tutorial; one term  
Prerequisite: HITH SCI 1G03 or PSYCH 1A03  
Corequisite: HITH SCI 2A03 or STATS 1C03  
Antirequisite: KINESIOL 2G03

HITH SC2K03 \textbf{EUKARYOTIC BIOLOGY} \\
An examination of the relationship between cell structure and function in eukaryotic (primarily) cells.  
Tutorials (three hours); Problem Based Learning and Computer Laboratories (three hours); one term 
Prerequisite: CHEM 1A03, and either BIOLOGY 1A03 or 1I06, and registration in the B.H.Sc. (Honours) program; or permission of the instructor 
Antirequisite: BIOLOGY 2B03

HITH SC3D03 \textbf{GENETICS IN HEALTH SCIENCES} \\
This course examines basic genetic issues including cyto genetics, genetic traits and inheritance as they relate to health care issues.  
Two lectures, one tutorial; one term  
Prerequisite: HITH SCI 2G03, 2F03, 2K03

HITH SC3E03 \textbf{INQUIRY III} \\
This course will cover health issues that are prevalent at certain times in the developmental cycle. Topics will include reproduction, health of children and adolescents, adulthood, and health care issues in the elderly.  
One term  
Prerequisite: HITH SCI 2E03 and registration in Level III of the B.H.Sc (Honours) Program

HITH SC3G03 \textbf{CRITICAL APPRAISAL OF THE MEDICAL LITERATURE} \\
Participants are provided with the skills necessary to critically appraise studies that investigate risk, therapy, prognosis, and screening and diagnostic tests. Participants are also introduced to the methodology of systematic review and meta-analyses.  
Two lectures, one tutorial; one term  
Prerequisite: HITH SCI 2G03

HITH SC3H03 \textbf{INQUIRY PROJECT} \\
An opportunity to explore one or more specialized areas of Health Sciences in preparation for HITH SCI 4A03 (or HITH SCI 4B06).  
One tutorial/seminar session (three hours); one term 
Prerequisite: Registration in B.H.Sc. (Honours) program  
Antirequisite: BIOCHEM 4C03, 4P03, BIOLOGY 4C03, 4F06, 4F3, 4G03, 4I03, MOL BIOL 4R09, PHARMAC 4F09, PSYCH 4D06, 4D09, 4E09

HITH SC3I03 \textbf{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: BIOLOGY 2B03 or HITH SCI 2K03  
Antirequisite: BIOLOGY 3X03

HITH SC3J03 \textbf{HEALTH, INJURY AND PATHOLOGY} \\
An introduction to human pathology with emphasis on the mechanisms of pathogenesis and the morphologic changes induced to occur in cells and tissues.  
Two lectures, one tutorial (three hours); one term  
Prerequisite: HITH SCI 2K03

HITH SC3L03 \textbf{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: HITH SCI 2K03  
Antirequisite: HEALTHST 3E03

HITH SC3Y03 \textbf{DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA} \\
This course explores the history of health and health care in Canada, from the first European settlements to the present day.  
Two lectures, one small group discussion (one hour); one term 
Prerequisite: Registration in Level II or above  
Cross-list: HEALTHST 3Y03, HISTORY 3Y03

HITH SCI 4A09 \textbf{THESIS} \\
A thesis-based research project conducted under the direction and supervision of a member of the Faculty. Arrangements to enrol in HITH SCI 4A09, including agreement of the supervisions and a co-supervisor, must be made before the end of March in Level III.  
Prerequisite: Registration in B.H.Sc. (Honours) program and permission of B.H.Sc. (Honours) Program Office  
Antirequisite: BIOCHEM 4G03, 4P03, BIOLOGY 4C03, 4F06, 4F3, 4G03, 4I03, HITH SCI 4B06, MOL BIOL 4R09, PHARMAC 4F09, PSYCH 4D06, 4D09, 4E09
HEALTH SCIENCES

HTH SCI 4B06  
**SENIOR PROJECTS**
A selection of information-based research projects conducted under the supervision of one or more members of the Faculty. Arrangements to register in HTH SCI 4B06 including agreement of faculty supervisors must be made before the end of March in Level III.
Prerequisite: Registration in B.H.Sc. (Honours) program and permission of B.H.Sc. (Honours) Program Office
Antirequisite: BIOCHEM 4C03, 4F03, BIOLOGY 4C09, 4F66, 4F67, 4G93, 4G94, HTH SCI 4A09, MOL BIOL 4B09, PHARMAC 4F09, PSYCH 4D06, 4D09, 4G90

HTH SCI 4C03  
**SCIENTIFIC THOUGHT**
This course will cover the logic of science and scientific methods, how progress is defined in science, the diversity of sciences applied to health research.
One term
Prerequisite: Registration in Level III or IV of the B.H.Sc. (Honours) program

HTH SCI 4D03  
**SPECIAL TOPICS IN HEALTH SCIENCES**
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: Permission of Assistant Dean, B.H.Sc. (Honours)

HTH SCI 4F03  
**CLINICAL PRACTICE ENVIRONMENT**
This course will include one or more placements for students. In conjunction with these placements, students will be required to compile a report on one or more health care delivery environments. Students must arrange their clinical placement.
One term
Prerequisite: HTH SCI 3H03, and permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4I03  
**ADVANCED TOPICS IN IMMUNOLOGY**
This course will build on knowledge of the immune system and focus on the immune system in disease: allergy, inflammation, autoimmunity, immunodeficiency, malignancy and cancer immunotherapy.
Two lectures, one tutorial; one term
Prerequisite: BIOLOGY 3X03 or HTH SCI 3I03
Antirequisite: BIOLOGY 4I03

HTH SCI 4J03  
**BIOCHEMICAL IMMUNOLOGY**
This advanced course applies small group based learning to immunological problems. Topics concern development of immunocassays, resistance to infection and immunity in health and disease.
One session (two hours), one tutorial; one term
Prerequisite: BIOLOGY 3X03 or HTH SCI 3I03; and one of BIOCHEM 3B03, 3B3, 3D03, 3G03 or BIOLOGY 3H03
Cross-list: BIOCHEM 4J03, MOL BIOL 4J03

HTH SCI 4K03  
**HUMAN PHYSIOLOGY**
The course is designed to allow participants to think and solve problems in the areas of physiology, pathophysiology and anatomy.
One lecture, one tutorial, one lab; one term
Prerequisite: HTH SCI 2F03 or permission of the instructor.

HTH SCI 4U03  
**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: Registration in the B.H.Sc. (Honours) program

HTH SCI 4T03  
**CURRENT RESEARCH INITIATIVES**
An opportunity to explore current research initiatives at McMaster. Faculty members and Post-Doctoral fellows will offer three week sessions to explain and discuss their current research.
Three hours; one term
Prerequisite: Registration in Level II or above of the B.H.Sc. (Honours) program or permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4U06  
**CURRENT RESEARCH INITIATIVES**
An opportunity to explore current research initiatives at McMaster. Faculty members and Post-Doctoral fellows will offer three week sessions to explain and discuss their current research.
Three hours; two terms
Prerequisite: Registration in Level II or above of the B.H.Sc. (Honours) program or permission of the Assistant Dean, B.H.Sc. (Honours) program

HTH SCI 4V03  
**CONTROL OF HUMAN MOVEMENT**
The topics in this course will include basic neurophysiology and control of sensation, proprioception, reflex and voluntary movement. Throughout the course, theories underlying motor control of voluntary movement will be studied in healthy and neurologically impaired populations.
Two lectures, one lab; one term
Prerequisite: HTH SCI 2F03, 2F3F

HTH SCI 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: Permission of the Assistant Dean, B.H.Sc. (Honours) Program Office

HTH SCI 4X03  
**COLLABORATION AND PEAR TUTORING**
An important part of our responsibility in the program is to develop a learning community that incorporates the concepts of collaboration, peer tutoring and life-long learning. This course will consist of three units to be taken over four years and will encourage these activities, both formally and informally.
Prerequisite: Registration in Level IV of the B.H.Sc. (Honours) program
Antirequisite: BIOLOGY 3Q03, 3G03, INQUIRY 3S03, SCIENCE 2L03, SOC SCI 2L03

HTH SCI 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: Registration in Level II or above of the B.H.Sc. (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), B.Sc. N. (A), (B), (C) or (D) Streams, Oncology, Psychiatric-Mental Health Nursing or Midwifery, as applicable.

**Courses**

**HTH SCI 1A03**  
**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.
Lectures and problem-based tutorial (three hours); one term
Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream; or permission of the instructor
Antirequisite: HTH SCI 1A06, 1C7C

**HTH SCI 1B03**  
**HUMAN BIOCHEMISTRY II**
DNA replication, transcription and translation; recombinant DNA technology; and the molecular biology of inherited and acquired diseases.
Lectures and problem-based tutorial (three hours); one term
Prerequisite: HTH SCI 1A03 and registration in Level I of the B.Sc.N. (A) or (D) Stream; or permission of the instructor
Antirequisite: HTH SCI 1A06, 1C7C

**HTH SCI 1C06**  
**SOCIAL AND CULTURAL DIMENSIONS OF HEALTH CARE**
This course will increase the students' understanding of individuals, social and cultural groups in relation to health and health care. Special emphasis will be placed on understanding the social and cultural meanings of pregnancy and birth to women and their families, in particular cultural communities within Ontario.
Lectures/tutorial; two terms
Prerequisite: Registration in the Midwifery Education program

**HTH SCI 1C7**  
**INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE**
Through a small group, self-directed problem-based learning format, students will apply principles of cellular biology, biochemistry and human anatomy and physiology essential to the assessment and understanding of normal and pathological problems.
Lecture (two hours), two problem-based tutorials (two hours each), self-study; one term
Prerequisite: Registration in Level III of the B.Sc.N. (B) or Nurse Practitioner (C) Stream
Antirequisite: HTH SCI 1A06, 1A33, 1B33, 1Z24

**HTH SCI 1D06**  
**TOPICS IN BIOLOGICAL SCIENCES**
This course covers basic concepts of human structure and function, genetics and embryology through lectures, demonstrations and appropriate laboratory assignments.
Lectures/tutorial; two terms
Prerequisite: Registration in the Midwifery Education program
Antirequisite: BIOLOGY 1J03, 3U03, 3U3, HTH SCI 1F03, 2FF3, KINESIOL 1A06, 1X06, 1Y03, 1YV3
HTH SCI 1H03  HUMAN PHYSIOLOGY AND ANATOMY I
A study of anatomy and physiology of the communication and locomotion systems.
Lecture (two hours), lab or tutorial (three hours); one term
Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream or permission of the instructor.
Cross-list: HTH SCI 2F03
Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1B07, KINESIOL 1A05, 1X06, 1Y03, 1YY3

HTH SCI 1I03  HUMAN PHYSIOLOGY AND ANATOMY II
A study of the anatomy and physiology of the systems maintaining homeostasis.
Lecture (two hours), lab or tutorial (three hours); one term
Prerequisite: HTH SCI 1H03 and registration in Level I of the B.Sc.N. (A) or (D) Stream; or permission of the instructor.
Cross-list: HTH SCI 2F03
Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1B07, KINESIOL 1A05, 1X06, 1Y03, 1YY3

HTH SCI 1Z24  INTRODUCTION TO PHYSIOLOGY FOR POST DIPLOMA NURSING STUDENTS
This course focuses on the regulatory physiology of the gastrointestinal, cardiovascular, respiratory and renal systems and how these systems maintain acid base and ionic balance and homeostasis.
Lecture (two hours), tutorial/lab (three hours); one term
Prerequisite: Credit or registration in HTH SCI 1AA3 1BB3 (or 1A05) and registration in Level III of the B.Sc.N. (B) Stream; and permission of the instructor.
Antirequisite: HTH SCI 1CC7

HTH SCI 2BB3  HEALTH SCIENCE AND SOCIETY
This course is concerned with the biological, environmetal, behavioural, social and economic factors that determine health needs of the population. The major components to the course are: measuring health status, the determinants of health, and the provision of health care services. Offered by Web CT/Print Management Based. The Program reserves the right to cancel the course due to low enrolment.
Prerequisite: Registration in Level II of the Midwifery Education program.

HTH SCI 2C07  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 problems.
Lecture (two hours), two problem-based tutorials (two hours each), journal club; one term
Prerequisite: Either HTH SCI 1CC7 or both HTH SCI 1A06 and 1Z24; and registration in Level III of the B.Sc.N. (B) or Nurse Practitioner (C) Stream.
Antirequisite: HTH SCI 2AA2, 2BB2, 2CC2, 2DD2, 2H03, 2C05, 2H3

HTH SCI 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 or clinical problem (three hours); one term
Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A05), 1H03, 1HH3 and registration in Level II of the B.Sc.N. (A) or (D) Stream; or permission of the instructor.
Antirequisite: HTH SCI 2B08, 2C07, 2D02

HTH SCI 2H08  INTRODUCTORY MICROBIOLOGY
An examination of the interactions of microbes in the human body including action, responses, treatment and prevention.
Lecture (two hours), tutorial or lab or clinical problem (three hours); one term
Prerequisite: HTH SCI 1AA3, 1BB3 (or 1A05), 1H03, 1HH3 and registration in Level II of the B.Sc.N. (A) or (D) Stream; or permission of the instructor.
Antirequisite: HTH SCI 2B08, 2C07, 2C02

HTH SCI 2I03  SOCIAL ASPECTS OF REPRODUCTION
An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above.
Cross-list: HEALTHST 2F03, WCNENST 2H03
This course is administered by Women's Studies.

HTH SCI 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: Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering.
Cross-list: HTH SCI 1H03, 2F03
Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 1D06, KINESIOL 1A05, 1X06, 1Y03, 1YY3

HTH SCI 2L03  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, immunological, gastrointestinal, nutrition, uro-genital, and renal.
Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term
Prerequisite: Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering.
Cross-list: HTH SCI 1H03, 2F03
Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 1D06, KINESIOL 1A05, 1X06, 1Y03, 1YY3

HTH SCI 3B03  HEALTH, SCIENCE AND SOCIETY
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.
Nine lecture/problem-based tutorials (three hours each), guided self-study (two hours); one term
Prerequisite: Registration in Level III of the B.Sc.N. (A) or (D) Stream, or the Nurse Practitioner (C) Stream or Level III or IV of the B.Sc.N. (B) Stream; or registration in Level II of the Midwifery Education program; or permission of the instructor.

HTH SCI 3C04  INTRODUCTION TO RESEARCH METHODS AND CRITICAL APPRAISAL
Introduction to the principles of clinical research and scientific inference, with particular emphasis on critical assessment of research evidence (both qualitative and quantitative) as presented in the health sciences literature related to health care.
Problem based tutorial (three hours), guided self-study (one and one half hours) per week; one term
Prerequisite: Normally, registration in Level III of the B.Sc.N. (A), (B), (D) or Nurse Practitioner (C) Stream; or registration in the Midwifery Education program; or the Paediatric Oncology or Adult Oncology program; or the Psychiatric-Mental Health Nursing program; or permission of the Instructor.
Antirequisite: HTH SCI 3A03, 3L02, 5M03

HTH SCI 3R03  INDEPENDENT STUDY IN A HEALTH SCIENCES TOPIC
A non-clinical course in which special topics will be considered in depth under the supervision of a faculty member. The plan of study must be negotiated with the faculty member.
Lecture or equivalent (three hours); one term
Prerequisite: Registration in Level II or above of the B.Sc.N. program; and permission of the instructor; and permission of the Coordinator of Studies (Nursing).
Students will not normally be permitted to apply more than one independent study course in the Health Sciences toward their elective requirements for the B.Sc.N. program.

HTH SCI 4E05  INTRODUCTION TO HEALTH CARE LEADERSHIP/MANAGEMENT
Theories and principles of leadership and management are applied to the health care disciplines. Given in both problem based tutorial format and through distance education. Enrolment in tutorial format is limited.
Problem based tutorial or equivalent (four hours); independent study at a clinical site (six hours); one term
Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor.
Antirequisite: NURSING 4306
HEALTH STUDIES

WEB ADDRESS:  http://www.socsci.mcmaster.ca/healthst/

Faculty as of January 15, 2005

Director
Roy Cain

Associate Professors
Ivy Bourgeault(Sociology) B.S.C. (Alberta), M.Sc., Ph. D. (Toronto)

Assistant Professors
Aina Gildiner(Political Science) B.S.C., M.Sc., Ph.D. (Toronto)
James Gillett(Sociology) B.A. (Calgary), M.A., Ph.D. (McMaster)
Celia Rothenberg(Anthropology) B.A. (Western Ontario), M.A., Ph.D. (Toronto)
Chris Sinding(Social Work) B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)

Adjunct Assistant Professor
Colin McMullan(Anthropology) B.A. (Western Ontario), M.A., Ph.D. (McMaster)

Associate Members
Roy Cain(Social Work) B.S.W., M.S.W., Ph.D. (McGill)
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)
Michael Jerrett(Geography and Earth Sciences) B.Sc. (Toronto), M.A., Ph.D. (Toronto)
Christina Moffat(Anthropology) B.S.C. (Toronto), B.A., Ph.D. (McMaster)
David Wright(History/Psychiatry) B.A., M.A. (McGill), D. Phil. (Oxford)

Academic Advisory Committee
Jane Aronson(Social Work)
David Clark(English and Cultural Studies)
Margaret A. Denton(Gerontology/Sociology)
Susan Elliott(Geography and Earth Sciences)
M. Di Giammarino(Clinical Epidemiology and Biostatistics/CHEPA)
Del Harsh(Bachelor of Health Sciences(Honours) program)
Ann Herrin(Anthropology)
Jeremiah Hurley(Economics)
Sue Inglis(Kinesiology)
Chistina Moffat(Anthropology)
Dorothy Pawluch(Sociology)
Terry Porter(Political Science)
Eileen Schuler(Anthropology)
Laurel Trainer(Psychology)
David Wright(History/Psychiatry)

Notes:
1. HEALTHST 1A03 is available to all students.
2. HEALTHST 2C03, 2D03, 2E03, 2H03 and 3Y03 may be taken as electives by students enrolled in Level II and above of a non-Health Studies program.
3. HEALTHST 3A03, 3D03, 3E03, 3F03, 3H03 and 3Y03 may be taken as electives by students enrolled in Level III and above of a non-Health Studies program. Enrolment for such students is limited and places are assigned on a first come basis.

Courses
If no prerequisite is listed, the course is open.

HEALTHST 1A03  INTRODUCTION TO HEALTH STUDIES
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: HEALTHST 1E03, 1S03, HEALTHST 2A03, 2B03, 2D03, 2F03, 2H03
Not open to students in a Nursing or Midwifery program.

HEALTHST 2A03  SOCIAL IDENTITY, HEALTH AND ILLNESS
A critical exploration of the role of class, race, gender, ability and age in patterns of health and illness.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above of a Health Studies or Gerontology program.
Antirequisite: HEALTHST 2A03
This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.

HEALTHST 2B03  RESEARCH METHODS IN HEALTH STUDIES
A review of the major methodological approaches used in health studies research. The course will examine methods such as historical, qualitative, quantitative, and narrative.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: ECON 2CC3
Not open to students with credit or registration in ECON 2B03, 2X03 or 3203.
This course is administered by the Department of Economics.

HEALTHST 2D03  MENTAL HEALTH
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 discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 3V03

HEALTHST 2E03  HEALTH, ILLNESS AND THE BODY
This course draws on a range of theoretical perspectives to consider the social construction, regulation, control, and experience of the body as it relates to health and illness.
Three hours (lectures and discussion); one term
Prerequisite: One of HEALTHST 1A03, 1E03, 1S03 or SOC SCI 1H03; and registration in Level II or above

HEALTHST 2H03  SOCIAL ASPECTS OF REPRODUCTION
An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birth; rituals, reproductive ethics, policy and technologies.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: HTH SCI 2K03, WOMEN ST 2H03

HEALTHST 3A03  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: Registration in Level III or above of a Health Studies or Gerontology program.
Antirequisite: HEALTHST 3A03
This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.
HEALTHST 3C03  OCCUPATIONAL HEALTH AND SAFETY
An analysis of issues and problems associated with occupational health and safety in Canada and other industrialized countries. Topics will be examined from social, political, economic, legal and medical perspectives. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above of a Health Studies or Labour Studies program
Cross-list: LABR ST 3D03
This course is administered by Labour Studies.
HEALTHST 3D03  DISABILITIES AND CHRONIC ILLNESS
An examination of issues relating to disabilities and chronic illness. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Health Studies program.
HEALTHST 3E03  ETHICAL ISSUES
Ethical issues of current relevance to debates in health and health care. Topics will vary from year to year. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above
Antirequisite: HTH SCI 3L03
Enrolment is limited. Priority will be given to students registered in a Health Studies program.
HEALTHST 3F03  SELECTED TOPICS IN HEALTH STUDIES I
Topics may vary from year to year. Three hours (lectures and discussion); one term
Prerequisite: One of HEALTHST 1F03, 1G03, 1H03; and registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Health Studies program.
HEALTHST 3G03  APPLIED METHODS IN HEALTH STUDIES RESEARCH
A review of applied research methods in Health Studies. The course will consider issues in program evaluation, community needs assessments and community-based research. Students may be involved in community service learning. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above of a Health Studies program
HEALTHST 3H03  HEALTH CONSUMERISM
This course examines the meaning of consumerism, consumer health groups, and the impact of consumerism on health care and health policy. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Health Studies program.
HEALTHST 3I03  INDEPENDENT STUDY
Independent research supervised by a faculty member. One term
Prerequisite: Registration in Level III or above of a Health Studies program and permission of the Director of Health Studies
HEALTHST 3J03  HEALTH POLICY IN A CHANGING WORLD
This course examines major models of health care and policy systems, and the key ideas and instruments that underlie health policy in selected countries such as Canada. Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or above of any Health Studies or Political Science program
Cross-list: POL SCI 3M03
This course is administered by the Department of Political Science.
HEALTHST 3K03  DEATH, DISEASE AND DEGENERATION:
A HISTORY OF HEALTH AND HEALTH CARE IN CANADA
Explores the history of health and health care in Canada, from the first Western European settlements to the present day. Two lectures one small group session (one hour); one term
Prerequisite: Registration in Level II or above
Cross-list: HTH SCI 3K03, HISTORY 3Y03
This course is administered by the Bachelor of Health Sciences (Honours) program.
HEALTHST 4A03  RESEARCH SEMINAR
Systematic inquiry of a selected topic in a problem-based seminar. Students will identify a health issue, formulate questions, conduct research and present findings. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies program
HEALTHST 4C03  REPRESENTATIONS OF HEALTH AND ILLNESS
An exploration of representations of health and illness in the humanities. The focus may vary from year to year, but will examine how health and illness have been represented in literature, art, drama, or music. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies or Gerontology program
Enrolment is limited. This course may be taken by students enrolled in a Gerontology program. However, enrolment for such students is limited.
HEALTHST 4D03  HEALTH IN CROSS CULTURAL AND INTERNATIONAL PERSPECTIVES
Examination of contemporary issues in health and illness from cross cultural and international perspectives. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies program
Enrolment is limited.
HEALTHST 4E03  ENVIRONMENT AND HEALTH
Models and methods for research and policy on environment and health. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies program
Cross-list: GEO 4H03
This course is administered by the School of Geography and Earth Sciences.
HEALTHST 4F03  SELECTED TOPICS IN HEALTH STUDIES II
An examination of selected topics in health studies. Topics may vary from year to year. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies program
HEALTHST 4G03  SELECTED TOPICS IN HEALTH STUDIES III
Topics may vary from year to year. Three hours (seminar); one term
Prerequisite: Registration in Level IV of any Health Studies program
Enrolment is limited.
HEALTHST 4H06  INDEPENDENT STUDY
Independent research supervised by a faculty member. Two terms
Prerequisite: Credit or registration in HEALTHST 4A03 and permission of the Director of Health Studies
HEALTHST 4I03  DIRECTED RESEARCH IN HEALTH STUDIES
Directed study of a research question in Health Studies under the supervision of a faculty member. A report is submitted to the supervisor upon completion of the project. Three hours (seminar); one term
Prerequisite: HEALTHST 4A03 and registration in Level IV of a Health Studies program; or permission of the Director of Health Studies
Enrolment is limited.
HEALTHST 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: Registration in Level IV Health Studies or Level IV Cultural Studies and Critical Theory
Enrolment is limited.

HEBREW

(SEE RELIGIOUS STUDIES, HEBREW)

HISPANIC STUDIES

(SEE MODERN LANGUAGES AND LINGUISTICS, HISPANIC STUDIES)

HISTORY

WEB ADDRESS: http://www.humanities.mcmaster.ca/~history/  
Chester New Hall, Room 619  
Ext. 24270

Faculty as of January 15, 2005

Chair  
Virginia Aksan  
Professors  
Department Notes:

1. The Department of History offers six Level I courses, each of which is designed to introduce the student to the study of History at the university level through the examination of an important aspect of the development of western civilization. Six units of Level I History are required for those students who anticipate entering B.A. or Honours programs in History, but students will be admitted to programs in History from CLASSICS 1LL3, L03, or L06, or from other Departments. Students may take only 12 units of these Level I History courses.

2. Not every History course listed in this Calendar is offered every year. Students should consult the Department of History web site (http://www.humanities.mcmaster.ca/-history/) 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 an Honours History program to enrol in any Level IV History seminar. Preference will be given in order to students according to the following categories: Level IV Honours History and Combined Honours in History; Level III Honours History and Combined Honours in History; Level III B.A. History and others (with special permission of the Department).

4. Students interested in Ancient History are advised to examine the courses in Classics offered by the Department of Classics. The following course may be applied towards degree requirements in History at Levels II and III:

KINESIOL 3A03 History of Physical Culture and Sports Medicine

KINESIOL 4L16 Advanced Topics in Canadian Sport History

Courses

If no prerequisite is listed, the course is open.

HISTORY 1A03 EUROPE FROM THE RENAISSANCE TO THE FRENCH REVOLUTION

An examination of the principal themes and issues of European History from the Renaissance to the French Revolution. Three hours (lectures and tutorials); one term.

HISTORY 1A03 EUROPE FROM THE FRENCH REVOLUTION TO THE END OF THE SECOND WORLD WAR

An examination of the principal themes and issues of European History from the French Revolution to the end of the Second World War. Three hours (lectures and tutorials); one term.

HISTORY 1B03 THE AMERICAS AND THE WORLD

An examination of the Americas from European contact into the nineteenth century. Three hours (lectures and tutorials); one term.

HISTORY 1B03 GLOBAL HISTORY IN THE TWENTIETH CENTURY

An examination of global interactions of peoples and nations since 1900. Three hours (lectures and tutorials); one term.

HISTORY 1L03 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD I

The history of the Ancient Near East and Greece down to the end of the 5th century B.C. based on documentary sources and archaeological evidence. Two lectures, one tutorial; one term. Cross-list: Classics 1L03. Antirequisite: Classics 1L06, History 1L06. This course is administered by the Department of Classics.

HISTORY 1L03 HISTORY AND ARCHAEOLOGY OF THE ANCIENT WORLD II

The history of Greece and Rome from the 4th century B.C. to the fall of Rome based on documentary sources and archaeological evidence. Two lectures, one tutorial; one term. Cross-list: Classics 1L03. Antirequisite: Classics 1L06, History 1L06. This course is administered by the Department of Classics.

HISTORY 2A03 THE MODERN CARIBBEAN

An examination of the nineteenth- and twentieth-century Caribbean, focusing on the end of slavery; the arrival of indentured Asian immigrants; pan-Africanism; anti-colonial movements and revolution. Three hours (lectures and discussion); one term. Prerequisite: Registration in Level II or above. Cross-list: Peace 2A03.

HISTORY 2C06 MODERN EUROPE

An examination of major themes in 19th- and 20th-century European history up to the 1990s. Three lectures; two terms. Prerequisite: Registration in Level II or above.

HISTORY 2D03 EARLY LATIN AMERICA

From the Amerindian cultures to 1823. This course will deal with the pre-Columbian civilizations, the Spanish conquest and its consequences until the wars for independence from Spain. Three hours (lectures and discussion); one term. Prerequisite: Registration in Level II or above. Antirequisite: History 2XX3. Alternates with History 2G03.

HISTORY 2E03 ISLAM AND MEDITERRANEAN SOCIETY, 600-1300

An introduction to Islamic civilization from its beginnings in Arabia to the period of the Crusades, with an emphasis on Mediterranean culture of the period. Three lectures; one term. Prerequisite: Registration in Level II or above. Cross-list: RELIG ST 2E03.

HISTORY 2E03 ISLAM IN THE WORLD, 1300-1800

A survey course which emphasizes the role of Islam in the global setting in the period of the great Islamic empires. Three lectures; one term. Prerequisite: Registration in Level II or above. Cross-list: RELIG ST 2E03.
HISTORY 2F03  WOMEN IN EUROPE TO 1650
An exploration of the history of European women and gender during the
medieval and early modern periods, focusing on the political, social, spiritual, intellectual and economic realms.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 2F03
Antirequisite: HISTORY 2BB6, WOMEN ST 2BB6

HISTORY 2FF3  WOMEN IN EUROPE FROM 1650
An exploration of the history of European women and gender in the modern
era, focusing on women's changing roles in the economic and political
spheres and the development of new visions of the family and sexuality.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 2FF3
Antirequisite: HISTORY 2BB6, WOMEN ST 2BB6

HISTORY 2G03  MODERN LATIN AMERICA SINCE 1820
A thematic study of Latin America since 1820, with an emphasis on political, social and cultural development.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2G03
Antirequisite: HISTORY 2GG3, CLASSICS 2GG3

HISTORY 2H06  EUROPE IN THE MIDDLE AGES
The history of Western Europe, 400-1400: from the barbarian kingdoms to the emergence of national monarchies.
Three lectures; two terms
Prerequisite: Registration in Level II or above

HISTORY 2K03  THE SOCIETY OF GREECE AND ROME
A description and analysis 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: Registration in Level II or above
Cross-list: CLASSICS 2K03

HISTORY 2L03  CLASSICAL GREECE
Greece from the rise of the city-states to Alexander, with particular attention to the political, social and cultural development in the light of literary and archaeological evidence. (No Greek or Latin required.)
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2L03

HISTORY 2L3  CLASSICAL ROME
Rome from the middle Republic through the Empire, with particular attention to the political, social and cultural development in the light of both literary and archaeological evidence. (No Greek or Latin required.)
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2L3

HISTORY 2M03  EARLY MODERN BRITAIN, 1500-1800
A thematic study of British culture, society and governance between 1500 and 1600 A.D.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2MN

HISTORY 2MM  BRITAIN IN THE MODERN ERA, 1800-2000
The political, social, economic and cultural history of Britain over the last two centuries, with particular attention to the domestic impact of the British imperial experience.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2MN

HISTORY 2P03  HISTORICAL INQUIRY
An introduction to the systematic investigation of historical issues and problems in a small class setting. Topics will vary, representative of the interests of the department's teaching staff.
Three hours (seminar); one term
Prerequisite: Permission of the Department. Priority will be given to students registered in Level II of an Honours program in History. Students wishing to take this course must complete an application form in the History Department before March 31 to guarantee consideration for the following year. Enrolment is limited. Departmental permission is required.

HISTORY 2Q03  IMPERIAL RUSSIA
A survey of Russian history from Peter the Great to the Revolutions of 1917.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 3HN

HISTORY 2Q3  SOVIET HISTORY FROM 1917 TO THE PRESENT
A history of the Soviet Union from 1917 to the present with an emphasis on social history, culture, and identity.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 3HN

HISTORY 2R03  U.S. HISTORY TO THE CIVIL WAR
A survey of the political, cultural, social and economic development of the United States to 1877, from the colonial and revolutionary era to the Civil War and Reconstruction.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2H06

HISTORY 2R3  U.S. HISTORY SINCE THE CIVIL WAR
A survey of the political, cultural, social, and economic development of the United States from Reconstruction to the present.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2H06

HISTORY 2S03  WAR IN THE WEST, 1789-1945
A survey of the development of warfare in the Western World from 1789 to 1945. Particular attention is paid to the French Revolutionary and Napoleonic Wars, and the Two World Wars in the twentieth century.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2S03

HISTORY 2T03  SURVEY OF CANADIAN HISTORY, BEGINNINGS TO 1885
A 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.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2J06

HISTORY 2T3  SURVEY OF CANADIAN HISTORY, 1885 TO THE PRESENT
A survey of the political, cultural, social and economic development of modern Canada, from the North West Rebellion and nation-building era to the present.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2J06

HISTORY 2U03  HISTORICAL ANTECEDENTS OF GLOBALIZATION, 1200-1700
An introduction to interpretations of globalization, the appearance and expansion of cross-cultural trade systems, colonization, and population diaspora.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2J06

HISTORY 2U3  HISTORICAL ANTECEDENTS OF GLOBALIZATION, 1700-1950
The emergence of global economies, settlement colonies, the dispersal of flora and fauna, the spread of ideas about property and economic development, innovations in finance and communications.
Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2J06

HISTORY 3A3  THE MODERN MIDDLE EAST
A survey of the political and social history of the Middle East from 1800 to the present, with an emphasis on contemporary issues, such as the Islamic impulse and the Arab-Israeli conflict.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3A3
HISTORY 3B03  MODERN JAPAN
A survey of 19th and 20th century Japan, with emphasis on political developments, social change, and Japan's relations with East Asia and the West. Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: JAPAN ST 3B03

HISTORY 3C03  THE LATE ROMAN REPUBLIC
An examination and analysis of major themes in the political, social, and economic history of Rome, from the mid-second century B.C. to the assassination of Caesar. Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L13, 2K03, 2L13, 3C03, 3E03; and registration in Level III or above
Cross-list: CLASSICS 3C03
Alternates with HISTORY 3CC3.
Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3 if the topic was The Late Republic.
This course is administered by the Department of Classics.

HISTORY 3C3  THE EARLY ROMAN EMPIRE
An examination and analysis of major themes in the political, social and administrative history of Rome under the early emperors. Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L13, 2K03, 2L13, 3C03, 3E03; and registration in Level III or above
Cross-list: CLASSICS 3C3
Alternates with HISTORY 3MM3.
Not open to students with credit in CLASSICS 3MM3 or HISTORY 3MM3 if the topic was The Late Republic.
This course is administered by the Department of Classics.

HISTORY 3D03  FRANCE IN ENLIGHTENMENT AND REVOLUTION
A study of change in eighteenth-century France, with emphasis on the origins, nature and impact of the Enlightenment and the French Revolution. Three hours (lectures and discussion); one term
Prerequisite: Six units of History and registration in Level II or above

HISTORY 3D3  THE JEWISH WORLD IN NEW TESTAMENT TIMES
A 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: Registration in Level II or above
Cross-list: RELIG ST 3D3
This course is administered by the Department of Religious Studies.

HISTORY 3E03  THE ROMAN FAMILY
The ancient Roman family, including social, economic and legal aspects.
Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L13, 2K03, 2L13, 3C03, 3E03; and registration in Level III or above
Cross-list: CLASSICS 3E03
Alternates with HISTORY 3EE3.
This course is administered by the Department of Classics.

HISTORY 3E3  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: Registration in Level III or above
Cross-list: CLASSICS 3EE3
This course is administered by the Department of Classics.

HISTORY 3F03  MEDIEVAL SOCIETY
An examination of the aristocratic, monastic, urban and rural communities of the Middle Ages. Attention will be given to patterns of social organization as well as to such specific themes as gender, popular piety, justice and warfare.
Three hours (lectures and discussion group); one term
Prerequisite: Registration in Level II or above

HISTORY 3G03  BUSINESS HISTORY: THE CANADIAN EXPERIENCE IN INTERNATIONAL PERSPECTIVE
An examination of major developments in the formation of the modern corporation and the international business system, including a consideration of the impact of the business system on Canadian society.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3G3  CHINA: THE REVOLUTIONARY CENTURY, 1895-1995
End of the imperial system; the Republic; the rise of the Communist Party; Communist China; the varieties of revolution.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2G06

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: Registration in Level II or above
Cross-list: PEACE ST 3I03

HISTORY 3I3  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 hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3I3

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.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3JJ3  CRIME, CRIMINAL JUSTICE AND PUNISHMENT IN MODERN HISTORY
A study of the changing face of the institutions of criminal justice, and of criminal behaviour, as revealed in statistical and conventional historical works. The course will be on North America, Great Britain and France.
Three lectures; one term
Prerequisite: Registration in Level II or above, with a minimum of six units of History.
Enrolment is limited.

HISTORY 3K03  CANADIAN POLITICAL DEVELOPMENT SINCE 1840
An examination of the changing structure and role of the Canadian state since the Act of Union, with particular attention to the emergence of the modern regulatory and welfare state.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3K3  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: Registration in Level II or above
Cross-list: PEACE ST 3K3
Antirequisite: GSCH 4H03

HISTORY 3L03  SOCIAL ACTIVISM, 1500-2000
A thematic study of community activism in Europe and North America. Students will be exposed to the religious, socio-economic and political contexts of social activism, and the historical theory and practice of community-based actions.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3L03

HISTORY 3L3  THE HELLENISTIC AGE
The successor states of Alexander, the world of the monarchies and their absorption into the Roman Empire. Political, cultural and social achievements in the light of modern historical research will be emphasized.
Three hours (lectures and discussion groups); one term
Prerequisite: One of HISTORY 1L03, 1L06, 1L13, 2L03
Cross-list: CLASSICS 3LL3
This course is administered by the Department of Classics.

HISTORY 3M3  TOPICS IN ROMAN HISTORY
Studies of Roman history and institutions during the Republic of the Empire. Consult the Department for the topic to be offered.
Three lectures; one term
Prerequisite: One of HISTORY 1L06, 1L13, 2K03, 2L03, 2L13
Cross-list: CLASSICS 3MM3
HISTORY 3M3 may be repeated, if on a different topic, to a total of six units.
HISTORY 3NN3  CANADA'S REVOLUTIONS: 1939-1982
An intensive treatment, through the lenses of society, ideology and politics, of the revolutionary experience of the post-war decades. The course will examine the country's transition from a prevailing conservative liberalism premised on community solidarity to a liberal democracy which elicits individual rights.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3003  SLAVERY IN THE ATLANTIC WORLD
An examination of slavery in the Americas, from the fifteenth to the nineteenth centuries. Topics to be examined include plantations and labour regimes; gender, slave health; slave resistance; Afro-Creole culture; emancipation.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3003

HISTORY 3P03  RELIGION AND SOCIETY IN CANADA
This course will examine the origin, nature and development of the major Canadian religious denominations from the 17th to the mid-20th Century.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Offered in alternate years.

HISTORY 3PP3  THE INDUSTRIAL REVOLUTION IN BRITAIN, 1780-1914
A survey of the economic and social history of Britain from the early stages of the industrial revolution to the outbreak of the First World War.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3Q03  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.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3Q03

HISTORY 3QG3  THE SOVIET UNION THROUGH FILM
Soviet history through the prism of Soviet film as a primary source from 1924 to the present.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3RR3  WAR AND SOCIETY IN 20TH-CENTURY BRITAIN
Imperialism and Society in Britain: the impact of World War I and World War II on the British Empire.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3SS3  ASPECTS OF THE CULTURAL HISTORY OF ENGLAND, 1500-1688
An Introduction to courtly, urban, and rural culture from pre-Reformation humanism through to the Restoration era, with emphasis upon social, political and religious influences.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3V03  MADNESS IN THE AGE OF REASON: MENTAL ILLNESS AND SOCIETY FROM 1750 TO THE PRESENT DAY
An exploration of the history of madness from the rise of the asylum to the present day.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HEALTHST 2D03

HISTORY 3W03  WOMEN IN CANADA AND THE U.S. TO 1920
This course examines key areas of women's history, such as indigenous cultures, slavery, immigration, religion, witchcraft, the family, sexuality, paid and unpaid labour, and the first wave of the women's movement.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 3G03
Antirequisite: HISTORY 3X03

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: Registration in Level II or above
Cross-list: WOMEN ST 3G03
Antirequisite: HISTORY 3X03

HISTORY 3Y03  DEATH, DISEASE AND DEGENERATION: A HISTORY OF HEALTH AND HEALTH CARE IN CANADA
Explores the history of health and health care in Canada, from the first Western European settlements to the present day:
Two lectures one small group session (one hour); one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 3Y03, HTH SCI 3Y03
This course is administered by the Bachelor of Health Sciences (Honours) program.

HISTORY 3Z03  JUDAISM, THE JEWISH PEOPLE AND THE BIRTH OF THE MODERN WORLD
On the lures and threats of the modern world from the early eighteenth to the early twentieth century. Topics include: Jewish philosophy in the Age of Reason; newer Jewish denominations, assimilation, early Zionism; Yiddish socialism; the beginnings of modern anti-Semitism movements of cultural renewal.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3Z03
Antirequisite: RELIG ST 2XX3
This course is administered by the Department of Religious Studies.

Note:
Level IV seminars are open only to students registered in Levels III and IV of an Honours History program. Enrolment 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.

HISTORY 4A06  RACISM AND HUMAN RIGHTS IN POST-CONFEDERATION CANADA
This course examines ethnic and racist prejudices and discrimination in Canada including attitudes towards immigrants from Asia and Europe, African Canadian, and Indigenous peoples. It will also explore the efforts of human rights advocates.
Seminars (two hours); two terms
Prerequisite: One of HISTORY 2J06, 2T73 or 2U03; and registration in Level III or IV of an Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4A6  EARLY MODERN BRITAIN, 1500-1800
Selected topics in the political, religious, intellectual, and social life of the British peoples, 1500-1800.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2M03, 2N06, 3SS3, or 3T73; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4B06  MODERN CANADA, 1867-1988: AN INTELLECTUAL AND CULTURAL HISTORY
An intensive study of the shaping of the twentieth-century outlook in English-speaking Canada. Topics will include the growth of the welfare state, ideologies (liberalism, conservatism, socialism, feminism), the cultural impact of depression and the two world wars, and the role of religion in shaping the Canadian community.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2J06, 2T73, 2U03 or 3N03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.
HISTORY 4B06 MODERN JAPAN
Japan from the Meiji Restoration to the post-war resurgence, with emphasis on political developments and social change.
Seminar (two hours); two terms
Prerequisite: HISTORY 3B03 and registration in Level III or IV of any Honours program in History; or JAPAN ST 3B03 (HISTORY 3B03) with a grade of at least B- and registration in Level III or IV of the Japanese Studies program
Enrolment is limited. Departmental permission required.

HISTORY 4C06 MODERN EUROPEAN CULTURE IN CRISIS
An examination of European intellectual and cultural history from the late nineteenth to the mid-twentieth centuries. Themes include the encounter with modernity; the intersection of culture and politics; the impact of two world wars; and the response of intellectuals, artists and scientists to ideological polarization.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2R03, 3H06, 3HH3, 3103, 3Q03, 3R03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4D06 ANCIENT CIVILIZATIONS
A thematic study of selected civilizations in the ancient world.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2106, 2L03, 2LL3, 3LL3, 3MM3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4E06 THE LEGACY OF THE FIRST WORLD WAR ON BRITISH SOCIETY
This course examines the social, political and cultural consequences of the First World War on Britain, both at the time of its fighting and long after the fighting had ended.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2M03, 2Q03, 3HH3, 3Q03, or 3R03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4F06 HEALTH AND MEDICINE IN THE MODERN WORLD
An examination of public health and medicine in the Modern Western World, with particular emphasis on Britain and North America, c. 1760-1945. Topics will include: the impact of infectious diseases on First Nations' society; urban sanitary reform; the emergence of the medical profession; and the rise of universal health insurance.
Seminar (two hours); two terms
Prerequisite: HISTORY 3V03 or 3Y03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4G06 MODERN CHINA
Aspects of the political, social, and cultural history of nineteenth- and twentieth-century China.
Seminar (two hours); two terms
Prerequisite: HISTORY 2G33 or 3G33; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4G66 MIDDLE EASTERN AND ISLAMIC HISTORY
Aspects of the social history of the Middle East and Islamic world, such as the Muslim-Christian encounter, gender and ethnicity.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2EA3, 2EB3, 3A03, 3AA3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4I06 WOMEN AND SOCIAL MOVEMENTS IN THE NINETEENTH AND TWENTIETH-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, feminism, masculinity, and class in U.S. history.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2F03, 2H06, 2R03, 2RR3 or 3WW3; and registration in Level III or IV of an Honours program in History
Not open to students with credit in HISTORY 4J06 if taken in the 2000, 2002 or 2003 academic years.
Enrolment is limited. Departmental permission required.

HISTORY 4J06 THE UNITED STATES SINCE 1865
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2R03, 2RR3 or 3FF3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4J16 U.S. FOREIGN RELATIONS
Topics in the history of the United States Foreign relations in the modern era.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2R03, 3FF3, 3R13 or 3KK3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4K06 ENVIRONMENT AND ENVIRONMENTALISM IN MODERN NORTH AMERICA, 1890-1990
Explores how different social groups in the United States and Canada confronted the sometimes adverse impact of urban and industrial growth on the physical environment of their communities.
Seminar (two hours); two terms
Prerequisite: Registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4N06 SOCIETY AND CULTURE IN THE ATLANTIC WORLD
An examination of selected themes in the history of the Atlantic world from the sixteenth to the nineteenth centuries. Topics may include race, gender, and class; slavery and emancipation; revolution and the transfer of revolutionary ideas.
Prerequisite: One of HISTORY 2AA3, 2D03, 2R03, 2U03, 3Q03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4O06 RUSSIA AND REVOLUTION
The Soviet experiment from 1917 to the death of Stalin and beyond with special emphasis on the issue of identity.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2003, 2Q03, 3H06, 3Q03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4P06 CONTEMPORARY EUROPE
Topics in the history of Europe during the 20th Century.
Seminar (two hours); two terms
Prerequisite: Six units from HISTORY 2C06, 2G03, 3H06, 3HH3, 3Q03, or 3R03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4Q06 LATE ANTIQUITY AND BYZANTIUM
An examination of the shift from pagan to Christian paradigms in the Mediterranean world, beginning with the conversion of Constantine in 313 and ending with the fall of Constantinople in 1453.
Seminar (two hours); two terms
Prerequisite: Six units from HISTORY 2106, 2L03, 3L03, 3L3, 3MM3, 3U03, 3VV3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4R06 INDEPENDENT RESEARCH
A 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.
Prerequisite: Registration in Level IV of any Honours program in History with a CA of at least 9.0; and permission of the Department
Enrolment is limited. Departmental permission required.

HISTORY 4W06 THE NORTH AMERICAN CITY, 1700 TO THE PRESENT
An examination of: founders' designs; practices and influence of business communities; the impact of technologies and architecture; spatial organization of class and ethnicity; shelter and urban services; differences between Canadian and American cities.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2H06, 2J06, 2R03, 2RR3, 2T03 or 2TT3; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4Y06 THE SECOND WORLD WAR
Emphasis will be placed on the military and diplomatic aspects of the subject.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2C06, 2S03, 3103, 3Q03 or 3R03; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.
HUMANITIES (GENERAL)

Courses  If no prerequisite is listed, the course is open.

HUMAN 2C03  CRITICAL THINKING
This course aims to improve skills in analyzing and evaluating arguments and presentations found in everyday life and academic contexts, and to improve critical judgement.
Two lectures; one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2W03
Antirequisite: ARTS&SCI 1B06, PHILOS 2B03
HUMAN 2C03 is administered by the Department of Philosophy.

HUMAN 3C03  HUMANITIES COMMUNICATION PRACTICUM
Students will study writing problems common to Level I or II writing assignments and instructional techniques for addressing them. Students will serve as writing mentors.
Three hours (tutorials and labs); one term.
Prerequisite: Registration in Level III or IV of any Honours program in the Faculty of Humanities and permission of the instructor (Dr. J. Buckley, TSH-906)
Enrolment is limited.

HUMAN 3W03  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: Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Dean's Office, CNH-112, for information on opportunities that are available for the coming year.
Enrolment is limited. Permission of the Associate Dean is required.

HUMAN 4W03  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: Registration in Level III or IV of any Honours program offered by the Faculty of Humanities. Students must contact the Dean's Office, CNH-112, for information on opportunities that are available for the coming year.
Enrolment is limited. Permission of the Associate Dean is required.

INDIGENOUS STUDIES

WEB ADDRESS:  http://www.mcmaster.ca/indigenous/
Chester New Hall, Room 228
Ext. 27426

Director
D.J. Martin-Hill, B.A., M.A., Ph.D. (McMaster)

Committee of Instructors
S. Buck
T. Deer, Mohawk Language Instructor
N. General
J. Longboat
T. McCarthy
L. Toulouse, Ojibwe Language Instructor

Associate Elders
W. Cooke, Ojibwe
A. General, Confederacy Chief, Six Nations
N. General, Faithkeeper, Six Nations

President's Committee on Indigenous Issues
Co-Chairs
T. Deer (Six Nations Community Representative)
W. Werry (McMaster University Representative)

INDIGENOUS STUDIES ...  

Courses  If no prerequisite is listed, the course is open.

INDIG ST 1A03  INTRODUCTION TO CONTEMPORARY INDIGENOUS STUDIES
This course will explore the relationship between Indigenous peoples and mainstream society in the twentieth century with regard to governmental policy, land claims, economic development, and self-determination.
Three hours (lectures and seminars); one term
Antirequisite: INDIG ST 1A03

INDIG ST 2A03  INDIGENOUS PEOPLES' SPIRITUALITY
This course will examine the spirituality based knowledge of aboriginal 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: INDIG ST 1A03, 1A1A; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor
Antirequisite: INDIG ST 2A03

INDIG ST 2A03  INDIGENOUS KNOWLEDGE AND METHODOLOGY
This course will explore the basis of Indigenous knowledge and how that translates into theory and methodology. It explores a range of interdisciplinary approaches based on current work of Indigenous scholars redefining the field of Indigenous research.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A1A; or one of CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03; or permission of the instructor
Antirequisite: INDIG ST 2A03

INDIG ST 2B03  HISTORY OF INDIGENOUS PEOPLES' SOVEREIGNTY
An examination of North America Indigenous People's political and economic history in the pre-contact, early contact, and colonial era's within a post-colonial context. Topics will include: self-determination, resource management, land claims, and economic development.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1A1A; or permission of the Instructor

INDIG ST 2C03  CONTEMPORARY INDIGENOUS SOCIETIES AND ISSUES: SELECTED TOPICS
2005-2006 Topic: TBA
A 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: INDIG ST 1A03, 1A1A; or permission of the instructor
INDIG ST 2C03 may be repeated, if on a different topic, to a total of six units.

INDIG ST 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
Prerequisite: INDIG ST 1A03, 1A1A; or permission of the instructor
Not open to students with credit in INDIG ST 3CC3, if the topic was Traditional Indigenous Ecological Knowledge.

INDIG ST 3C03  STUDY OF IROQUOIS FIRST NATIONS IN CONTEMPORARY TIMES
An intensive examination of the Iroquois Confederacy and its attempts to maintain its culture, socio-political systems and economic independence.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

INDIG ST 3CC3  CONTEMPORARY INDIGENOUS SOCIETIES: SELECTED TOPICS
2005-2006 Topic: TBA
An intensive examination of selected political, economic, or social problems faced by selected Indigenous peoples.
Three hours (lectures and seminars); one term
Prerequisite: Six units Level II Indigenous Studies or permission of the instructor
INDIG ST 3CC3 may be repeated, if on a different topic, to a total of six units.
INDIG ST 3D03  CONTEMPORARY NATIVE LITERATURE IN CANADA

A study of significant works by Native writers who give voice to their experience in Canada. Issues to be examined include appropriation of voice, Native identity, women in Indigenous societies, and stereotypes.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor
Cross-list: CSCT 3W03, ENGLISH 3W03

INDIG ST 3E03  CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

A study of contemporary works by Native writers in the United States. Native representations of voice, identity, gender, and popular culture will be examined.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor
Cross-list: CSCT 3X03, ENGLISH 3X03, PEACE ST 3X03

INDIG ST 3G03  INDIGENOUS CREATIVE ARTS AND DRAMA: SELECTED TOPICS

2005-2006 Topic: TBA
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: Six units of Level II Indigenous Studies or permission of the instructor
INDIG ST 3G03 may be repeated, if on a different topic, to a total of nine units.

INDIG ST 3H03  INDIGENOUS MEDICINE I - PHILOSOPHY

This course will examine the Aboriginal 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: Six units of Level II Indigenous Studies or permission of the instructor
Not open to students with credit in INDIG ST 3CC3, if the topic was Traditional Approaches to Healing and Wellness.

INDIG ST 3H13  INDIGENOUS MEDICINE II - PRACTICAL

This course will examine the concept of traditional medicines; their histories and their connection to Aboriginal 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: Six units of Level II Indigenous Studies or permission of the instructor
Not open to students with credit in INDIG ST 3CC3, if the topic was Traditional Approaches to Healing and Wellness.

INDIG ST 3I03  INDIGENOUS PEOPLES AND SOCIAL POLICY

Examines the evolution of colonial policies and their impact on Indigenous peoples, social structures, socio-economic status and relationships with the government of Canada. The emphasis will be on the colonialization of family and community; assessing how the Indian Act and Child Welfare Act shaped the current First Nations realities and challenges. There will be a focus on gender Indigenous analysis of colonialism.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

INDIG ST 3J03  GOVERNMENT AND POLITICS OF INDIGENOUS PEOPLES

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.
Three hours (lectures and seminars); one term
Cross-list: POL SCI 3C03
Enrolment is limited
This course is administered by the Department of Political Science.

INDIG ST 3K03  INDIGENOUS HUMAN RIGHTS

A study of government policies and their impact on Indigenous Peoples, specifically Indian Affairs in Canada and the United States. Topics will include individual and collective rights of Indigenous Peoples and the conceptual problems which arise in a Westernized justice system.
Three hours (lectures and seminars); one term
Prerequisite: Six units of Level II Indigenous Studies or permission of the instructor

INDIG ST 3L03  INDIGENOUS INDEPENDENT STUDY

In consultation with the Director of Indigenous Studies, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required.
Prerequisite: Registration in Level II, or III of the Combined B.A. in Indigenous Studies program or permission of the Director

CAYUGA...

Courses  If no prerequisite is listed, the course is open.

CAYUGA 1203  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.
Three hours (lecture and seminars); one term
Prerequisite: CAYUGA 1203 or 1206
Antirequisite: CAYUGA 2206
This course is administered by and offered at Six Nations Polytechnic, Ohsweken, Ontario.

CAYUGA 2203  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.
Three hours (lecture and seminars); one term
Prerequisite: CAYUGA 1203 or 1206
Antirequisite: CAYUGA 2206
This course is administered by and offered at Six Nations Polytechnic, Ohsweken, Ontario.

MOHAWK ...

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.
Three hours (lecture and seminars); one term
Antirequisite: MOHAWK 1Z06

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.
Three hours (lecture and seminars); one term
Prerequisite: MOHAWK 1Z03 or 1Z06
Antirequisite: MOHAWK 2Z06

OJIBWE ...

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.
Three hours (lecture and seminars); one term
Antirequisite: OJIBWE 1Z06

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.
Three hours (lecture and seminars); one term
Prerequisite: OJIBWE 1Z03 or 1Z06
Antirequisite: OJIBWE 2Z06

INQUIRY

Note: These Level I courses unite the expertise of the Faculties' scholars and researchers with the University's distinctive inquiry-based approach to instruction. Students examine a key research question, as a class of no more than 25, in smaller groups, or in combination with other classes that are examining the same question in a section led by a different instructor.
Courses

If no prerequisite is listed, the course is open.

**INQUIRY 1HU3  INQUIRY IN THE HUMANITIES**
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Humanities.
Three hours; one term
Prerequisite: Registration in Humanities I or Music I
Enrolment is limited.

**INQUIRY 1SC3  INQUIRY IN SCIENCE I**
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a variety of Science-based topics. The choice of topics is guided by the students' interest.
One hour, term one; Two hours, term two
Prerequisite: Registration in Science I or Mathematics and Statistics I
Enrolment is limited.

**INQUIRY 1SS3  INQUIRY IN THE SOCIAL SCIENCES**
This introduction to the systematic investigation of an issue develops skills that will serve students well in their university careers. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions, using, as content, a topic central to research in the Faculty of Social Sciences. Topics may vary from session to session.
Three hours; one term
Prerequisite: Registration in Social Sciences I or Kinesiology I
Enrolment is limited.

Note:
The following courses are upper level Inquiry Courses offered by the Science Faculty. Each course deals with the systematic investigation of broad themes from various areas of science. Students will work in small groups using an interdisciplinary approach. Normally, only one of the following courses may be taken to satisfy program requirements for Inquiry Courses. However, students who are not able to register for three units of Inquiry in their own department may take a maximum of two of the following courses to meet program requirements.

**INQUIRY 3SS03  TEACHING INQUIRY (PEER TUTORING)**
This course provides an opportunity to learn about the teaching of inquiry through practical experience as a peer tutor working closely with an Inquiry instructor, and through projects investigating some aspects of inquiry in more detail.
Peer tutoring responsibilities; weekly seminars; two terms
Prerequisite: Credit in three units of an Inquiry course and permission of the instructor.
Antirequisite: HTH SCI 4X03, INQUIRY 4S03, SCIENCE 2L03, SOC SCI 2L03

**INQUIRY 4SB3  INQUIRY IN SCIENCE II (BIOLOGY)**
Three hours (seminars and discussion); one term
Prerequisite: At least three units of Biology and registration in Level IV of an Honours program in the Faculty of Science other than Biology.
Enrolment is limited.

**INQUIRY 4SC3  INQUIRY IN SCIENCE II (CHEMISTRY)**
Three hours (seminars and discussion); one term
Prerequisite: At least three units of Chemistry and registration in Level IV of an Honours program in the Faculty of Science other than Chemistry.
Enrolment is limited.

**INQUIRY 4SF3  INQUIRY IN SCIENCE II (MATHEMATICS AND STATISTICS)**
Three hours (seminars and discussion); one term
Prerequisite: At least three units of Mathematics or Statistics and registration in Level IV of an Honours program in the Faculty of Science other than Mathematics or Statistics.
Enrolment is limited.

**INQUIRY 4SG3  INQUIRY IN SCIENCE II (PHYSICS AND ASTRONOMY)**
Three hours (seminars and discussion); one term
Prerequisite: At least three units of Physics and registration in Level IV of an Honours program in the Faculty of Science other than Physics.
Enrolment is limited.

**INQUIRY 4SH3  INQUIRY IN SCIENCE II (PSYCHOLOGY)**
Three hours (seminars and discussion); one term
Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science.
Enrolment is limited.

**INQUIRY 4S33  INQUIRY IN SCIENCE II (RADIATION AND LIFE)**
Three hours (seminars and discussion); one term
Prerequisite: Registration in Level IV of an Honours program in the Faculty of Science.
Enrolment is limited.

**ITALIAN**

(See Modern Languages and Linguistics, Italian)

**JAPANESE AND JAPANESE STUDIES**

(See Modern Languages and Linguistics, Japanese)

**JEWISH STUDIES**

(See Interdisciplinary Minors and Thematic Areas)

**KINESIOLOGY**

WEB ADDRESS: http://mcmaster.ca/kinesiology/
Ivor Wynne Centre, Room 203
Ext. 24462

Faculty as of January 15, 2005

Chair
Nal McCartney

Associate Chair (Undergraduate Program)
Nick Cipriano

Professors
Cameron J. Bingham/B.A., B.P.E. (McMaster), M.A., Ph.D. (Western Ontario)
Daphy Elliott/B.Sc., M.Sc., Ph.D. (Waterloo), Senior Canada Research Chair, Motor Control in Special Populations
Audrey Hicks/B.P.E., M.Sc., Ph.D. (McMaster)
Timothy D. Lee/B.H.K., M.A. (Windsor), Ph.D. (Louisiana State)
Nal McCartney/B.Ed. (Exeter), Ph.D. (McMaster)
Daphy G. Sale/B.P.H.E. (Toronto), M.A. (Western Ontario), Ph.D. (McMaster)
Janet L. Starks/B.A. (Western Ontario), M.Sc., Ph.D. (Waterloo)

Associate Professors
Nancy B. Bouchier/B.A., M.A., Ph.D. (Western Ontario)
Nick Cipriano/B.P.H.E., M.Sc. (Lakehead)
James J. Dowling/B.H.K., M.H.K. (Windsor), Ph.D. (Waterloo)
KINESIOLOGY

Martin J. Gibala/B.H.K., M.Sc. (McMaster), Ph.D. (Guelph)
Robert J. Henderson/B.P.E. (McMaster), M.A., Ph.D. (Alberta)
Sue Inglis/B.P.E., M.A. (Alberta), Ph.D. (Ohio State)
Kathleen A. Martin Ginis/B.Sc. (Toronto), M.A. (Western Ontario), Ph.D. (Waterloo)
Stuart M. Phillips/B.Sc., M.Sc. (McMaster), Ph.D. (Waterloo)
David C. Wilson/Cert.Ed. (St. Paul's College), B.Ed. (Bristol), M.A. (York)

Assistant Professors
Barry Bartlett/B.P.H.E. (Toronto), M.A. (Western Ontario), CATA (C)
Steven Bray/B.A., M.A. (Western Ontario), Ph.D. (Waterloo)
James Lyons/B.A., M.Sc., (McMaster), Ph.D. (Simon Fraser)
Maureen J. MacDonald/B.Sc. (Acadia), M.Sc., Ph.D. (Waterloo)

Associate Members
Vicki Galea/(Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (McMaster)
Mark V. Kamathi/(Medicine) B.Eng. (Mysore), M.S., Ph.D. (Indian Inst. of Tech., Madras), Ph.D. (McMaster)
Robert S. McKelvie/(Medicine) B.Sc., M.Sc., M.D. (Western Ontario), Ph.D. (McMaster)
Michael Pierrynowski/(Rehabilitation Science) B.Sc., M.Sc., M.D. (Alberta), Ph.D. (Simon Fraser)
Mark A. Tarnopolsky/(Medicine) B.P.E., M.D., Ph.D., F.R.C.P. (C), (McMaster)
Jean Wessell/(Rehabilitation Science) B.Sc., (McGill) M.HSC, (McMaster)

Department Notes:
1. Kinesiology students may not register in Level III or IV Kinesiology courses until all required Level I and II Kinesiology courses have been successfully completed.
2. Not all Level III and IV Kinesiology courses are offered each year. Enrollment in some Level III and IV Kinesiology courses is limited.
3. KINESIOLOGY 1Y03 and 1Y04 are available to non-Kinesiology students. Enrollment is limited.
4. The following courses are available for elective credit for students enrolled in Level III or above of a non-Kinesiology program: KINESIOLOGY 3D03, 3F03, 3J03, 3M03, 3P03, 3SS3, 3T03, 3Y03, 4D03, 4G03, 4J03, 4M03, 4T03, 4U03 and 4203. Enrollment for such students is limited and places are assigned on a first come basis.
5. Kinesiology students who previously completed KINESIOLOGY 4P03 may use this course to satisfy Psychology requirements for Kinesiology students pursuing a Minor in Psychology.
6. KINESIOLOGY 2G03 and 3SS3 may be used to satisfy Gerontology requirements for Kinesiology students pursuing a Minor in Gerontology.

Courses
All courses are open only to Kinesiology students unless otherwise specified. (See Notes 3 and 4 above.)

KINESIOLOGY 1A06 HUMAN ANATOMY AND PHYSIOLOGY
An introduction to the anatomy and physiology of the skeletal, articular, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, and urinary systems including a regional and systemic approach to examine the functional anatomy of the upper and lower extremities. Three hours (lectures), two hours (labs/tutorials); two terms
Prerequisite: Registration in Kinesiology I
Antirequisite: BIOLOGY 1J03, 2A03, 3U03, 3U03, HTH SCI 1D06, 1H03, 1H03, 2F03, 2F03, 2L03, 2L03, KINESIOLOGY 1X06, 1Y03, 1Y03
Not open to students with credit or registration in BIOLOGY 4G06.

KINESIOLOGY 1E03 PSYCHOMOTOR BEHAVIOUR
The behavioural and psychological principles underlying motor control and motor learning. Three hours (lectures, labs); one term
Prerequisite: Registration in Kinesiology I

KINESIOLOGY 1H03 SPORT, HUMAN MOVEMENT AND CULTURE
Critical examination of contemporary issues and problems of sport in Canadian Society.
Three hours (lectures); one term
Prerequisite: Registration in Kinesiology I
Antirequisite: KINESIOLOGY 2B03

KINESIOLOGY 1K01 INTRODUCTION TO KINESIOLOGY
This course gives insight to the study of Kinesiology at McMaster University. Lectures focus on faculty research and teaching interests.
One hour; one term
Prerequisite: Registration in Kinesiology I
Antirequisite: KINESIOLOGY 1F01

KINESIOLOGY 1Y03 HUMAN ANATOMY AND PHYSIOLOGY I
An introduction to the anatomy and physiology of the skeletal, articular, muscular, and nervous systems including a regional approach to examine the functional anatomy of the upper and lower extremities.
Three hours (lectures), two hours (labs/tutorials); one term
Completion of Biology I (or OAC Biology) is strongly recommended.
Antirequisite: BIOLOGY 1J03, 2A03, 3U03, 3U03, HTH SCI 1D06, 1H03, 1H03, 2F03, 2F03, 2L03, 2L03, KINESIOLOGY 1A06, 1X06
Not open to students registered in a Kinesiology program, Science I, the Bachelor of Health Sciences (Honours) program or to students with credit or registration in BIOLOGY 4G06.
Enrolment is limited.

KINESIOLOGY 2A01 BIOMECHANICS
An introduction to mechanical principles and concepts as applied to human physical activity and the musculoskeletal system.
Three hours (lectures, lab); one term
Prerequisite: KINESIOLOGY 1Y03
Antirequisite: BIOLOGY 1J03, 2A03, 3U03, 3U03, HTH SCI 1D06, 1H03, 1H03, 2F03, 2F03, 2L03, 2L03, KINESIOLOGY 1A06, 1X06
Not open to students registered in a Kinesiology program, Science I, the Bachelor of Health Sciences (Honours) program or to students with credit or registration in BIOLOGY 4G06.
Enrolment is limited.

KINESIOLOGY 2C06 PHYSIOLOGY OF EXERCISE
The effects of exercise on the physiological systems, and the application of physiological principles to human exercise performance.
Three hours (lectures, labs); two terms
Prerequisite: KINESIOLOGY 1A06 and registration in Level II of a Kinesiology program

KINESIOLOGY 2G03 HEALTH PSYCHOLOGY
An introduction to health psychology issues including stress, exercise, weight control and diet, health promotion, addictions and coping with illness.
Three hours (lectures); one term
Prerequisite: Registration in Level II of a Kinesiology program
Antirequisite: HTH SCI 1J03

KINESIOLOGY 2H03 HISTORY AND PHILOSOPHY OF KINESIOLOGY
A study of the origins and development of modern Kinesiology including an examination of the evolution of Kinesiology subdisciplines and areas of allied professional practice such as physical education and sports medicine.
Three hours (lectures, tutorials); one term
Prerequisite: Registration in Level II of a Kinesiology program
Antirequisite: KINESIOLOGY 1D03

KINESIOLOGY 3A03 HISTORY OF PHYSICAL CULTURE AND SPORTS MEDICINE
Selected topics in the social and cultural history of physical culture and sports medicine in the Western World, with a particular emphasis on nineteenth and twentieth century developments in North America.
Three hours (lecture/seminar); one term
Prerequisite: Registration in Level III or above of any Kinesiology, Health Studies or History program
KINESIOLOGY 235

KINESIOLOGY 3AA3 | BIOMECHANICS II
Study of kinematics and kinetics of human movement, including electromyography, fluid and tissue mechanics with applications.
Three hours (lectures, lab); one term
Prerequisite: KINESIOLOGY 1A06, 2A03 and registration in Level III or above of a Kinesiology program
Antirequisite: KINESIOLOGY 2A06

KINESIOLOGY 3B30 | PHYSICAL ACTIVITY FOR CHALLENGED POPULATIONS
An introduction to special populations, together with an examination of issues related to integration, design, and objectives of special physical activity programming.
Three hours (lectures); one term
Prerequisite: KINESIOLOGY 1A06, 2G03
Corequisite: KINESIOLOGY 3B0P
Students who do not successfully complete the required KINESIOLOGY 3B0P placement will forfeit credit in KINESIOLOGY 3B03.

KINESIOLOGY 3B0P | SPECIAL POPULATIONS PLACEMENT
This placement is designed to supplement the student's classroom learning of the issues involving physical activity for special populations. Students design and/or implement physical activity programs in a variety of community settings.
Prerequisite: Registration in Level III or above of a Kinesiology program
Corequisite: KINESIOLOGY 3B03
This placement must be completed in conjunction with KINESIOLOGY 3B03. Students who do not successfully complete this placement will forfeit credit in KINESIOLOGY 3B03.

KINESIOLOGY 3C03 | STATISTICS AND RESEARCH DESIGN
Research design and descriptive and inferential statistics in Kinesiology.
Three hours (lectures, labs); one term
Prerequisite: Registration in Level III or above of a Kinesiology program

KINESIOLOGY 3D03 | GROWTH, MATURATION AND PHYSICAL ACTIVITY
Growth, development and maturation changes underlying morphologic and functional development of selected physiological systems which influence human exercise capacity during childhood.
Three lectures, one seminar; one term
Prerequisite: KINESIOLOGY 1A06, 2C06

KINESIOLOGY 3D03 | FOUNDATIONS OF OUTDOOR EXPERIENTIAL EDUCATION
An analysis of curricular programs in O.E.E. including, environmental, earth, and eco-political education: expeditionary and adventure based learning, eco-psychology and eco-tourism.
Prerequisite: Registration in Level III or above
Antirequisite: KINESIOLOGY 4D03
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.

KINESIOLOGY 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.
Three hours (lectures); one term
Prerequisite: KINESIOLOGY 1A06, 1E03 and registration in Level III or above of a Kinesiology program or PSYCH 2F03 and registration in Level III or above of an Honours Psychology program and permission of the instructor.

KINESIOLOGY 3F03 | MANAGEMENT CONCEPTS AND PROGRAM DESIGN
Combining theory and practice, the course provides an introduction to various work environments related to Kinesiology. An examination of organizational structure, management skills, and new project/program design.
Three hours (lectures, seminars, group projects); one term
Prerequisite: 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.

KINESIOLOGY 3F03 | MANAGEMENT PLACEMENT
This placement is designed to provide practical experience in applying management concepts in a variety of community settings.
Prerequisite: Credit or registration in KINESIOLOGY 3F03 and registration in Level III or above of a Kinesiology program

KINESIOLOGY 3J03 | HISTORY OF MODERN DANCE
A survey of trends in modern dance including forerunners, pioneers, second generation, post-moderns, and new dance. Students attend performances and participate in workshops.
Three hours (lectures, practical); one term
Prerequisite: 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.

KINESIOLOGY 3J03 | DANCE PLACEMENT
This placement is designed to provide practical experience in dance production, choreography, teaching and administration of dance.
Prerequisite: Credit or registration in KINESIOLOGY 3J03 or 4J03; and registration in Level III or above of a Kinesiology program

KINESIOLOGY 3K03 | SPORTS INJURIES
Common injuries suffered in sport and physical activity will be discussed under the following headings: mechanism of injury, prevention, recognition and care, tissue healing, basic taping techniques, basic support techniques and emergency care.
Two lectures, one lab; one term
Prerequisite: KINESIOLOGY 1A06, 2C06 (Approximately $40.00 will be charged for supplies used in labs.)
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOLOGY 3K0P | SPORTS INJURIES PLACEMENT
This placement is designed to provide practical experience in sports injuries in a variety of clinical settings.
Prerequisite: Registration in Level III or above of a Kinesiology program and a grade of at least B in KINESIOLOGY 3K03 and valid CPR/First Aid certification and permission of the instructor.

KINESIOLOGY 3L03 | ORGANIZATIONAL BEHAVIOUR AND APPLICATIONS TO KINESIOLOGY
An examination of concepts and issues of organisational behaviour in a variety of work environments. Topics include communications, leadership, conflict management, individuals and groups at work.
Three hours (lectures and seminars); one term
Prerequisite: KINESIOLOGY 3F03
Antirequisite: COMMERCE 2B04
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.

KINESIOLOGY 3M03 | FOUNDATIONS OF ATHLETIC COACHING
An examination of the coaching process with emphasis placed on the behavioural aspects. Topics include leadership styles and decision making, motivation in sport, ethics in coaching, group cohesion and psychological considerations for youth in sport.
Three hours (lectures); one term
Prerequisite: 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.

KINESIOLOGY 3M0P | COACHING PLACEMENT
This placement is designed to apply the principles and theories of athletic coaching in a practical setting. The student will coach an athletic team for one season.
Prerequisite: Credit or registration in KINESIOLOGY 3M03 or 4M03 and; registration in Level III or above of a Kinesiology program

KINESIOLOGY 3P03 | SPORT AND SOCIAL DEVELOPMENT
Macro-analysis of sport and culture, considering the place of sport and leisure in cultural transmission and cultural change.
Three hours (lectures and discussion); one term
Prerequisite: One of KINESIOLOGY 1H03, 2B03, SOCIOLOGY 1A08; and registration in Level III or above
Not open to students with credit or registration in SOCIETY 3J03 if the topic was Sociology of Sport.
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.

KINESIOLOGY 3S53 | BODY, MIND, SPIRIT
An exploration of the relationship between body, mind and spirit from the standpoint of eastern and western religious and philosophical thought with special reference to current perspectives on human potential. Course work includes experiential learning and community placement.
Three hours (lectures and seminars); one term
Prerequisite: 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. Enrolment is limited.
KINESIOLOGY

KINESIOL 3T03  DANCE PERFORMANCE
An in-depth practical experience in performing, choreographing and teaching aimed at experienced dancers. The course will have a focus on contemporary modern dance and dance composition but will also include an introduction to other styles such as jazz and ballet.
Four hours (seminars and labs); one term
Prerequisite: 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.
(Approximate cost of field component is $30.00.)
Enrolment is limited.

KINESIOL 3Y03  HUMAN NUTRITION AND METABOLISM
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 disease states.
Three hours (lectures and labs); one term
Prerequisite: Either KINESIOL 1A08 or 1X08, or both KINESIOL 1Y03 and 1YY3; and registration in Level III or above
Antirequisite: KINESIOL 4Y03
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 3Z03  HUMAN MOVEMENT PRACTICUM
Experiential learning in three movement activities selected from team games and individual sports. (Depending on the activity, there may be a fee charged for course materials.)
Prerequisite: Registration in Level III or above of a Kinesiology program
Antirequisite: KINESIOL 3Z23
Enrolment is limited.

KINESIOL 3Z23  HUMAN MOVEMENT PRACTICUM
Experiential learning in three movement activities selected from yoga, tai chi, dance and massage. (Depending on the activity there may be a fee charged for course materials.)
Prerequisite: Registration in Level III or above of a Kinesiology program
Antirequisite: KINESIOL 3Z03
Enrolment is limited.

KINESIOL 4A06  ADVANCED BIOMECHANICS
In-depth study of the mechanics of human movement incorporating the topics of multi-linked segment analysis in 3-D, fluid resistance, optimization, movement simulation, and individual muscle force estimation with applications to occupational biomechanics, injury and rehabilitation.
Three hours (lectures, labs); two terms
Prerequisite: KINESIOL 2A03, 3A03

KINESIOL 4B03  PHYSICAL ACTIVITY AND CORONARY HEART DISEASE
An examination of the role of physical activity in the prevention and rehabilitation of coronary heart disease.
Three lectures; one term
Prerequisite: KINESIOL 1A06, 2C06

KINESIOL 4C03  INTEGRATIVE PHYSIOLOGY OF HUMAN PERFORMANCE
A detailed analysis of the physiological factors that regulate human physical performance. Emphasis is placed on the body's integrative response to exercise, including the control of energy demand and supply.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 2C06
Enrolment is limited.

KINESIOL 4C33  NEUROMUSCULAR EXERCISE PHYSIOLOGY
Neuromuscular physiology of strength, power, and speed performance, including adaptations to training and training methods.
Three hours (lectures, labs); one term
Prerequisite: KINESIOL 2C06
Enrolment is limited.

KINESIOL 4D00  OUTDOOR EDUCATION
An examination of skills, pedagogy and perspectives of outdoor (expediential) education. This course involves a nine day field component before classes start.
Three hours (lectures, tutorials, field experiences); one term
Prerequisite: Registration in Level III or above of a Kinesiology program; or registration in Level III or above of a non-Kinesiology program and permission of the instructor
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program.
(Approximate cost of field component is $380.00.)
Enrolment is limited.

KINESIOL 4D03  OUTDOOR EDUCATION PLACEMENT
This placement is designed to allow the student to experience a variety of outdoor education activities.
Prerequisite: Credit or registration in KINESIOL 4D03 and registration in Level III or above of a Kinesiology program

KINESIOL 4EE3  ADVANCED PLACEMENT
Students take part in a supervised practical experience that links classroom knowledge to professional practice. Placements are offered in aging, cardiac rehabilitation, sports injuries, dance, management, outdoor education, special needs populations, teaching and coaching. Placement experience equivalent to one day per week (60 hrs.); seminars; one term
Prerequisite: One of KINESIOL 3B03, 3F03, 3J03, 3K03, 3M03, 4B03, 4D03, 4I03, 4J03, 4P03; and completion of one of the corresponding non-credit placements; and registration in Level IV of a Kinesiology program; and permission of the supervising instructor
Students may complete only one of KINESIOL 4EE3 and 4X06.

KINESIOL 4F03  SELECTED TOPICS IN KINESIOLOGY
Each year the Department of Kinesiology offers a number of different courses under this category reflecting topics of contemporary interest with emphasis upon current theory and research. Students are advised to contact the Department of Kinesiology, Undergraduate Office, for descriptions of the courses offered during the current academic year.
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of a Kinesiology program
Enrolment is limited for some topics.

KINESIOL 4FF3  SELECTED TOPICS IN KINESIOLOGY II
As per KINESIOL 4F03
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of a Kinesiology program
Enrolment is limited.

KINESIOL 4G03  PEDAGOGY OF CONTEMPORARY AND TRADITIONAL WILDERNESS TRAVEL
An examination of Canadian winter travel skills (traditional and contemporary), travel literature and pedagogy of travel guiding. Part of the course requirement is a mandatory five-day traditional winter travel experience during the February mid-term recess.
Three hours (lectures, tutorials, field experiences); one term
Prerequisite: KINESIOL 4D03 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.
(Approximate cost of field component is $35.00.)
Enrolment is limited.

KINESIOL 4I03  EXERCISE PSYCHOLOGY
This course examines the psychosocial antecedents and consequences of exercise participation. Emphasis is placed on evaluating and applying the psychology research.
Three hours (lectures, seminars); one term
Prerequisite: KINESIOL 2G03 and registration in Level III or above of a Kinesiology program
Not open to students with credit in KINESIOL 4F03 if the topic was Exercise Psychology.
Enrolment is limited.

KINESIOL 4J03  FUNCTIONAL ANATOMY
A comprehensive applied study of the functional anatomy for independent learners. Focus is on palpating the structures of the osseous, articular, muscular, and supportive systems and testing their functions.
Four hours (labs, located in IWG/224); one term
Prerequisite: KINESIOL 2C06, 3K03 and registration in Level III or above of a Kinesiology program
(Approximately $35.00 will be charged for supplies used in labs.)
Enrolment is limited. Priority will be given to Level IV Kinesiology students.
Not open to students with credit in KINESIOL 4FF3 if the topic was Functional Anatomy.

KINESIOL 4J33  DANCE IN CONTEMPORARY SOCIETY
A survey of topics pertaining to the dance industry and the lifestyles of dancers in contemporary society. Content includes dance careers, administration, production, technology, education, health and special populations.
Three hours (lectures, seminars); one term
Prerequisite: 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.
Enrolment is limited.
KINESIOLOGY 4K03 PERCEPTUAL-MOTOR BEHAVIOUR
The examination of perceptual-motor control of everyday skills is discussed using a problem-based approach. The emphasis is on the discovery of principles through the generation and application of research.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 1E03 and registration in Level III or above of a Kinesiology program

KINESIOLOGY 4K03 FUNDAMENTALS OF REHABILITATION
This course will outline the basic principles of rehabilitation and explore the more common techniques and modalities. Application of principles will be explored in a number of impairments including, acquired brain injury, amputee, spinal cord injury, neuromuscular disease, stroke, etc.
Three hours (lectures, lab); one term
Prerequisite: KINESIOLOGY 1A06, 2C06 and registration in Level III or above of a Kinesiology program
Enrollment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOLOGY 4L06 ADVANCED TOPICS IN CANADIAN SPORT HISTORY
An examination of selected topics and themes in the historical development of sport and physical activity in nineteenth and twentieth century Canada and supervised research involving scholarly secondary and primary source data.
Three hours (semesters); two terms
Prerequisite: KINESIOLOGY 3A03 or 3H03, and registration in Level III or above of a Kinesiology program; or registration in Level III or above of an Honours History program
Not open to students with credit in KINESIOLOGY 4FF3 if the topic was Canadian Sport History.

KINESIOLOGY 4M03 ATHLETIC COACHING: TRAINING AND PLANNING PERSPECTIVES
Principles of sport psychology are applied to individual and team performance issues. Research is emphasized and topics include: personality, motivation, arousal, perception, biofeedback, the process of competition, children in sport, and ethics in sport psychology.
Two lectures, one lab; one term
Prerequisite: 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.
Enrollment is limited.

KINESIOLOGY 4N03 THESIS
An analysis of factors that facilitate sport performance at the elite level. Topics include periodization, talent identification, environmental factors, optimal arousal and scouting.
Three hours (lectures); one term
Prerequisite: KINESIOLOGY 3M03 and registration in Level III or above of a Kinesiology program

KINESIOLOGY 4Q03 PAEDIATRIC EXERCISE PHYSIOLOGY
Physiologic aspects of physical activity in children and adolescents in health and disease.
Two lectures, one lab; one term
Prerequisite: KINESIOLOGY 2C06, 3D03

KINESIOLOGY 4R03 INDEPENDENT RESEARCH
Investigation of a selected theoretical or applied problem mutually acceptable to instructor and student.
Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5 and permission of the instructor
Antirequisite: KINESIOLOGY 4R6

KINESIOLOGY 4R6 THESIS
Independent project involving a research topic under the supervision of a faculty member. The project involves a literature review, design of methodology, data collection, analysis and a research report or equivalent appropriate to the sub-discipline.
Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5; and permission of the instructor; and co-registration of KINESIOLOGY 3C03
Antirequisite: KINESIOLOGY 4R03

KINESIOLOGY 4S03 PHYSICAL ACTIVITY IN CHRONIC HEALTH IMPAIRMENTS
Focus on specific health impairments prevalent in our society and the various benefits/risks of physical activity in these populations.
Three hours (two lectures, one seminar); one term
Prerequisite: KINESIOLOGY 3B03, 3B01

KINESIOLOGY 4SP0 HEALTH PROMOTION AND REHABILITATION PLACEMENT
Supplements classroom learning of the major issues affecting physical activity in the older adult, in patients undergoing cardiac rehabilitation and in those with spinal cord injury. Students serve as exercise leaders in the Centre for Health Promotion and Rehabilitation.
Prerequisite: Credit or registration in one of KINESIOLOGY 3B03, 4B03, 4I03, 4S03 or 4SS3 and, registration in Level III or above of a Kinesiology program

KINESIOLOGY 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: KINESIOLOGY 1A06, 2C06, 2G03

KINESIOLOGY 4T03 GENDER, SPORT AND LEISURE
The influence of sport and leisure on the social construction of masculinity and femininity.
Three hours (seminars); one term
Prerequisite: One of KINESIOLOGY 1H03, 2B03, SOCIOL 2006; 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, enrollment for such students is limited.

KINESIOLOGY 4U03 ADVENTURE BASED LEARNING
Adventures based learning foundations, philosophy, and pedagogy will be examined through a combination of practices and theories relevant to contemporary educational issues.
Lectures, tutorials, and field experiences; one term
Prerequisite: 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, enrollment for such students is limited.
(Approximate field component cost is $140.00.)

KINESIOLOGY 4V03 HUMAN FACTORS AND ERGONOMICS
The abilities and limitations of human performance are examined with respect to how individuals interact with objects in their environment.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 1A06, 1E03, 2A03

KINESIOLOGY 4X06 HEALTH PROMOTION AND REHABILITATION THEORY AND PRACTICE
Provides students with in-depth experiences working in health promotion and rehabilitation settings with a variety of special populations. Students explore exercise and lifestyle issues through an experiential component, seminars and research.
Three hours (seminars, lab); two terms
Prerequisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 7.0; and two of KINESIOLOGY 3B03, 4B03, 4I03, 4S03, 4SS3 Students may complete only one of KINESIOLOGY 4E03 and 4X06.

KINESIOLOGY 4Y03 NUTRITION AND ERGOgenic AIDS
Emphasis on biochemical mechanisms behind the current fads and myths surrounding the use of popular ergogenic aids. Ergogenic aids relating to human physical performance and health will be covered.
Four hours (lectures, tutorials, stand-alone presentations and a research paper); one term
Prerequisite: KINESIOLOGY 3Y03 and registration in Level III or above of a Kinesiology program
Not open to students with credit in KINESIOLOGY 4F03 if the topic was Nutrition and Ergogenic Aids.
Enrollment is limited. Priority will be given to Level IV Kinesiology students.

KINESIOLOGY 4Z03 SELECTED TOPICS IN SPORT MANAGEMENT
A senior level seminar course related to management theory and practice in sport, recreation and physical activity.
Three hours (seminars and presentations); one term
Prerequisite: One of KINESIOLOGY 3F03, 3L03 or COMMERCIAL 2B03; 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, enrollment for such students is limited.

KINESIOLOGY 4A03 TOPICS IN SPORT HISTORY
The topic will be announced at the beginning of the term.
Three hours (lectures); one term
Prerequisite: KINESIOLOGY 3A03 or 3H03
LABOUR STUDIES

WEB ADDRESS: http://socserv.mcmaster.ca/labourstudies/ Ext. 24592

Kenneth Taylor Hall, Room 717

Faculty as of January 15, 2005

Director
Charlotte Yates

Professors
Wayne Lewchuk (Economics) B.A., M.A. (Toronto), Ph.D. (Cambridge)
Charlotte A. B. Yates (Political Science) B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Carleton)

Associate Professors
Robert H. Storey (Sociology) B.A. (Toronto), M.A. (Dalhousie), Ph.D. (Toronto)
Donald M. Wells (Political Science) B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)

Assistant Professors
Donna Baines (Social Work) B.S.W. (Calgary), M.S.W. (Carleton), Ph.D. (Toronto)
Greg McElligott (Political Science) B.A., M.A. (Carleton), Ph.D. (York)
Stephanie Ross (B.A., M.A. (Carleton)

Associate Members
Patricia M. Daanzen (Social Work) B.A.S. (York), M.S.W., Ph.D. (Toronto)
Robert J. O'Brien (Political Science) B.A. (Carleton), M.Sc. (London), Ph.D. (York)
Joseph B. Ross (Commerce) B.B.A. (Adelphi), M.B.A. (California), Ph.D. (SUNY-Buffalo) (Industrial Relations)
Pamela Sugiman (Sociology) B.A., M.A., Ph.D. (Toronto)

Note:
The following courses may be taken for elective credit by qualified students registered in any program, however, enrolment for such students is limited and permission of the instructor is required.

LABR ST 2A05 Unions
LABR ST 2C03 Theoretical Foundations of the Labour Movement
LABR ST 2D03 Different Labours, Different Voices
LABR ST 3A03 Economics of Labour Market Issues
LABR ST 3C03 Labour Law and Policy
LABR ST 3D03 Occupational Health and Safety
LABR ST 3E03 Women, Work and Unionism
LABR ST 3F03 Selected Topics in Labour Studies
LABR ST 3G03 Economic Restructuring and Work Organization
LABR ST 3W03 Technologies at Work: Past, Present, Future

The Honours B.A. Program and the B.A. Program in Labour Studies are supervised and coordinated by an interdisciplinary Labour Studies Committee.

Labour Studies Committee

Chair
Charlotte Yates (Labour Studies / Political Science)

Donna Baines (Labour Studies / Social Work)
Wayne Lewchuk (Economics / Labour Studies)
Greg McElligott (Labour Studies / Political Science)
Stephanie Ross (Labour Studies)
Robert Storey (Labour Studies / Sociology)
Donald Wells (Labour Studies / Political Science)

Courses

LABR ST 1A03 AN INTRODUCTION TO THE CANADIAN LABOUR MOVEMENT
An examination of the impact of economic, social, cultural and political factors on the historical evolution, structure and actions of the Canadian working class and labour movement.
Lectures and discussions; one term

LABR ST 1Z03 WORK, WORKERS AND UNIONS IN A GLOBAL ECONOMY
An introduction to major issues in the field of Labour Studies. Topics will include the nature of work, technology, occupational health and safety, labour-management relations and the role of government in a global context.
Lectures and discussion; one term

Prerequisite: LABR ST 2A03

LABR ST 2A03 UNIONS
Examines unions' structure, internal decision making and economic, political and social environment. Students explore collective bargaining, political action, union democracy, diversity and renewal by simulating internal union life and participating in a union convention.
Lecture and group work / simulation; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

LABR ST 2B03 SOCIAL WELFARE: GENERAL INTRODUCTION
Purpose, values underlying development of social welfare programs.
Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program

Cross-list: SOC WORK 2B03

Students in a Labour Studies program must register for this course as LABR ST 2B03.

This course is administered by the School of Social Work.

LABR ST 2BB3 SOCIAL WELFARE: ANTI-OFFPRESSIVE POLITICIES AND PRACTICES IN SOCIAL WORK
Exploration and analysis of systematic patterns of oppression and their relationships to social policies and practice and the implications for social work through a variety of instruction including experiential exercises. Topics could include: race, gender, disability, sexual orientation.
Exercises, lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program

Corequisite: Must be taken in the same academic session as LABR ST 2B03

Cross-list: SOC WORK 2BB3

Students in a Labour Studies program must register for this course as LABR ST 2BB3.

This course is administered by the School of Social Work.

LABR ST 2C03 THEORETICAL FOUNDATIONS OF THE LABOUR MOVEMENT
An examination of political, sociological and economic explanations of labour behaviour in industrial society. This focus will be on attempts to explain why labour has tended to organize as well as this different strategies which labour has pursued to achieve its goals.
Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

Antirequisite: LABR ST 1B03

LABR ST 2D03 DIFFERENT LABOURS, DIFFERENT VOICES
An examination of the ways in which people's changing experiences of work are shaped by gender, race, class and culture in Canada and the wider global context.
Lectures and discussion; one term

Prerequisite: Registration in a Labour Studies program or permission of the instructor

LABR ST 2G03 LABOUR AND GLOBALIZATION
An examination of key themes in the political economy of contemporary 'globalization' with particular emphasis on implications for worklife, working class politics and democracy. An introduction to major international economic institutions and processes associated with globalization and emerging forms of labour internationalism that contest globalization.
Lectures and discussion; one term

Antirequisite: LABR ST 1Z03

Enrollment is limited. Priority is given to students registered in a Labour Studies program.

LABR ST 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 clipping; work sharing.
Prerequisite: ECON 1A00 or both ECON 1B03 and 1B03 and registration in a Labour Studies program; or permission of the instructor

Cross-list: ECON 2A03

This course is administered by the Department of Economics.
**LABR ST 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: ECON 1A03 or both ECON 1B03 and 1BB3; and registration in a Labour Studies program

Cross-list: ECON 2T03

This course is administered by the Department of Economics.

**LABR ST 3C03**  **LABOUR LAW AND POLICY**

An analysis of the concepts and fundamentals of Canadian labour law and an analysis of Canadian labour policy.

Lectures; one term

Prerequisite: LABR ST 2A03 or 2A06, and registration in a Labour Studies program; or permission of the instructor

Cross-list: COMMERCE 4BF3

Generally offered in alternate years.

**LABR ST 3D03**  **OCCUPATIONAL HEALTH AND SAFETY**

An analysis of issues and problems associated with occupational health and safety in Canada and other industrialized countries. Topics will be examined from social, political, economic, legal and medical perspectives.

Lectures and discussion; one term

Prerequisite: Registration in a Health Studies or Labour Studies program; or permission of the instructor

Cross-list: HEALTHST 3C03

Generally offered in alternate years.

**LABR ST 3E03**  **WOMEN, WORK AND UNIONISM**

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 relationships of women to the labour movement.

Lectures and discussion; one term

Prerequisite: LABR ST 2A03 and registration in a Labour Studies program; or permission of the instructor

Generally offered in alternate years.

**LABR ST 3F03**  **SELECTED TOPICS IN LABOUR STUDIES**

Topics of current interest to students in Labour Studies, with emphasis on current theory and research. Students should consult the Labour Studies Office concerning the topics to be examined.

Three hours (seminar); one term

Prerequisite: LABR ST 2A03 or 2A06, and registration in a Labour Studies program; or permission of the instructor

Generally offered in alternate years.

**LABR ST 3G03**  **ECONOMIC RESTRUCTURING AND WORK ORGANIZATION**

Analysis of transformations in work organization and labour markets in selected advanced capitalist societies; evaluation of labour strategies in the context of neoliberalism and globalization.

Lectures and discussion; one term

Prerequisite: LABR ST 2A03 or 2A06, and registration in a Labour Studies program; or permission of the instructor

Antirequisite: LABR ST 3A03

Generally offered in alternate years.

**LABR ST 3H03**  **FIELD PLACEMENT METHODS**

An inquiry course that exposes students to research ethics and strategies in preparation for Level IV thesis or field work. Emphasizes working with data in a real world context. Students will learn on-line research skills and how to use various software packages and other presentation strategies.

Lectures and discussion; one term

Prerequisite: Registration in Level III or above of an Honours Labour Studies program

Antirequisite: LABR ST 4A09

**LABR ST 3W03**  **TECHNOLOGIES AT WORK: PAST, PRESENT, FUTURE**

An inquiry based course exploring the evolution of work, how workplaces are organized in relation to technologies today, and the possible impact of technology on work in the future. It will explore the nature of work in manufacturing, the service sector and the public sector.

Lectures, discussion and inquiry report; one term

Prerequisite: Registration in Level III or above of a Labour Studies or Engineering and Society program

Antirequisite: ENGSOCITY 3X03

Offered in alternate years.


Enrollment is limited.

**LABR ST 4A08**  **RESEARCH AND FIELD EXPERIENCE**

Students will either write an honours thesis or participate in a field experience (a placement in a labour union, government agency or other appropriate organization). Enrolment in the field experience option is limited; students must apply to the Labour Studies Office by March 1.

Two terms

Prerequisite: Registration in Level IV of an Honours Labour Studies program

Antirequisite: LABR ST 4A09

**LABR ST 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: COMMERCE 4BC3 and registration in Level III or IV of a Labour Studies program

Cross-list: COMMERCE 4BG3

This course is administered by the School of Business.

**LATIN**

(SEE CLASSICS, LATIN)

**LINGUISTICS**

(SEE MODERN LANGUAGES AND LINGUISTICS, LINGUISTICS)

**MANUFACTURING TECHNOLOGY**

John Hodgins Engineering Building, Room A215

**Note:** Manufacturing Technology courses are open only to students registered in the Bachelor of Technology Degree Program in Manufacturing Engineering Technology and are subject to prerequisite requirements.

**Courses**

**MAN TECH 1C03**  **ADVANCED CADD**

Design cycles; graphic workstations; representation methods; Bsp, CSG; shape then size modelling-profiles, relational dimensioning; libraries; assemblies; mechanism design; IGES/STEP; hardware, software, graphics, networking.

One lecture, one lab (two hours); one term

Corequisite: ENG TECH 1PG3

**MAN TECH 1D03**  **INDUSTRIAL ENGINEERING**

Production and operations management; decision making tools; forecasting; strategies and capacity; location, operations layout and aggregate planning, inventory management and JIT tactics; material requirements; project management.

Three lectures; one term

**MAN TECH 1T03**  **THERMO FLUIDS I**

Thermodynamic principles; steam plant cycles; heat engines; gas and steam turbine cycles; refrigeration and heat pumps; air conditioning; conduction; transient systems; convection; radiation; heat exchangers.

Three lectures; one tutorial; one term

Corequisite: ENG TECH 1MA3

**MAN TECH 2M03**  **MACHINE DYNAMICS**

Transient and steady state vibrations of single degree-of-freedom systems, natural and forced vibrations; lumped mass systems—multi degree of freedom; vibrations of continuous systems; balancing and critical speeds of shafts.

Three lectures; one term

Prerequisite: ENG TECH 1MA3
MATERIALS SCIENCE AND ENGINEERING

Chair
Gordon A. Irons

Distinguished University Professors

Professors
John Hodgins/Chair in Ferrous Metallurgy
Gyan P. Iqbal/B.Sc., M.Sc., Ph.D. (Gorakhpur), D.H.C. (Lyon), F.R.S.C.
Adrian Kital/B.Sc., Ph.D. (McMaster), P.Eng.

Gu Xu/M.Sc., Ph.D. (Pittsburgh), D.E.S. (Columbia)

Adjunct Professors
Yves Brechet/D.E.A. (Ecole Polytechnique), Ph.D. (Grenoble)
C.H. Chew/B.A.Sc. (Ottawa), M.A.Sc., Ph.D. (Toronto)
Michael J. Graham/B.Sc., Ph.D. (Liverpool)
Zygmun J. Jakubek/M.S. (Cracow), Ph.D. (M.I.T.)
Beng S. Ong/B.Sc. (Nanyang), Ph.D. (McGill)
Zoran D. Popovic/Dipl.Eng., M.Sc. (Belgrade), Ph.D. (McMaster)
Barry A. Strathearn/B.A.Sc., Ph.D. (Toronto), P.Eng.
S.V. Mani Subramanian/B.Sc. (Banaras), M.Met., Ph.D. (Sheffield)
K.T. Conlon/B.Sc.Eng. (Winnipeg), Ph.D. (McMaster)

Associate Professors
Gianluigi Bonito/B.Eng., Ph.D. (Ecole Polytechnique)
Kenneth S. Coley/B.Sc. (Strathclyde), Ph.D., D.I.C. (Imperial College, London)
Dmitri V. Malakhov/B.Sc. (Moscow), M.Sc., Ph.D. (Novosibirsk, Russia)
Marek Nowczas/M.Sc., Ph.D. (Krakow)
Nikolas Provatas/M.Sc., Ph.D. (McGill)
Igor Zhizhminskiy/M.Sc. (State University, Kalinin), Ph.D. (Karpov Institute, Moscow)

MATERIALS SCIENCE AND ENGINEERING

WEB ADDRESS: http://mse.mcmaster.ca/
John Hodgins Engineering Building, Room 357
Ext. 24295

Faculty as of January 15, 2005

MATS 1M03 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 tutorial; second term
Prerequisite: Registration in any program in the Faculties of Engineering or Science

MATS 2B03 THERMODYNAMICS OF MATERIALS
Thermodynamics of gases and critical phenomena. The three laws of thermodynamics applied to materials processing. An introduction to statistical thermodynamics.
Three lectures, one tutorial; first term
Prerequisite: CHEM 1A03 or 1E03
Antirequisite: ENG PHYS 2H04, MATLS 2B03, PHYSICS 2H04

MATS 2D03 SOLUTIONS THERMODYNAMICS
Thermodynamic activity in solid and liquid systems: Gibbs energy of solutions; binary phase diagrams; equilibrium constants; reaction equilibria in gases; Ellingham diagrams.
Three lectures, one tutorial; second term
Prerequisite: CHEM 1A03 or 1E03; and MATLS 2B03
Antirequisite: MATLS 2B03

MATS 2H04 MEASUREMENTS AND COMMUNICATION
Basic experimental, simulation and data collection skills relating to materials structure and properties. Written and presentation skills development through laboratory work, assignments and plant visits.
Two three hour laboratories or tutorials per week; both terms
Prerequisite: One of COMP SCI 1M03, 1MC3 or ENGINEER 1D04; and CHEM 1A03 or 1E03; and registration in a program administered by the Department of Materials Science and Engineering
Antirequisite: MATLS 2H03
MATERIALS SCIENCE AND ENGINEERING 241

MATLS 2X03 CRYSTALLINE STRUCTURE OF MATERIALS
Crystal geometry, point groups, space groups, x-ray diffraction methods for the determination of crystallographic structures and chemical compositions, electron and neutron diffraction methods, microanalysis, crystallographic defects, physical properties of crystals, crystal growth, phase analysis, phase diagrams, phase transitions, protein crystallography.
Two lectures, one lab (three hours); first term
Prerequisite: Completion of Science I or Engineering I
Antirequisite: MATLS 2X02

MATLS 3A03 COMPUTATIONAL MATERIALS SCIENCE I
Thermodynamic modellings, Principles of computational thermodynamics and its applications. CALPHAD method. Thermo-Calc. Fortran 90/95 programming, TO interface and its incorporation into problem-oriented programs. Two lectures, one tutorial during the first half of the term, one lecture, two tutorials during the second half of the term; second term. Prerequisite: Either MATLS 3C03 or 3D04, and PHYSICS 2G03; or registration in a program administered by the Department of Materials Science and Engineering

MATLS 3B03 MATERIALS PRODUCTION
Surface science and technology related to the preparation of fine particles of ceramics, metals and ceramics for industrial production. Application of electrochemistry for diverse materials processing, such as electrolytically, thin film production and anodizing. Two lectures, one lab (three hours); second term
Prerequisite: MATLS 2B06 or MATLS 2B03 and 2D03

MATLS 3C04 THERMODYNAMICS OF MULTICOMPONENT SYSTEMS
Reaction equilibria in solution; stability diagrams; ternary phase diagrams; aqueous and high temperature electrochemistry; use of computerized thermodynamic databases.
Two lectures, one lab (three hours) every other week, one tutorial; first term
Prerequisite: MATLS 2D03
Antirequisite: MATLS 2T03, 3D03

MATLS 3E04 MASS TRANSFER
Phenomenological and mechanistic approaches to diffusion; boundary conditions; diffusion in fluids and solids; point defects in solids.
Three lectures, two tutorials; second term.
Prerequisite: One of ENGINEER 2003, MATLS 1A03 or 1M03; and either MATH 2M06 or both MATH 2A03 and 2C03

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 (two hours); second term
Prerequisite: MATLS 2D03
Antirequisite: MATLS 4B04

MATLS 3M03 MECHANICAL BEHAVIOUR OF MATERIALS
How materials are made strong, tough; ductile, formable. How to prevent failures. Materials selection using computer databases.
Two lectures, one tutorial and/or laboratory; first term
Prerequisite: ENGINEER 2P04 and one of ENGINEER 2003, MATLS 1A03, 1M03, 2M06; or permission of the department
Antirequisite: ENGINEER 3F03, MATLS 3P03

MATLS 3N03 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; second term
Prerequisite: One of ENGINEER 2E03, 2003 or MATLS 1M03

MATLS 3O04 PHASE TRANSFORMATIONS
Review of thermodynamic, kinetic, and solid state diffusion. Role of interfaces; solidification, diffusion, and martensitic transformations; welding; oxidation. Metallographic examination will be featured in laboratory work.
Three lectures or tutorial, one lab (three hours); first term
Prerequisite: One of ENGINEER 2003, MATLS 1M03, 2X02 or 2X03

MATLS 4A04 SEMINARS AND INDUSTRIAL PRACTICE
Seminars and discussions on current problems. Corresponding plant visits made by the class and reported both in written and oral form. Workshops on: Statistical Process Control; ISO 9000; Industrial Health and Safety; Entrepreneurship.
One seminar/tutorial/plant visit (three hours); both terms
Prerequisite: Registration in the final level of a program administered by the Department of Materials Science and Engineering

MATLS 4C03 MODERN IRON AND STEELMAKING
Three lectures; second term
Prerequisite: MATLS 2D03; and MATLS 3E04 or 3T04 (which may be taken concurrently).

MATLS 4D03 MATERIALS AND THE ENVIRONMENT
The environments experienced by engineering materials in service, and economic methods for ensuring their survival. The basic science of high temperature oxidation and aqueous corrosion leads to an appreciation of methods for corrosion control.
Three lectures; first term
Prerequisite: MATLS 2D03; and MATLS 3E04 or 3T04 (which may be taken concurrently).

MATLS 4E04 COMPUTATIONAL MATERIALS SCIENCE II
Introduction to numerical simulation techniques used in computational modeling in materials science and engineering. Applications to microstructure formation and interface dynamics. Introduction to parallel methods.
Three lectures, one tutorial; second term.
Prerequisite: MATLS 3A03 or 3E04; and MATH 2C03 or 2M06; and PHYSICS 3G03

MATLS 4F04 SYNTHESIS AND APPLICATIONS OF NANOMATERIALS
Introduction to synthesis routes for nanomaterials, bottom-up and top-down approaches, specific properties of materials at the nanoscale including carbon nanotubes, nanoparticles and quantum dots.
Four lectures; second term
Prerequisite: Registration in Level IV of a program in Honours Chemistry, Materials Engineering or Honours Materials Science

MATLS 4G02 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; first term
Prerequisite: Registration in Level III or IV of a program in Chemical Engineering, Honours Chemistry, Engineering Physics, Materials Engineering or Honours Materials Science

MATLS 4H03 THIN FILMS SCIENCE
Deposition and fabrication techniques, surfaces, growth, mechanisms, epitaxy, kinetic effects in thin films, defects and properties of thin films. Materials for packaging.
Three lectures; first term
Prerequisite: Registration in Level IV of Materials Science or Engineering

MATLS 4I03 SUSTAINABLE MATERIALS PROCESSING
Sustainable development, traditional economic growth, materials cycles, methods for measuring environmental impact, life cycle analysis, waste treatment technologies and recycling technologies. Assessment will consist of a combination of individual assignments and a project group.
Two lectures, one tutorial (one hour); second term
Prerequisite: MATLS 3B03; and MATLS 3F03 or 4B04

MATLS 4J04 MATERIALS SELECTION IN DESIGN AND MANUFACTURING
Importance of materials selection in design and manufacturing, overview of materials properties, materials selection charts, performance indices, case studies with simple and complex design constraints, fabrication process selection.
Three lectures, one tutorial (one hour); first term
Prerequisite: ENGINEER 2P04; and CHEM ENG 2A04 or MECH ENG 3R03

MATLS 4K04 SENIOR THESIS
Individual experimental research problem with a selected supervisor. A preliminary written and oral report is required at the end of the first term. The thesis is defended orally. A minimum of six unscheduled hours each week, both terms.
Prerequisite: A CA of at least 8.0, and registration in the final level of a Materials Engineering program or Level IV of Honours Materials Science

MATLS 4L02 MATERIALS MANUFACTURING LABORATORY
A sequence of experiments based on processing methods used in the metal and ceramic industries. Structure-property relationships are assessed at each step of the processing route.
One lecture, one lab (three hours); first term
Prerequisite: Registration in final year of a Materials Engineering program.
MATHS 4P03 PROPERTIES OF POLYMERIC MATERIALS
Structure of amorphous and crystalline polymeric materials; mechanical, electrical and optical properties, and their modification through processing.
Three lectures; first term
Prerequisite: CHEM 2WW2 or 2WW4; and MATH 2M06
Offered in alternate years.
Offered in 2005-2006.
Open to Level III and IV students registered in a program in the Faculty of Science or Engineering with permission of the department.

MATHS 4R03 CERAMIC SCIENCE
The unique properties of structural and functional ceramics are explored, including ferroelectric, piezoelectric and magnetic ceramics, clays, porcelain and refractories. The importance of processing for achieving desired properties is emphasized.
Three lectures; second term
Prerequisite: MATHS 3B03

MATHS 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; second term
Prerequisite: One of ENGINEER 3P03, MATHS 3M03 or 3P03

MATHS 4Z04 INDUSTRIAL PROJECTS
Projects, in cooperation with industry, involving materials design in manufacturing, complemented by workshops in group problem solving and design methodology.
Two lecture (three hours); both terms
Prerequisites: Registration in Level IV or V of any program in Materials Engineering

MATHS AND STATISTICS

WEB ADDRESS: http://www.math.mcmaster.ca
Hamilton Hall, Room 218
Ext. 24581

Faculty as of January 15, 2005

Chair
Matthew A. Valeriote

Associate Chairs
Bradd Hart/Graduate Studies
Miroslav Lovric/Undergraduate Studies

Professors
Stanley Alama/B.Sc. (Columbia), M.Sc., Ph.D. (Courant, N.Y.U.)
N. Balakrishnan/B.Sc., M.Sc., Ph.D. (Trinity, Toronto)
Lia Bronsard/B.A. (Montreal), M.Sc., Ph.D. (Courant, N.Y.U.)
Walter Craig/A.B. (California-Berkeley), M.Sc., Ph.D. (Courant, N.Y.U./Senior Canada Research Chair
Shui Feng/B.Sc., M.Sc. (Beijing Normal), Ph.D. (Carleton)
Pengfei Guan/B.Sc. (Zhejiang), Ph.D. (Princeton)
Ian Hambleton/B.Sc., M.Sc. (Toronto), Ph.D. (Yale), Britton Professor of Mathematics
Bradd Hart/B.Math. (Waterloo), Ph.D. (McGill)
Fred M. Hoppe/B.Sc. (Waterloo), M.Sc. (Weizmann Institute of Science), M.A., Ph.D. (Princeton)
Thomas R. Hurd/B.Sc. (Queen's), D.Phil. (Oxford)
Manfred Kolster/Dipl. (Hamburg), Dr. rer. nat. (Saarbrucken), Habil. (Munster)
Peter D.M. Macdonald/B.Sc., M.Sc. (Toronto), D.Phil. (Oxford)/Graduate Advisor, Statistics
Maung Min-Oo/B.Sc. (Rangoon), Dipl. Math., Dr. rer. nat., Habil. (Bonn)
Andrew J. Nicas/B.Sc. (McGill), M.A., Ph.D. (Princeton)
Eric T. Sawyer/B.Sc., Ph.D. (McGill)/McKay Professor of Mathematics
Matthew A. Valeriota/B.Math. (Waterloo), Ph.D. (California-Berkeley)
Roman Viveros-Aguilera/B.A. (Veracruzana, Mexico), M.A. (National Polytechnical Inst., Mexico), Ph.D. (Waterloo)
McKenzie Y.-K. Wang/A.B. (Princeton), Ph.D. (Stanford)
Gary S.K. Wolkowicz/B.Sc., M.Sc. (McGill), Ph.D. (Alberta)

Adjunct Professor
Abdel H. El-Shaarawi/B.Sc., M.Sc. (Cairo), Ph.D. (Waterloo)/part-time

Associate Professors
Hans Boden/B.Sc. (New Hampshire), Ph.D. (Brandeis)/Graduate Advisor
David Eskin/B.Sc., M.Sc. (Torioko), Ph.D. (Cambridge)
Jean-Pierre Gabardo/Ph.D. (Université de l'Est en France), Ph.D. (Maryland)
Deirdre Haskell/B.A. (Oxford), M.Sc., Ph.D. (Stanford)
Nikolai Khristian/B.Sc. (British Columbia), Ph.D. (Cambridge)
Zdzislaw K. Kowalski/B.Sc. (Charles, Prague), Ph.D. (Toronto)
Miroslav Lovric/B.S. (Zagreb), M.Sc., Ph.D. (Ohio State), 3M Teaching Fellow/Undergraduate Advisor
Ernest R. Mead/B.A., M.A., Ph.D. (Western Ontario, A.S.A.
Dmitry E. Pelinovsky/M.S. (Nizhny Novgorod State, Russia), Ph.D. (Monash)

Adjunct Associate Professor
Kevin N. Vander Meulen/B.Sc. (Calvin College), Ph.D. (Queen's)

Assistant Professors
Ilham Akhoundov/B.A. (Azerbaijan State University), M.A., Ph.D. (St. Petersburg-Leningrad)
Angelo Canty/B.Sc. (University College, Cork), M.Sc., Ph.D. (Toronto)
Aaron Chihide/B.Sc., M.Sc., Ph.D. (McMaster)
Matheus Grasselli/B.Sc. (Sao Paolo), Ph.D. (King's College, London)
Bartoel' Protas/M.Sc. (Warsaw University of Technology), Ph.D. (Warsaw University of Technology and Université de Paris)
Romyar Sharifi/B.A. (California-Berkeley), Ph.D. (Chicago)
Hui June Zhu/B.E. (Xi'an), Ph.D. (California-Berkeley)
Rong Zhu/B.Sc., M.Sc. (University of Science and Technology of China), Ph.D. (British Columbia)

Associate Members
Sylvia Esterby/B.A. (Queen's), Ph.D. (Waterloo)

Charles H. Goldsmith/Cl. Inical Epidemiology and Biostatistics B.Sc., M.Sc. (Michigan), Ph.D. (N.California)
Mahmut Parlar/(Business) B.Sc., M.Sc. (Middle East Tech. Univ.), Ph.D. (Waterloo)

Patrick Ryan/Computing and Software B.Sc. (Toronto), Ph.D. (Brown)

Michael Soldys/Computing and Software B.Sc., M.Sc., Ph.D. (Toronto)
Tamas Todor/Computing and Software B.Sc., M.Sc. (Ireland)
Stephan Walter/(Health Sciences) B.Sc. (Imperial College, London), Ph.D. (Edinburgh), A.R.C.S.

Department Note:
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 (Studies).

MATH 1A03 CALCULUS I
Differential calculus, the definite integral, techniques of integration, differential equations with applications.
Three lectures, one tutorial; one term
Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) or MATH 1X03
Antirequisite: ARTS & SCI 1D06, MATH 1N03

MATH 1A33 CALCULUS II
Power series, partial derivatives, extremal problems, multiple integrals.
Three lectures, one tutorial; one term
Prerequisite: MATH 1A03
Antirequisite: ARTS & SCI 1D06, MATH 1N03

MATH 1B03 LINEAR ALGEBRA I
Vectors, matrices, determinants, solvability of linear systems, Euclidean geometry, complex numbers, with applications.
Three lectures, one tutorial; one term
Prerequisite: One of Grade 12 Mathematics of Data Management U or OAC Finite Mathematics, Grade 12 Geometry and Discrete U (OAC Algebra and Geometry), STAT 1L03
Antirequisite: MATH 1H03, 1H05, 1H13
MATH 1C03  INQUIRY IN MATHEMATICS I
Material covered in the course may include topics from: geometry, discrete math, number theory, algebra.
Three hours; one term
Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus), and one of Grade 12 Geometry and Discrete U (or OAC Algebra and Geometry) or Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics); and registration in Science I or Mathematics and Statistics I.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 1H03  LINEAR ALGEBRA FOR ENGINEERING
Linear systems of equations, matrices, determinants, vectors and vector spaces, complex numbers, eigenvalues and eigenvectors.
Three lectures, one tutorial; first term
Prerequisite: Registration in Engineering I
Antirequisite: MATH 1B03, 1H05

MATH 1J03  MATHEMATICAL COMPUTING
Introduction to scientific programming; the Matlab environment, statements and control structures, scripts and functions, matrix computations, symbolic algebra, numerical differentiation and integration, plotting, data analysis, applications to modelling problems.
Two lectures, one lab (two hours); one term
Prerequisite: Credit or registration in MATH 1A03 and 1B03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 1K03  INTRODUCTORY CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES
An introduction to differential calculus and its applications.
Three lectures, one tutorial; one term
Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics (Advanced)
Normally not open to students who have completed Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus).
Students transferring to the Faculty of Science do not retain credit for this course.

MATH 1M03  CALCULUS FOR BUSINESS, HUMANITIES AND THE SOCIAL SCIENCES
Differential and integral calculus.
Three lectures, one tutorial; one term
Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus)
Not open to students with credit or registration in MATH 1A03, 1N03, ARTS&SCI 1D06.
Students transferring to the Faculty of Science do not retain credit for this course. Students considering upper year mathematics courses should take MATH 1A03.

MATH 1N03  CALCULUS FOR ENGINEERING I
Differential calculus, the definite integral, techniques of integration, applications.
Three lectures, one tutorial; one term
Prerequisite: Registration in Engineering I
Antirequisite: MATH 1A03

MATH 1NN3  CALCULUS FOR ENGINEERING II
Applications of integration, differential equations, sequences and series of differential calculus of several variables, applications.
Three lectures, one tutorial; one term
Prerequisite: MATH 1N03
Antirequisite: MATH 1A03

MATH 2A03  CALCULUS III
Functions of several variables, chain rule, Taylor's formula, extremal problems, Lagrange multipliers; multiple integrals, change of variables formula, line and surface integrals, Green's, Gauss' and Stokes' theorems.
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, ARTS&SCI 1D06; and credit or registration in one of MATH 1B03, 1H03, 1H05 or 1H06
Antirequisite: MATH 2M06, 2Q04

MATH 2AB3  INTRODUCTION TO REAL ANALYSIS
Fundamental topics in analysis; properties of real numbers, sequences and series, power series, uniform continuity, uniform convergence.
Three lectures; one term
Prerequisite: MATH 1A03 and credit or registration in MATH 1B03
Antirequisite: MATH 2AA3

MATH 2C03  DIFFERENTIAL EQUATIONS
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, ARTS&SCI 1D06; and one of MATH 1B03, 1H03, 1H05, 1H13
Antirequisite: MATH 2003, 2M06, 2P04

MATH 2ED0  INTRODUCTION TO MODELLING
General features of modeling. Selected examples from biology, chemistry, economics and physics are treated by a variety of elementary methods. Computer packages are used when appropriate.
Three lectures, one lab (one hour); one term
Prerequisite: One of MATH 1A03, 1N03, ARTS&SCI 1D06; and credit or registration in one of MATH 1B03, 1H03, 1H05, 1H13
Enrolment is limited. However, all students in programs requiring this course will be admitted. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 2K03  FINANCIAL MATHEMATICS
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 term
Prerequisite: One of MATH 1A03, 1M03, 1N03, ARTS&SCI 1D06

MATH 2L03  MATHEMATICAL METHODS FOR BUSINESS AND SOCIAL SCIENCES
Selected topics from: linear programming, Markov chains, game theory, differential equations, and the calculus of several variables.
Three lectures; one term
Prerequisite: One of MATH 1A03, 1M03, 1N03, ARTS&SCI 1D06; and one of MATH 1B03, 1L03, STATS 1L03, Grade 12 Mathematics of Data Management U (or OAC Finite Mathematics)
Not open to students registered in Science or Engineering programs.

MATH 2M06  ENGINEERING MATHEMATICS II
Ordinary differential equations, Laplace transforms, Fourier series, vector calculus, orthogonal curvilinear coordinates, integral theorems, with engineering applications.
Three lectures; two terms
Prerequisite: MATH 1NN3; and one of MATH 1H03, 1H05, 1H13
Antirequisite: MATH 2A03, 2C03, 2P04, 2Q04

MATH 2P04  DIFFERENTIAL EQUATIONS FOR ENGINEERING
Three lectures and two tutorials; one term
Prerequisite: MATH 1NN3 and one of MATH 1H03, 1H05, 1H13; or registration in Honours Neural Computation and credit or registration in MATH 1B03
Antirequisite: MATH 2C03, 2M06

MATH 2P06  ADVANCED CALCULUS FOR ENGINEERING
Vector algebra, curves, partial differentiation, multiple integrals, Green's Theorem, line and surface integrals, integral theorems, scalar and vector potentials, orthogonal curvilinear coordinates, introduction to partial differential equations.
Three lectures and two tutorials; one term
Prerequisite: MATH 1NN3 and one of MATH 1H03, 1H05, 1H13; or registration in Honours Neural Computation and credit or registration in MATH 1B03
Antirequisite: MATH 2A03, 2M06

MATH 2P08  LINEAR ALGEBRA II
Abstract vector spaces, basis and dimension, linear transformations, linear equations, inner product spaces, eigenvalues, spectral theorems.
Three lectures; one term
Prerequisite: One of MATH 1A03, 1N03, ARTS&SCI 1D06; and one of MATH 1B03, 1H03, 1H05, 1H13

MATH 2S03  LINEAR ALGEBRA III
Canonical forms, determinants, bilinear forms, groups of linear transformations, other topics selected by the instructor.
Three lectures; one term
Prerequisite: MATH 2P03

MATH 2T03  NUMERICAL ANALYSIS I
Numerical solution of linear and nonlinear systems of equations; root finding, LU factorization, Jacobi iteration; conditioning and stability, QR factorization, least squares, power iteration and other eigenvalue algorithms.
Three lectures; one term
Prerequisite: MATH 2P03
MATH 2U03  TEACHING MATHEMATICS
This course is designed to give a maximum of 20 students practical experience with teaching methods in mathematics. The course also provides an introduction to mathematics writing and development of communication skills relevant to mathematics.
Two lectures and one practicum; one term
Prerequisite: A grade of A- in both MATH 1A03 and 1A04 or in ARTS&SCI 1D06; and permission of the instructor. Applications must be submitted to the instructor by May 1 of the academic year prior to registration, with selection for placements announced by September 9.
See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Enrolment is limited.

MATH 3A03  REAL ANALYSIS I
The real number system, metric spaces, compactness, sequences and series, continuity, differentiability, the Riemann-Stieltjes integral, uniform convergence.
Three lectures; one term
Prerequisite: MATH 2A03, 2C03, 2R03

MATH 3A04  REAL ANALYSIS II
Equicontinuous functions, functions of several variables, the inverse function theorem, the implicit function theorem, the rank theorem, Stokes' Theorem, the Lebesgue integral.
Three lectures; one term
Prerequisite: MATH 3A03

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: MATH 2A03, 2R03

MATH 3C03  MATHEMATICAL PHYSICS I
Linear algebra and eigenvalue problems; partial differential equations, orthogonal functions, Fourier series, Legendre functions, spherical harmonics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2C04; and MATH 2C03 or 2P04. One of PHYSICS 2B06, 2D03 or 2K03 is recommended.
Not open to students with credit or registration in MATH 3FF3 or credit in MATH 3J04.

MATH 3D03  MATHEMATICAL PHYSICS II
Functions of a complex variable, probability and statistics, boundary value problems, Bessel functions.
Three lectures; one term
Prerequisite: MATH 3C03
Antirequisite: MATH 3K03
Not open to students with credit or registration in MATH 3X03 or credit in MATH 3J04.
Not open to students registered in Honours Mathematics and Physics.

MATH 3E03  ALGEBRA I
An introduction to group theory, including Sylow theorems and structure of finitely generated Abelian groups; applications of group theory.
Three lectures; one term
Prerequisite: MATH 2P03

MATH 3E04  ALGEBRA II
Topics in ring and module theory, in particular principal ideal domains, unique factorization domains, Euclidean rings, field theory and Galois theory.
Three lectures; one term
Prerequisite: MATH 3E03

MATH 3F03  ADVANCED DIFFERENTIAL EQUATIONS
Three lectures; one term
Prerequisite: MATH 2A03; and MATH 2C03 or 2P04; and credit or registration in MATH 2R03

MATH 3F03* PARTIAL DIFFERENTIAL EQUATIONS I
First order equations, well-posedness, characteristics, wave equation, heat equation, Laplace equation, boundary conditions, Fourier series, applications.
Three lectures; one term
Prerequisite: MATH 2A03, 2C03, 2R03

MATH 3H03* NUMBER THEORY
Selected topics from: congruences 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: Credit in at least 12 units of Level II Mathematics or Statistics

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 coordinate systems.
Three lectures; first term
Prerequisite: MATH 2M06; or MATH 2P04 and 2Q04; or registration in Level III or IV of a program in the Department of Materials Science and Engineering.

MATH 3K03  ENGINEERING MATHEMATICS III
Complex variable theory with applications to electrical and computer engineering.
Three lectures; one term
Prerequisite: MATH 2P04, 2Q04
Antirequisite: MATH 3D03

MATH 3N03  MATHEMATICAL BIOLOGY
Three lectures; one term
Prerequisite: MATH 2E03, 3F03

MATH 3O03  NUMERICAL ANALYSIS II
Three lectures; one term
Prerequisite: MATH 2A03, 2T03
Antirequisite: MATH 4Q03

MATH 3P03  SET THEORY AND GENERAL TOPOLOGY
Naive set theory, Zorn's Lemma, metric spaces, point set topology.
Three lectures; one term
Prerequisite: MATH 2R03

MATH 3P03  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 term
Prerequisite: MATH 2A03, 2C03, 2R03

MATH 3Q03  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.
Three lectures; one term
Prerequisite: At least two Level II Mathematics or Statistics courses other than MATH 2K03, 2L03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MATH 4B03  CALCULUS ON MANIFOLDS
Review of multivariable calculus, basic properties of manifolds, differential forms, Stokes' theorem, de Rham cohomology and applications.
Three hours; one term
Prerequisite: MATH 3C03; or MATH 3S03 and either MATH 2A03 or 2AB3

MATH 4C03* COMBINATORICS
Inversion formulae, systems of distinct representatives, block designs and other configurations; and other topics.
Three lectures; one term
Prerequisite: MATH 2A03, 2R03

MATH 4E03  ALGEBRA III
Selected topics in algebra, such as an introduction to algebraic number theory, commutative algebra or algebraic geometry.
Three lectures; one term
Prerequisite: MATH 3E03

MATH 4E03  DYNAMICAL SYSTEMS
Topics to be selected from ordinary differential equations theory, bifurcation and stability theory.
Three lectures; one term
Prerequisite: MATH 3F03. MATH 3A03 is recommended.
### MATH 4J03* • GRAPH THEORY
Graphs, trees, bipartite graphs, connectivity, graph colouring, matrix representations, applications.
Three lectures; one term
Prerequisite: MATH 2A03, 2R03

### MATH 4L03 • INTRODUCTION TO MATHEMATICAL LOGIC
First order logic, deduction systems, completeness and compactness theorems, model theory.
Three lectures; one term
Prerequisite: MATH 3E03

### MATH 4Q03 • NUMERICAL METHODS FOR ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS
Three lectures; second term
Prerequisite: Credit or registration in MATH 3D03 or 3FF3; or permission of the instructor
Antirequisite: MATH 3Q03

### MATH 4S03* • THE THEORY OF COMPUTABILITY
Automata and regular languages, Turing machines, recursive functions, decidability, Gödel's incompleteness theorems.
Three lectures; one term
Prerequisite: MATH 2R03 and credit or registration in any Level III or IV Mathematics course
Antirequisite: COMP SCI 4TC3

### MATH 4T03 • ALGEBRAIC TOPOLOGY
Fundamental groups and covering spaces, topics selected by the instructor.
Three lectures; one term
Prerequisite: MATH 3E03; and MATH 3A03 or 3S03

### MATH 4V03 • APPLIED MATHEMATICAL ANALYSIS
Lebesgue integration, distribution theory, Fourier analysis, partial differential equations, integral equations, calculus of variations; additional topics.
Three lectures; one term
Prerequisite: MATH 3D03 or 3FF3

### MATH 4W03 • TOPICS IN MATHEMATICS
Directed reading in areas of mathematics of interest to the student and the instructor.
Prerequisite: Permission of the Chair of the Department

### MATH 4X03 • COMPLEX ANALYSIS II
Conformal maps, analytic continuation, harmonic functions, the Riemann mapping theorem, Riemann surfaces.
Three lectures; one term
Prerequisite: MATH 3X03

### STATISTICS ...

#### Department Note:
Students wishing to register in any Mathematics and Statistics specialization must take MATH 1A03 and 1B03.

#### Courses If no prerequisite is listed, the course is open.

### STAT 1L03 • PROBABILITY AND LINEAR ALGEBRA
The algebra of probability, conditional probability and independence, discrete and continuous random variables, mean and variance, matrices, determinants, Cramer's rule, solution of linear equations.
Three lectures, one tutorial; one term
Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics
Not open to students with credit in Grade 12 Mathematics of Data Management U (or QAC Finite Mathematics) or STATS 1CC3, 2A03, 2M03, 2MB3.

### STAT 2D03 • PROBABILITY THEORY
Combinatorics, independence, conditioning; Poisson-process; discrete and continuous distributions with statistical applications; expectation, transformations, order statistics. Distribution of sample mean and variance, moment-generating functions, central limit theorem.
Three lectures; one term
Prerequisite: MATH 1A03 or 1M03; and credit or registration in MATH 1B03
Not open to students with credit or registration in STATS 2A03, 2M03.

### STAT 2M03 • PROBABILITY AND STATISTICAL METHODS FOR SCIENCE
Combinatorics; discrete and continuous probability distributions; expectations; central limit theorem; point and interval estimation; hypothesis testing; regression and correlation; analysis of variance.
Three lectures; one term
Prerequisite: STATS 1CC3 and MATH 1A03 or 1M03
Antirequisite: ECON 2903
Not open to students with credit or registration in COMMERCE 2A03, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2D03, 2MB3.

### STAT 2MB3 • STATISTICAL METHODS
Estimation; sampling distributions; confidence intervals; hypothesis testing; power; robustness; analysis of variance for one and two factor designs; linear regression; graphical methods; statistical computing using software package R.
Three lectures; one term
Prerequisite: STATS 2D03
Antirequisite: ECON 2B03, PSYCH 2R03, 2RR3, STATS 2R06
Not open to students with credit or registration in COMMERCE 2A03, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2D03, 2MA3.

### STAT 3A03 • REGRESSION AND DESIGN OF EXPERIMENTS
Introduction to SAS, linear models, regression and inference, diagnostics, analysis of variance, randomized block designs, Latin squares, and factorial experiments using SAS.
Three lectures; one term
Prerequisite: Credit or registration in STATS 3D03
Antirequisite: STATS 4B03

### STAT 3D03 • MATHEMATICAL STATISTICS I
The multivariate normal distribution, sampling distributions, limiting distributions, introduction to statistical inference.
Three lectures; one term
Prerequisite: STATS 2D03 and one of MATH 2A03, 2L03, 2Q04
Antirequisite: STATS 3D06

### STAT 3D03 • MATHEMATICAL STATISTICS II
Estimation: tests of hypotheses, sufficient statistics, inference about normal models, and selected topics from robust inference, Bayesian inference, nonparametric inference and resampling methods.
Three lectures; one term
Prerequisite: STATS 3D03
Antirequisite: STATS 3D06

### STAT 3G03* • ACTUARIAL MATHEMATICS I
Survival distributions, life tables, life insurance, life annuities, net premiums and reserves.
Three lectures; one term
Prerequisite: STATS 2D03 and credit or registration in MATH 2K03
Offered in alternate years.

### STAT 3H03* • ACTUARIAL MATHEMATICS II
Multiple life functions, multiple decrement models, valuation theory for pension plans.
Three lectures; one term
Prerequisite: STATS 3G03
Offered in alternate years.
STATS 3J04  PROBABILITY AND STATISTICS FOR ENGINEERING
Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance, applications to civil and environmental engineering.
Three lectures; one tutorial; first term
Prerequisite: Registration in II or above of any program in Engineering
Antirequisite: MATH 3J04, STATS 3N03, 3Y03

STATS 3N03  STATISTICAL METHODS FOR ENGINEERING
Introduction to probability, data analysis, statistical inference, regression, correlation and analysis of variance.
Three lectures; one term
Prerequisite: Registration in a program in Engineering above Level I
Antirequisite: STATS 3Y03, 3J04

STATS 3S03  SURVEY SAMPLING
Survey design; simple random sampling; stratified sampling; conditional allocation; ratio estimation; cluster sampling; systematic sampling and sample size determination. A project associated with current research is required.
Three lectures; one term
Prerequisite: STATS 2D03, 2MB3

STATS 3U03  STOCHASTIC PROCESSES
Three lectures; one term
Prerequisite: MATH 2A03, STATS 2D03

STATS 3Y03  STATISTICAL ANALYSIS FOR ENGINEERING
Introduction to probability, univariate and multivariate random variables and their distributions, statistical estimation and inference, regression and correlation, decision making, applications.
Three lectures; one term
Prerequisite: Registration in a program in Engineering above Level I
Antirequisite: STATS 3J04, 3N03

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.
Three lectures; first term
Prerequisite: MATH 3A03, STATS 3D03; and STATS 3A03 or 4E03

STATS 4C03  GENERALIZED LINEAR MODELS
Normal linear model, exponential family, iteratively-rewighted least squares, logistic regression, Poisson regression and log-linear models, other families of GLMs, analysis of deviance and model checking, residual analysis.
Three lectures; one term
Prerequisite: STATS 3A03 or 4E03; and STATS 3D03

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: MATH 3A03, STATS 2D03

STATS 4E03  BROWNIAN MOTION AND DIFFUSION
Brownian motion, stochastic integrals, one-dimensional Ito’s formula, diffusion processes, option pricing and other financial applications. Simulation of the Black-Scholas formula and related models.
Three lectures; one term
Prerequisite: STATS 2D03

STATS 4F03  TWO-WAY AND THREE-WAY CONTINGENCY TABLES
Two-way and three-way contingency tables, logistic regression, loglinear models for contingency tables, collapsibility, ordinal associations, multicategory logit models.
Three lectures; one term
Prerequisite: STATS 3A03 or 4E03; and STATS 3D03

STATS 4H03  OPERATIONS RESEARCH
Network models and algorithms, dynamic models, queuing models and other topics.
Three lectures; one term
Prerequisite: Credit or registration in STATS 3D03 (or 3D06)

STATS 4M03  MULTIVARIATE ANALYSIS
Multivariate distributions: Normal, Wishart, T2 and others; regression, correlation, factor analysis, general linear hypothesis.
Three lectures; first term
Prerequisite: STATS 3D03 (or 3D06) and MATH 2S02 or 2T03

STATS 4O03  ORDER STATISTICS
Three lectures, one term
Prerequisite: Credit or registration in 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.
Three lectures, second term
Prerequisite: STATS 4M03 and credit or registration in STATS 3A03 or 4B03

STATS 4U03  NONPARAMETRIC METHODS IN STATISTICS
Rank tests and nonparametric methods; rank correlation; comparisons with parametric methods.
Three lectures; one term
Prerequisite: Credit or registration in STATS 3D03 (or 3D06)

STATS 4W03  TOPICS IN STATISTICS
Directed reading in areas of statistics of interest to the student and the instructor.
Prerequisite: Permission of the Chair of the Department

MECHANICAL ENGINEERING

WEB ADDRESS: http://www.mech.mcmaster.ca
John Hodgins Engineering Building, Room 316
Ext. 24294

Faculty as of January 15, 2005

Chair
Samir Zlada

Professors
Mamdouh Shoukri/B.Sc. (cairo), M.Eng., Ph.D. (McMaster), P.Eng.
David S. Weaver/B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Waterloo), P.Eng.
Samir Zlada/B.Sc. (Cairo), M.Eng. (McMaster), Ph.D. (Lehigh)

Adjunct Professors
M. Heimi Attia/B.Sc., M.Sc. (Alexandria), Ph.D. (McGill)
Kamram Behardin/B.A.Sc. (Touiss), M.A.Sc. (Sherif), Ph.D. (Victoria)
Dan Ewing/B.A.Sc. (Waterloo), Ph.D. (SUNY-Buffalo)
German Fox-Rabinovich/Dipl. Machine Tool Eng. (Moscow), Ph.D., D.Sc. (Moscow)
Grzegorz Rzemkiewski/B.A.Sc., M.A.Sc. (Gdansk), Ph.D. (Memorial)
Vincent M. Sowa/B.Sc. (Illinois), M.A. (Purdue), Ph.D. (Washington)

Associate Professors
Chau Y. Ching/B.S. (Pardeyana), Ph.D. (Syracuse), P.Eng.
Marilyn F. Lightstone/B.A.Sc., Queen’s, M.A.Sc., Ph.D. (Waterloo), P.Eng.
Joseph R. Mcdermid/B.Sc. (Queen’s), M.Eng., Ph.D. (McGill)
Sumanth Shankar/B.Tech. (Banaras Hindu), Ph.D. (Worcester Polytechnic)
Mateusz P. Sklad/M.Sc., Ph.D. (Warsaw)
Allan D. Spence/B.Math., M.A.Sc. (Waterloo), Ph.D. (British Columbia), P.Eng.

Assistant Professors
Philip Koshy/B.E. (Anna), M.Tech., Ph.D. (IIT Kanpur)
Timothy J. Nyl/B.A.Sc. (Waterloo), M.A.Sc. (Chio State), Ph.D. (Waterloo), P.Eng.
Ponnambalam Selvaganapathy/B.Sc. (Madurai Kamaraj), M.S., Ph.D. (Michigan)
Stephen W. Tullis/B.Sc., M.Sc. (Queen’s), Ph.D. (Cambridge), P.Eng.
Lecturer

MECHANICAL ENGINEERING

MECH ENG 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. Technical writing and communication. Three lectures, one lab (three hours); second term.
Prerequisite: Registration in Level II of any Mechanical Engineering program
Antirequisite: MECH ENG 2B02

MECH ENG 2C03  MECHANICAL ENGINEERING DESIGN I
Lectures on Geometric Dimensioning and Tolerancing and three dimensional measurement methods. Design projects involving modelling, analysis, synthesis, computing and drawing. Three lectures, one lab (three hours); second term.
Prerequisite: Registration in Level II of any Mechanical Engineering program

MECH ENG 2D03  MECHANICAL ENGINEERING DESIGN ELEMENTS
Design synthesis, fundamental principles of standard design elements, mechanical and fluid power elements, formal mechanical design drawing requirements, component specification and optimization. Three lectures; first term.
Prerequisite: Registration in Level II of any Mechanical Engineering program

MECH ENG 2E04  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. Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term.
Prerequisite: Registration in Level II of any Mechanical Engineering program
Antirequisite: CIV ENG 2004, ENGINEER 2004

MECH ENG 2W04  THERMODYNAMICS I
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; second term.
Prerequisite: Registration in Level II of any Mechanical Engineering program
Antirequisite: ENGINEER 2W03, 2W04

MECH ENG 3A03  ENGINEERING MECHANICS
Singularity functions, generalized Hooke’s law; shear stress, shear flow in beams; shear centre; Biaxial and unsymmetrical bending, analysis of indeterminate beams. Loads using energy methods, impact loads, buckling of compression members. Introduction to yield criteria. Three lectures; second term.
Prerequisite: ENGINEER 2P04

MECH ENG 3C03  MANUFACTURING ENGINEERING
A 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; second term.
Prerequisite: Registration in any Mechanical Engineering or Chemical Engineering program

MECH ENG 3D03  THERMODYNAMICS II
Re-examination of the thermodynamic laws. Applied thermodynamics including advanced engineering thermodynamic processes, psychrometry, and an introduction to combustion, compressible flow and environmental problems. Three lectures; first term.
Prerequisite: MECH ENG 2W04

MECH ENG 3E04  MECHANICAL ENGINEERING DESIGN II
3-D stress transformation, curved beams, thick walled pressure vessels, contact stresses, fatigue, bolted and welded joints, machine elements. The laboratories feature a major design project from concept development through analysis to formal report preparation. Three lectures, one tutorial (two hours), one lab (two hours); second term.
Prerequisite: MECH ENG 2P04, MECH ENG 3A03; and ENGINEER 2D04 or MECH ENG 2W04

MECH ENG 3F04  MODELLING AND NUMERICAL SOLUTIONS
An introductory course in numerical analysis covering such topics as solution of differential and non-linear equations, matrices and systems of linear equations. One tutorial period, every other week, devoted to the modelling of mechanical systems. Three lectures; one tutorial; first term.
Prerequisite: Registration in any Mechanical Engineering program

MECH ENG 3G04  FLUID MECHANICS I
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: MATH 2P06; or MATH 2P04 and 2W04; or MATH 2A03 and 2C03

MECH ENG 3H03  HEAT TRANSFER
Three lectures; second term.
Prerequisite: MATH 2M06, MECH ENG 2W04

MECH ENG 3I03  COMPUTER AIDED MANUFACTURING
Furnishing and part set for machining and inspection, computer-aided tool path generation for machining and inspection, sculptured surface generation, and digitizing. Three lectures, one tutorial (one hour), one lab (one hour); second term.
Prerequisite: Registration in Level IV or above of a Mechanical Engineering program

MECH ENG 4A03  MANUFACTURING PROCESSES
Prerequisite: MECH ENG 3C03

MECH ENG 4B03  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; second term.
Prerequisite: One of CHEM ENG 3P03, ELEC ENG 3C03, 3TP4 or MECH ENG 4P03

MECH ENG 4C03  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; second term.
Prerequisite: MECH ENG 4C03

MECH ENG 4D03  FLUID MECHANICS III
Study of high Reynolds number flows occurring in engineering applications. Topics include turbulent boundary layers, aerodynamics, separated flows, drag reduction and heat transfer. Three lectures; second term.
Prerequisite: MECH ENG 4S03
MECH ENG 4K03  INTRODUCTION TO ROBOTIC MECHANICS
Spatial descriptions and transformations, manipulator kinematics, inverse kinematics, Jacobians, dynamics.
Three lectures; first term
Prerequisite: ENGINEER 2Q04 or MECH ENG 2Q04

MECH ENG 4L03  INDUSTRIAL DESIGN
Introduction for engineering students to the techniques of industrial design, case studies and introduction to illustration techniques.
Three lectures; second term
Prerequisite: MANUFACT 2C03 or MECH ENG 2C03; and permission of the Department

MECH ENG 4M04  PROJECT
A major project related to any option or branch of engineering which may be of a design or experimental nature, to be completed under the supervision or co-supervision of a faculty member holding an appointment in the Department of Mechanical Engineering.
One lab (three hours), first term; three labs (three hours); second term
Prerequisite: Registration in Level IV Mechanical Engineering; or in Level V Mechanical Engineering and Management or Mechanical Engineering and Society

MECH ENG 4M06  PROJECT
A major mechanical or manufacturing engineering design or experimental project to be completed under the supervision of the co-supervision of a faculty member holding an appointment in the Department of Mechanical Engineering.
Two labs (three hours), first term; four labs (three hours), second term
Prerequisite: Registration in Level IV Mechanical Engineering; or in Level V Mechanical Engineering and Management or Mechanical Engineering and Society

MECH ENG 4P02  COMPOSITE LABORATORY
Laboratory exercises in vibration analysis, machine structures, controls, heat transfer, gas dynamics, fluid mechanics and thermodynamics.
One lab (three hours); both terms
Prerequisite: MECH ENG 3M02 and registration in any Mechanical Engineering program

MECH ENG 4Q03  MECHANICAL VIBRATIONS
Transient and steady state vibration of single- and multi-degree of freedom systems. Free and forced vibrations of single and multiple degrees of freedom mechanical systems, transient response, damping and vibration isolation.
Three lectures; first term
Prerequisite: ENGINEER 2Q04 or MECH ENG 2Q04

MECH ENG 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: Registration in Level III Mechanical Engineering; or Level IV Mechanical Engineering and Management or Mechanical Engineering and Society.
Antirequisite: ELEC ENG 3CA3, 3CK4, 3TP4

MECH ENG 4S03  FLUID MECHANICS II
Introduction to potential flows, internal and external laminar and turbulent incompressible flows. Introduction to compressible flows and incompressible flow machines.
Three lectures; first term
Prerequisite: MECH ENG 3S04

MECH ENG 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.
Two lectures, one tutorial (one hour), one lab (two hours) alternate weeks; first term
Prerequisite: Registration in Level IV or V of any Mechanical Engineering program

MECH ENG 4U03  THERMODYNAMICS III
Compressible flows: Fanno and Rayleigh flows, normal and oblique shocks. Turbomachines: axial and radial flow gas and steam turbines, axial and radial flow compressors and fans.
Three lectures; second term
Prerequisite: MECH ENG 3D03

MECH ENG 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; first term
Prerequisite: MECH ENG 2W04, 3004, 3R03

MECH ENG 4Z03  COMPUTER AIDED DESIGN
Project-oriented CAD course, 3-D modelling and graphics, design by features, use of mechanical design application packages.
Two lectures, one tutorial (one hour), one lab (one hour); first term
Prerequisite: Registration in Level IV or above of any Mechanical Engineering program

MEDICAL PHYSICS AND APPLIED RADIATION SCIENCES
WEB ADDRESS: http://www.science.mcmaster.ca/medphys/index.php
Nuclear Research Building, Room 124
Ext. 27650

Faculty as of January 15, 2005
Chair
Fiona E. McNeill

Professors
David R. Chettle/B.Sc., M.Sc., Ph.D. (Birmingham)
Carmel E. Mothersill/B.Sc., Ph.D. (University College Dublin)
Michael S. Patterson/B.Sc. (Queen's), M.Sc. (McMaster), Ph.D. (Toronto)
Colin B. Seymour/DCR (RT) (Guy's Hospital), B.L. (King's Inn), Ph.D. (Trinity College Dublin)

Associate Professors
Douglas R. Boreham/B.Sc. (Laurentian), Ph.D. (Ottawa) Chair, Committee of Instruction, Honours Medical and Health Physics Co-op
Thomas J. Farrell/B.Sc., B.Ed. (Toronto), M.Sc., (Western Ontario), Ph.D. (McMaster)
Fiona E. McNeill/B.Sc. (Edinburgh), Ph.D. (Birmingham)
Douglas R. Wyman/B.Math (Waterloo), Ph.D. (McMaster)

Assistant Professors
Gerald R. Moran/B.Sc. (McMaster), Ph.D. (Guelph) (Undergraduate Advisor John F. Vailant/B.Sc., Ph.D. (McMaster)

Associate Members
Richard G. Butler (Pathology) B.Sc., M.Sc. (Toronto), Ph.D. (A.N.U. Canberra), M.B.A. (McMaster)
Troy Farncombe/B.Sc.(Calgary), M.Sc., Ph.D. (British Columbia)
Andrew J. Rainbow/Biology B.Sc. (Manchester), M.Sc. (London), Ph.D. (McMaster)
Colin E. Webster/Radiology B.Sc. (Birmingham), M.Phil., Ph.D. (Surrey)

Mohawk College of Applied Arts and Technology
Chair, Medical Radiation Sciences
Diane Barrafaoto/Dipl, M.R.T.(R), RTR

Coordinator, Radiation Therapy Specialization
Appointment Pending

Coordinator, Radiography Specialization
Caroline Falconi
Coordinator, Ultrasoundography Specialization
Lori Kozio

Faculty
Mary Ayerl RTR, RDMS/Clinical Coordinator, Ultrasoundography
Desmond Barnes/M.R.T.(R), RTR
Caroline Falconi/Dipl, B.App.Sc.(Med Im), M.App.Sc.(Med Im) (Charles Sturt), M.R.T.(R) RTR
Janice Gyory/Dipl, RTR, RDMS
MEDICAL AND HEALTH PHYSICS ...

Courses

If no prerequisite is listed, the course is open.

MED PHYS 2A03 PHYSICS IN MEDICINE AND BIOLOGY
Applications of introductory physics concepts to medicine and biology.
Centrifugation; chromatography and electrophoresis; ultrasonography; confocal microscopy; photomolecular interactions and optical diagnostic techniques.
Three lectures; one term
Prerequisite: Registration in Level II of Honours Medical and Health Physics

MED PHYS 3R03 COMPUTATIONAL MEDICAL PHYSICS
A problem-based introduction to the use of numerical methods in medical physics.
Three lectures; second term
Prerequisite: Registration in Level III of Honours Medical and Health Physics or Year 4 of Honours Medical and Health Co-op
Antirequisite: PHYSICS 3R03

MED PHYS 3T03 RADIOACTIVITY AND RADIATION INTERACTIONS
Radioactivity and radiation phenomenology: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection.
Three lectures; one term
Prerequisite: One of PHYSICS 1B03, 1B03 or permission of the instructor
Antirequisite: PHYSICS 3L03, PHYSICS 3T03

MED PHYS 4A03 MEDICAL PHYSICS COMMUNICATIONS
This is an inquiry course that introduces students to scientific communication in medical physics. The course will educate students in individual research and presentation skills. It will comprise both traditional and self-directed learning.
One lecture (one hour); a full year course for students in the Honours program
Prerequisite: Registration in Level IV of Honours Medical and Health Physics
Antirequisite: MED PHYS 3L01, 4A01, 4A01, 4A03, 4A03, 4A01, 4A01

MED PHYS 4A4A MEDICAL PHYSICS COMMUNICATIONS A
Preparation and presentation of report on first work term.
One seminar (one hour); first term
Prerequisite: Registration in Year 4 of Honours Medical and Health Physics Co-op
Antirequisite: MED PHYS 3L01, 4A01, 4A03, PHYSICS 3L01, 4A03

MED PHYS 4A4B MEDICAL PHYSICS COMMUNICATIONS B
Preparation and presentation of report on second work term.
One seminar (one hour); second term
Prerequisite: MED PHYS 4A4A
Antirequisite: MED PHYS 4A03, 4A01, PHYSICS 4A03, 4A01

MED PHYS 4R06 RADIATION AND RADIOISOTOPE METHODOLOGY
Techniques and theory of the measurement of radiation. Includes radioactive decay and radioactive decay, solid state dosimetry, principles of radioactive detectors, counting statistics and data reduction, advanced multidetector systems.
Two lectures every week, one lab (three hours) every other week; two terms
Prerequisite: Registration in Level IV of Honours Medical and Health Physics or Year 4 of Honours Medical and Health Physics Co-op; or permission of the instructor
Antirequisite: PHYSICS 4R06

MED PHYS 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: MATH 2A03 or 2C04; and MATH 2C03 or 2P04; and one of BIOL 3G03, ENG PHYS 3D03, MED PHYS 3T03, PHYSICS 3T03
Antirequisite: PHYSICS 4T03

MED PHYS 4XXX HUMAN BIOLOGY FOR PHYSICAL SCIENTISTS
An overview of the structure and function of the major organ systems of the body with some reference to radiation interactions.
Three hours; first term
Prerequisite: Registration in Level IV of Honour Medical and Health Physics or Year 4 of Honours Medical and Health Physics Co-op, or permission of the instructor
Antirequisite: BIOLOGY 3XX3, PHYSICS 3XX3, 4XX3

BIOLOGY 4U03 RADIATION BIOLOGY
The effects of radiation on biological material at the molecular, cellular, tissue and whole organism level.
Three lectures; or two lectures and one tutorial; one term
Prerequisite: One of BIOLOGY 2B03 or 2C03, and one of BIOLOGY 3L03, MED PHYS 3T03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op; or permission of the instructor

INQUIRY 4S23 INQUIRY IN SCIENCE II (PHOENIX: OUT OF THE ASHES AND INTO THE ATOMIC AGE)
This course will study the short and long term impact of nuclear weapons testing and use, upon humans and the environment. Students will visit critical sites where nuclear weapons were developed and detonated. The travel portion of the course will run for 10-12 days (dependent on available travel schedules) and will involve group discussions and field experiences. Students will be required to pay incidental fees over and above the normal tuition fee set by the University to cover travel costs.
Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MEDICAL RADIATION SCIENCES ...

WEB ADDRESS: http://www.science.mcmaster.ca/MedRadSci
Nuclear Research Building, Room 104
Ext. 26256

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.
2. A satisfactory Police Records Check may be required for clinical placements. All costs associated with this procedure are the responsibility of the student.
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. All Level II Medical Radiation Science courses will be first offered in 2005-2006. All Level III courses will be first offered in 2006-2007 and Level IV courses will commence in 2007-2008.

Courses

MEDRADSC 1A03 INTRODUCTION TO MEDICAL RADIATION SCIENCES
An introduction to the field of medical radiation sciences with particular emphasis on the medical imaging professions and their subspecialties, examining current applications in health care and future trends.
One hour (lecture) first term; one hour (lecture), two hours (tutorial) second term; two terms
Prerequisite: Registration in Medical Radiation Sciences

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.
Three hours (lectures); one term
Prerequisite: BIOLOGY 1A03, KINESIOL 1Y03 and registration in Medical Radiation Sciences
Corequisite: KINESIOL 1Y03
MEDRADSC 1C03 | INTRODUCTION TO PHYSICS FOR MEDICAL RADIATION SCIENCES
Fundamentals of Newtonian mechanics, wave motion, electricity, magnetism and modern physics and applications to ultrasonic, radiographic and magnetic resonance imaging.
Three lectures; one term
Prerequisite: PHYSICS 1C03 or a grade of at least 60% in Grade 12 Physics U (or O/C Physics) and registration in Medical Radiation Sciences.

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.
Two hours (lectures), two hours (lab); one term
Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization.

MEDRADSC 2B03 | MEDICAL INFORMATICS
Examination of the acquisition, storage, communication and security of digital patient records in health care facilities.
Two hours (lectures), one hour (lab); one term
Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization.

MEDRADSC 2C03 | INTRODUCTION TO PROFESSIONAL PRACTICE
Introduction to the legislative and regulatory frameworks of health care and health care professions, the behaviors and attitudes required of a health care professional, and concepts of reflective practice.
Two hours (lectures), two hours (tutorial); one term
Prerequisite: Registration in Level II of a Medical Radiation Sciences Specialization.

MEDRADSC 2D03 | RELATIONAL ANATOMY I
This course examines the spatial relationships of anatomical structures. The appendicular and axial skeleton (except skull), and all organ systems except central nervous are covered, with application to projection, sectional and volume rendered images.
Two hours (lectures), two hours (lab); one term
Prerequisite: Registration in Level II of the Radiography or Radiation Therapy Specialization.

MEDRADSC 2E03 | RADIOGRAPHIC IMAGE PRODUCTION
Image production, processing and display of analogue and digital radiographic images are covered. Image quality in terms of spatial and contrast resolution are explored.
Two hours (lectures), three hours (lab); one term
Prerequisite: Registration in Level II of the Radiography or Radiation Therapy Specialization.

MEDRADSC 2F03 | RADIOGRAPHIC PHYSICS AND INSTRUMENTATION I
The course focuses on the production of x-rays in radiography and the interactions of x-rays with matter. Control of beam quality and quantity is related to image quality and dose minimization.
Two hours (lectures), three hours (lab); one term
Prerequisite: Registration in Level II of the Radiography or Radiation Therapy Specialization.

MEDRADSC 3A03 | DIGITAL IMAGE MANAGEMENT
Using concepts of digital databases in health care, picture archiving and communication systems are examined, with attention to DICOM conformance standards and interconnectivity of medical imaging devices.
Three hours (lectures), one hour (lab or tutorial); one term
Prerequisite: MEDRADSC 2B03 and registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3B03 | QUALITY MANAGEMENT IN MEDICAL IMAGING
Examination of various quality management methodologies in health care facilities, external accreditation processes and legislation associated with quality in Medical Imaging.
Two hours (lectures), two hours (tutorial); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3C03 | MULTIDISCIPLINARY INTERVENTIONAL PROCEDURES
A survey of changing approaches to treating pathologies of various organ systems through intervention using image guidance.
Three hours (lectures); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3D03 | SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES
Students will select three units of study from a Medical Radiation Sciences subspecialty course list.
Three hours (lectures); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3E03 | INQUIRY IN MEDICAL RADIATION SCIENCES
Independent study of the scholarly literature, including the preparation of seminars and reports on assigned topics.
Three hours (lectures or seminars); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3F03 | 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 of provincial, federal and international bodies are examined.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiography or the Radiation Therapy Specialization.

MEDRADSC 3G03 | RELATIONAL ANATOMY II
The spatial relationships of anatomical structures, with particular emphasis on neuroanatomy, are examined. The bony skull and soft tissue structures of the central nervous system are examined in detail with application to projection, sectional and volume rendered images.
Two hours (lectures), two hours (lab); one term
Prerequisite: MEDRADSC 2C03 and registration in Level III of the Radiography or the Radiation Therapy Specialization.

MEDICAL RADIATION SCIENCES (RADIATION THERAPY SPECIALIZATION) ...

Subject to final approval, the Medical Radiation Sciences program will offer a Radiation Therapy Specialization in 2005-2006.

Courses

MEDRADSC 2503 | CLINICAL ONCOLOGY I
This course examines pediatric and some adult oncology sites. Epidemiology, etiology, signs and symptoms of disease, pathology, routes of spread, staging systems and management approach for cancers are emphasized.
Four hours (lectures); one term
Prerequisite: Registration in Level II of the Radiation Therapy Specialization.

MEDRADSC 2703 | CLINICAL ONCOLOGY II
This course further emphasizes the principles of additional oncology disease sites e.g. epidemiology, etiology, signs and symptoms of disease, pathology, routes of spread, staging systems and management approach.
Four hours (lectures); one term
Prerequisite: MEDRADSC 2503 and registration in Level II of the Radiation Therapy Specialization.

MEDRADSC 2U03 | TREATMENT PLANNING I
This course develops dosimetry problem-solving skills. Photon, electron beams, brachytherapy, conformal therapy and intensity modulated Radiation Therapy calculations and principles are emphasized.
Two hours (lectures), three hours (lab); one term
Prerequisite: Registration in Level II of the Radiation Therapy Specialization.

MEDRADSC 2V17 | CLINICAL PRACTICUM I
Seventeen week placement in a Radiation Therapy Department. Students develop clinical skills by participating in various areas of a Radiation Therapy Department under direct supervision of Radiation Therapy professionals.
One term
Prerequisite: MEDRADSC 2U03, 2V03 and registration in Level II of the Radiation Therapy Specialization.

MEDRADSC 3B03 | MULTIDISCIPLINARY INTERVENTIONAL PROCEDURES
A survey of changing approaches to treating pathologies of various organ systems through intervention using image guidance.
Three hours (lectures); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3D03 | SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES
Students will select three units of study from a Medical Radiation Sciences subspecialty course list.
Three hours (lectures); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3E03 | INQUIRY IN MEDICAL RADIATION SCIENCES
Independent study of the scholarly literature, including the preparation of seminars and reports on assigned topics.
Three hours (lectures or seminars); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.

MEDRADSC 3F03 | 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 of provincial, federal and international bodies are examined.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiography or the Radiation Therapy Specialization.

MEDRADSC 3G03 | RELATIONAL ANATOMY II
The spatial relationships of anatomical structures, with particular emphasis on neuroanatomy, are examined. The bony skull and soft tissue structures of the central nervous system are examined in detail with application to projection, sectional and volume rendered images.
Two hours (lectures), two hours (lab); one term
Prerequisite: MEDRADSC 2C03 and registration in Level III of the Radiography or the Radiation Therapy Specialization.

MEDICAL RADIATION SCIENCES (RADIATION THERAPY SPECIALIZATION) ...

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One term
Prerequisite: MEDRADSC 2U03, 2V03 and registration in Level II of the Radiation Therapy Specialization.

MEDRADSC 3B03 | MULTIDISCIPLINARY INTERVENTIONAL PROCEDURES
A survey of changing approaches to treating pathologies of various organ systems through intervention using image guidance.
Three hours (lectures); one term
Prerequisite: Registration in Level III of a Medical Radiation Sciences Specialization.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDRADSC 3G03</td>
<td>RADIOGRAPHIC PHYSICS AND INSTRUMENTATION II</td>
<td>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: MEDRADSC 2F03 and registration in Level III of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 3K03</td>
<td>QUALITY CONTROL IN RADIOGRAPHY</td>
<td>Students perform quality control testing procedures on both analogue and digital radiographic equipment, comparing equipment performance to legislated standards and best practices concepts. One hour (lecture), three hours (lab), one hour (tutorial); one term. Prerequisite: MEDRADSC 3G03 and registration in Level III of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 3J03</td>
<td>PATHOLOGY AND PROCEDURES II</td>
<td>Radiological procedures and image appearances of associated pathologies of the cardiovascular, endocrine, nervous and reproductive systems. Three hours (lectures); one term. Prerequisite: MEDRADSC 2I03 and registration in Level III of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 3K03</td>
<td>COMPUTED TOMOGRAPHY</td>
<td>Processes of data acquisition, image reconstruction and post-processing in computed tomography are discussed. Scan protocol optimization in terms of image quality, demonstrated structures and patient dose are examined. Three hours (lectures), one lab; one term. Prerequisite: MEDRADSC 3I03 and registration in Level III of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 3L03</td>
<td>RADIOGRAPHIC SKILLS II</td>
<td>Radiography of cranio-facial structures and development of case management and adaptation skills in modifying standard radiographic procedures to the special needs patients. One hour (lecture), six hours (lab); one term. Prerequisite: MEDRADSC 2J17 and registration in Level III of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 4A16</td>
<td>CLINICAL PRACTICUM II</td>
<td>Sixteen week placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, working toward competence in general radiography and fluoroscopy. One term. Prerequisite: Registration in Level IV of the Radiography Specialization.</td>
</tr>
<tr>
<td>MEDRADSC 4B17</td>
<td>CLINICAL PRACTICUM III</td>
<td>Seventeen week placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, integrating theory and development of independent decision-making capacity in the management of cases as required for entry to practice. One term. Prerequisite: MEDRADSC 4A16 and registration in Level IV of the Radiography Specialization.</td>
</tr>
</tbody>
</table>

### Courses

**MEDRADSC 2G03 - RADIOGRAPHIC SKILLS I**

Fundamental radiographic techniques and basic radiography of the appendicular skeleton through image production using anatomical phantoms and performance of simulated examinations on prens.

Two hours (lectures), three hours (lab); one term. Prerequisite: Registration in Level II of the Radiography Specialization.

**MEDRADSC 2H03 - RADIOGRAPHIC SKILLS II**

Radiography of the axial skeleton, chest, abdomen and skull through image production using anatomical phantoms and performance of simulated examinations on preens.

Two hours (lectures), six hours (lab); one term. Prerequisite: MEDRADSC 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 is studied.

Three hours (lectures); one term. Prerequisite: Registration in Level II of the Radiography Specialization.

**MEDRADSC 2J17 - CLINICAL PRACTICUM I**

Four month placement in a Diagnostic Imaging department. Students develop clinical and professional skills by participating in radiological procedures under direct supervision of a qualified professional.

One term. Prerequisite: MEDRADSC 2A03, 2D03, 2E03, 2F03, 2H03, 2I03, and registration in Level II 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: MEDRADSC 3I03 and registration in Level III of the Radiography Specialization.

**MEDRADSC 3K03 - COMPUTED TOMOGRAPHY**

Processes of data acquisition, image reconstruction and post-processing in computed tomography are discussed. Scan protocol optimization in terms of image quality, demonstrated structures and patient dose are examined. Three hours (lectures), one lab; one term. Prerequisite: MEDRADSC 3I03 and registration in Level III of the Radiography Specialization.

**MEDRADSC 3L03 - RADIOGRAPHIC SKILLS II**

Radiography of cranio-facial structures and development of case management and adaptation skills in modifying standard radiographic procedures to the special needs patients. One hour (lecture), six hours (lab); one term. Prerequisite: MEDRADSC 2J17 and registration in Level III of the Radiography Specialization.

**MEDRADSC 4A16 - CLINICAL PRACTICUM II**

Sixteen week placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, working toward competence in general radiography and fluoroscopy. One term. Prerequisite: Registration in Level IV of the Radiography Specialization.

**MEDRADSC 4B17 - CLINICAL PRACTICUM III**

Seventeen week placement in a Diagnostic Imaging department. Students further develop clinical and professional skills, integrating theory and development of independent decision-making capacity in the management of cases as required for entry to practice. One term. Prerequisite: MEDRADSC 4A16 and registration in Level IV of the Radiography Specialization.
MEDRADSC 2N03 SONOGRAPHIC SKILLS I
Emphasis is on performance of sonography of the abdominal vasculature, liver and biliary systems to include routine and alternate techniques, image recognition, patient care, communication and ergonomics.
One hour (lecture), four hours (lab); one term
Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2R17 CLINICAL PRACTICUM I
Under the direct supervision of a qualified sonographer, students will apply patient care and communication skills, scan selected patients with guidance to produce diagnostic images of the abdomen and pelvis.
One term
Prerequisite: MEDRADSC 2R03 and registration in Level II of the Ultrasonography Specialization

MEDRADSC 3S03 VASCULAR ULTRASONOGRAPHY
Vascular anatomy, physiology, flow hemodynamics, sonographic technique of normal and pathologic flow states, relevant alternative methods of assessing the vasculature of the head, neck, abdomen and extremities.
Three hours (lectures); one term
Prerequisite: MEDRADSC 2K03 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.
Two hours (lectures), one hour (lab); one term
Prerequisite: MEDRADSC 2R17 and registration in Level III of the Ultrasonography Specialization

MEDRADSC 4C16 CLINICAL PRACTICUM II
Four month 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 competency in the sonographic specializations.
One term
Prerequisite: MEDRADSC 2R17, 3Q03 and registration in Level IV of the Ultrasonography Specialization

MEDRADSC 4O17 CLINICAL PRACTICUM III
Four month 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 competency in the sonographic specializations.
One term
Prerequisite: MEDRADSC 4C16 and registration in Level IV of the Ultrasonography Specialization

Michael G. DeGroote Centre for Learning and Discovery, Room 3103 Ext. 26654
Faculty as of January 15, 2005
Assistant Dean
Karyn Kaufman
Professor
Karyn Kaufman, B.S.N. (Michigan), M.S. (New York), Dr.P.H. (North Carolina), R.M.
Associate Professor
Paul Krueger/B.Sc., M.Sc. (Waterloo), M.H.Sc., Ph.D. (Toronto)
Derek Lobb/B.Sc. (Western Ontario), M.Sc. (Guelph), Ph.D. (Toronto)
Helen McDonald/M.H.Sc. (Mcmaster), R.M.
Patricia McNiven/M.Sc., Ph.D. (Toronto), R.M.
Bruce Wainman/B.Sc., (Laurentian), M.H.Sc. (Mcmaster), Ph.D. (York)
Assistant Professor
Anne Malott/B.Sc.N. (Windsor), M.S.N (Case Western Reserve)

Courses If no prerequisite is listed, the course is open.

MEDIF 1A06 INTRODUCTION TO MIDWIFERY
Through small group discussions and arranged experiences, students will be oriented to the midwife's role, the philosophy of practice in Ontario and the future direction of midwifery in Canada. Students are assigned to follow-through with clients in fall and spring terms.
Prerequisite: Registration in the Midwifery Education Program

MEDIF 1C03 LIFE SCIENCE FOR MIDWIFERY
This course provides an overview of basic concepts relating to chemistry, biochemistry and microbiology. Content will include practical applications of clinical chemistry, specimen collection, related disease entities and pathologies, and the significance of laboratory values.
One term
Prerequisite: Registration in the Midwifery Education Program
Corequisite: RTH SCI 1D06

MEDIF 2A03 MIDWIFERY CARE I-CLINICAL SKILLS
This course involves four (4) weeks of structured learning experiences to prepare for an individualized placement in a midwifery practice. Fundamental clinical skills and theoretical information will be included.
Prerequisite: MEDIF 1A06

MEDIF 2B15 MIDWIFERY CARE II
This clinical course provides the student with an extended period of clinical experience within a midwifery practice. The course begins with a seven day intensive. Weekly tutorials will cover topics in preconception, antepartum, intrapartum, postpartum and newborn care.
One term
Prerequisite: MEDIF 2A03, 2E12
MODERN LANGUAGES AND LINGUISTICS

MODERN LANGUAGES AND LINGUISTICS

WEB ADDRESS:  http://www humanities.mcmaster.ca/modlang/  
Togo Salmon Hall, Room 613
Ext. 24388

Faculty as of January 15, 2005

Acting Chair
Dr. Robert McNutt/B.Sc. (New Brunswick), Ph.D. (M.I.T.)

Professors
Nina Kolesnikoff/M.A. (Moscow State), Ph.D. (Alberta)
Magda Strojneka/M.A. (Warsaw), Ph.D. (Edinburgh)

Associate Professors
Maria del C. Cerezo/B.A. (Puerto Rico), M.A. (McGill), Ph.D. (Toronto)
Inga Dolfina Mitchcock/M.A., Ph.D. (Leningrad)
Fiorgino Minelli/B.A., M.A. (Western Ontario), Ph.D. (Brown)
Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Assistant Professors
Iris Bruce/M.A., Ph.D (Toronto)
Vittorina Cochetel/B.A., M.A., Ph.D. (Toronto)
Paco Chirumbolo/M.A., Ph.D. (Toronto)
Tsuneko Iwai/B.A., M.Ed., Ph.D. (Toronto)
Anna L. Moro/B.A., M.A., Ph.D. (Toronto)
Gabriele Mueller/Ph.D. (UW, Bristol)
Antonio Rossini/Laurea in Lettere Classiche (Rome), M.A., Ph.D. (Toronto), Licences In Medieval Studies (Pontifical Institute for Medieval Studies, Toronto)
Diana Spokiene/M.A. (New Brunswick), Ph.D. (Alberta)
Antonio Velasquez/B.A. (Waterloo), M.A., Ph.D. (Toronto)

Lecturers
Eiko Virginia Ata/B.A. (Doshisha), M.A. (Toronto), M.A. (Texas)
Elena Valenzuela/B.A. (Carleton), M.A. (Ottawa), Ph.D. (McGill)

Department Notes:
1. The Department of Modern Languages and Linguistics administers all courses in European Studies, German, Hispanic Studies, Italian, Japanese, Linguistics, Polish, and Russian. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.
2. All language courses are taught and assessed in the original language.
3. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

EUROPEAN STUDIES ...

Courses in European Studies are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For Information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

COURSES  If no prerequisite is listed, the course is open.

EUROP ST 2A03  CONTEMPORARY EUROPE
An interdisciplinary approach to the study of contemporary European civilization: culture, society, change. Issues include nationalism, super- nationalism; economic and political integration of Europe; government of the European Union; migration, ethnic and racial divisions in European society. Three lectures; one term
Prerequisite: Registration in Level II or above

EUROP ST 2B03  THE MAKING OF THE EUROPEAN LINGUISTIC LANDSCAPE
The history of language use in Europe from antiquity to the present day. The course will illustrate the different functions of language in social life and the growth of national, standardized idioms. It will also serve as an introduction to the history of linguistics as a discipline. Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2U03, LINGUIST 2A03
Antirequisite: ANTHROP 2A13
This course is administered by the Department of Modern Languages and Linguistics.

MODERMAN LANGUAGES AND LINGUISTICS

ACTING CHAIR

Dr. Robert McNutt/B.Sc. (New Brunswick), Ph.D. (M.I.T.)

PROFESSIONAL ISSUES

This course will further develop knowledge and skills related to topics in preconception, antepartum, intrapartum, postpartum, and newborn care. Weekly tutorials will move from simple to more complex situations with further integration of the biological, behavioral and social concepts.

One term
Prerequisite: MIDWIF 2B15

REPRODUCTIVE PHYSIOLOGY

This course provides an in-depth understanding of human reproduction with particular emphasis on intrinsic control mechanisms and extrinsic methods of regulation of reproduction. This course will also provide the basis for understanding alterations from normal mechanisms including the influence of medical conditions on reproductive processes.

One term
Prerequisite: MHT 1006

MIDWIFERY CARE I CLINICAL PRACTICUM

This clinical placement focuses on assessment skills of prenatal and postnatal clients and observation of births. Physical assessment and history taking skills can be practised under supervision. Included is a weekly situation-based, small group tutorial which will focus on thorough assessment of situations and integration of basic knowledge with clinical observations.

Twelve weeks
Prerequisite: MIDWIF 2A03

PHARMACOTHERAPY

This course is an overview of basic concepts in pharmacy, pharmacology and therapeutics relevant to the practice of midwifery in Ontario. Concepts include pharmacokinetics, toxicology, adverse drug reactions during pregnancy and lactation and pharmacology in the neonate.

One term
Prerequisite: HTH SCI 1006

COMMUNITY PLACEMENTS

Three one month placements will be organized over the term. One placement will be conducted with a hospital labour and delivery department and one with an organization involved in community care. The third placement will be chosen by the student and may take place within or outside the province or country.

Prerequisite: MIDWIF 2B15

MIDWIFERY CARE IV

Integrates theoretical and clinical content progressively and a sound knowledge base of clinical skills to provide care throughout the childbearing cycle. The weekly tutorial situations will increasingly focus on the recognition of indications for consultation and referral and the relationships with other health care providers.

One term
Prerequisite: MIDWIF 2C15

MIDWIFERY CARE CLERKSHIP

This course examines clinical judgement and decision making skills. The student will be expected to participate in all phases of childbirth care in all available settings and should be increasingly able to devise the plan of care and make clinical decisions with minimal supervision.

One term
Prerequisite: MIDWIF 3B15

HEALTH EDUCATION AND HEALTH PROMOTION

This course will incorporate concepts and principles from areas that contribute to the understanding of human behaviour in health related situations. Of special interest are teaching-learning situations that arise in primary health care settings for childbearing families. Offered by WebCT/Print Management-based. The Program reserves the right to cancel the course due to low enrolment.

One term
Prerequisite: HTH SCI 1008

PROFESSIONAL ISSUES

This is a one-week intensive covering topics related to the profession of midwifery.

One term
Prerequisite: MIDWIF 3B15
Corequisite: MIDWIF 3C12

MIDWIFERY SYNTHESIS PAPER

The goal of this course is the synthesis of in-depth knowledge and critical analysis about a selected topic that leads to relevant application of the information for the midwifery profession. Each student is assigned to a faculty supervisor who will work closely with the student throughout the preparation of the paper.

One term
Prerequisite: Registration in Level III of the Midwifery Education Program
Three hours; one term
Prerequisite: GERMAN 1 BB3 or 2 ZZ3

GERMAN 2203 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 course is enhanced by the use of WebCT and multimedia technology. The sequel to this course is GERMAN 2 Z23.
Three hours; one term
Prerequisite: One of GERMAN 1 Z06, 1 ZZ3 or permission of the Department
Antirequisite: GERMAN 1 BB3
Not open to students with credit or registration in GERMAN 2 ZZ3.
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2 ZZ3 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. The sequel to this course are GERMAN 3 Z03 and 3 ZZ3.
Three hours; one term
Prerequisite: GERMAN 2 Z03 or permission of the Department
Antirequisite: GERMAN 1 BB3
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3803 GLOBALIZATION AND AUTONOMY IN EIGHTEENTH-CENTURY GERMANY
This course examines the relationship between globalization and autonomy using the text of several authors. Topics include: identity construction, growing urbanism, cultural production and gender issues.
Three hours; one term
Prerequisite: GERMAN 2AA3 or 2 CC3
Offered in alternate years.

GERMAN 3C03 GERMAN CULTURE AFTER 1945
This course, will explore the culture of modern Germany from 1945 to the present. Students will study important cultural developments by examining selected texts from literature, film and other forms of cultural expression.
Three hours; one term
Prerequisite: GERMAN 2AA3 or 2 CC3

GERMAN 3 N03 WOMEN IN GERMAN LITERATURE AND CULTURE
This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe. (See Note 3 above.)
Three hours; one term
Prerequisite: Registration in Level II or above
Prerequisite: COMP LIT 3 N03, WOMEN ST 3 N03
Offered in alternate years.

GERMAN 3Z03 ADVANCED GERMAN I
This course is designed to further develop accuracy and complexity in oral and written expression in German using authentic German language material taken from a variety of sources. The sequel to this course are GERMAN 3 Z23 and 4 Z03.
Three hours; one term
Prerequisite: GERMAN 2BB3 or 2 ZZ3
Antirequisite: GERMAN 3 E03
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3 ZZZ ADVANCED GERMAN II
This course further develops accuracy and complexity in reading, writing, speaking and listening using authentic texts from German-speaking countries. It provides students: with an advanced understanding of contemporary issues in Germany. Strong emphasis will be on in-class discussions and oral participation. The sequel to the course is GERMAN 4 Z03.
Three hours; one term
Prerequisite: GERMAN 1 BB3 or 2 ZZ3
Antirequisite: GERMAN 3 E03
Priority is given to students in a program requiring German. Students with native or near native fluency may be required to register in an appropriate alternative.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrolment is limited.
GERMAN 4CC3  TRANSLATION: TECHNIQUES AND PRACTICE
This course offers practice in the translation of literary and non-literary texts. (English to German and German to English.) The practical component will be complemented by an overview of electronic and on-line translation aids, as well as different theories and techniques of translation in Western Culture. Three hours; one term
Prerequisite: GERMAN 3203 or 4203

GERMAN 4FF3  GERMAN FOLKLORE AND FAIRY TALES
The course will examine elements of folklore and the supernatural in fairy tales from various periods: tales from German Romanticism, and modern twentieth-century (parodic) rewritings of the tradition. The boundaries between oral folk literature and literature, as well as between children’s and adult literature will also be examined. Three lectures; one term
Prerequisite: GERMAN 2AA3 or 2CC3
Alternates with GERMAN 4HH3.

GERMAN 4GG3  BERLIN/VIENNA:
THE CULTURAL LIFE OF A CITY
Students will embark on an interdisciplinary journey into the cultural history of a city from the 19th to the present. Through literary texts, songs, films, works of art and architecture, we will examine the city's high and popular culture and other aspects of its cultural life. Two hours; one term
Prerequisite: Registration in Level III or IV
Cross-list: COMP LIT 4GG3
Offered on an irregular rotation basis.

GERMAN 4HH3  THE HOLOCAUST IN GERMAN FILM AND FICTION
This course will examine the moral, philosophical and cultural legacy of the Holocaust as represented through the artistic imagination. Literary texts and films will involve key issues: truthfulness, politicization, marginalization, universalization, trivialization, abstraction, aestheticization, Holokitsch, etc. Three hours; one term
Prerequisite: GERMAN 2AA3 or 2CC3
Offered on an irregular rotation basis.

GERMAN 4HJ3  GERMAN LANGUAGE THROUGH THE AGES
The course follows the development of the German language from its Indo-European origins to the present situation in three German-speaking countries. Selected texts from different epochs, as well as visual materials on the linguistic and social history of the German language will be studied.
Three lectures; one term
Prerequisite: Nine units of German above Level I
Alternates with GERMAN 4FF3.

GERMAN 4IJ3  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: 12 units of German above Level I and permission of the Department.

GERMAN 4JO3  THE SPLIT-SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA
This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social, and cultural developments at the time of the films’ production. (See Note 3 above.) Two hours, plus one film screening per week; one term
Prerequisite: Registration in Level III or IV
Cross-list: COMP LIT 4JO3; THTR&PLM 4JO3
Offered on an irregular rotation basis.

GERMAN 4K03  FRANZ KAFKA AND 'MINOR LITERATURE' IN CONTEMPORARY GERMAN CULTURE
Students will inquire into some of the reasons for Kafka's popularity in contemporary culture and examine how themes of marginality, power, and identity - central to Kafka's work - remerge in contemporary German Jewish and Turkish writing.
Three lectures; one term
Prerequisite: GERMAN 2AA3 or 2CC3
Offered on an irregular rotation basis.

GERMAN 4Z03  GERMAN LANGUAGE AND CULTURE
This course further develops students' language proficiency and their cultural knowledge/competency. Students study various aspects of contemporary German society and focus on developing advanced reading, writing and speaking skills.
Three hours; one term
Prerequisite: GERMAN 3E03 or 3Z03

HISPANIC STUDIES ...
Courses and programs in Hispanic Studies are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the department office, Togo Salmon Hall, Room 613.

Notes:
1. Students should note that the Department has classified its Hispanic language courses under the following categories:
   Introductory Level Language Course
   HISPANIC 1203
   Intermediate Level Language Courses
   HISPANIC 1A03, 1AA3, 2Z03, 2ZZ3
   Advanced Level Language Courses
   HISPANIC 3X03, 3Y03, 4XX3, 4YY3
   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 Modern Languages and Linguistics to assess their proficiency in the language.
   4. Students are advised to pay particular attention to prerequisites for upper-level literature courses.

Courses If no prerequisite is listed, the course is open.

HISPANIC 1A03  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 HISPANIC 1AA3.
Four hours; one term
Prerequisite: Grade 12 U or M equivalent (or OAC Spanish) or permission of the Department.
Antirequisite: HISPANIC 2Z03, 2ZZ3
Not open to students with credit or registration in HISPANIC 1AA3.
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1AA3  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. The sequel to this course are HISPANIC 2A03 and 3X03.
Four hours; one term
Prerequisite: HISPANIC 1A03 or permission of the Department.
Antirequisite: HISPANIC 2Z03
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 1Z03  BEGINNER'S SPANISH
Courses in Spanish language and culture. 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 HISPANIC 2Z03.
Four hours; two terms
Prerequisites: Grade 12 U or M equivalent (or OAC Spanish), HISPANIC 1Z03
Students will have credit in HISPANIC 1Z03, but not in HISPANIC 1ZZ3, will be permitted to take HISPANIC 1Z03. However, they must relinquish credit in HISPANIC 1Z03 to do so.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrolment is limited.

HISPANIC 2C03  CONTEMPORARY SPANISH-AMERICAN CULTURE
Using a multidisciplinary approach involving fiction, cinema, music, art, and other cultural expressions, this course explores some of the issues that shape and define Spanish-America today.
Three hours; one term
Prerequisite: HISPANIC 1AA3 or 1Z06

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HISPANIC 2L03  INTRODUCTION TO SPANISH AMERICAN LITERATURE
A survey of Spanish American literature from the fifteenth century to the present. The most significant cultural currents and representative writers will be studied to understand the development of literary genres and the cultural, political and social context in which they flourished.
Three lectures; one term
Prerequisite: HISPANIC 3C03

HISPANIC 2X03  CONTEMPORARY SPAIN
Drawing on literature, film, art, popular culture and mass media, the course will explore the culture of modern and contemporary Spain, from the emancipation of the last colonies to the formation of the European Union, from avant-garde aesthetics to the Moviida madrileña, Barcelona's new architecture and Gehry's Guggenheim in Bilbao.
Three lectures; one term
Prerequisite: HISPANIC 1A03 or 1Z06

HISPANIC 2XX3  SPAIN IN THE WESTERN TRADITION
Drawing on literature, history, philosophy and the visual arts, this course will explore some of Spain's unique and enduring contributions to the Western tradition.
Three lectures; one term
Prerequisite: HISPANIC 2X03

HISPANIC 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 HISPANIC 2ZZ3.
Four hours; one term
Prerequisite: One of HISPANIC 1Z06, 1ZZ3 or permission of the Department
Antirequisite: HISPANIC 1A03, 1A3
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 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. The sequel to this course is HISPANIC 3XX3.
Four hours; one term
Prerequisite: HISPANIC 2Z03 or permission of the Department
Antirequisite: HISPANIC 1A3
The Department reserves the right to place students in the course most appropriate to their abilities.

HISPANIC 3X03  LANGUAGE PRACTICE I
In this course different styles of writing and communication will be examined and practiced: literary, journalistic, academic, etc.
Three hours; one term
Prerequisite: HISPANIC 1A03 or 1ZZ3
Antirequisite: HISPANIC 3A03, 3D03

HISPANIC 3Y03  SPANISH TRANSLATION
A course designed to introduce the student to the basic principles of translation from Spanish to English and from English to Spanish. Practice will be given in comprehension and precise writing.
Three hours; one term
Prerequisite: HISPANIC 1A03 or 1ZZ3
Antirequisite: HISPANIC 3A03

HISPANIC 4I03  INDEPENDENT STUDY
The student will prepare, under the supervision of a faculty member, a research paper involving independent study in an area in which the student has demonstrated competence.
Twelve units of Hispanic Studies above Level I and permission of the Department

HISPANIC 4L03  SPAIN'S GREAT MYTHS: DON QUIJOTE AND DON JUAN
An examination of the original texts and of the subsequent interpretations and adaptations of two of Spain's most enduring creations: one presents all the dramatic paradigms of life, the other embodies eternal conflicts that centre on the purpose of life itself.
Three hours; one term
Prerequisite: 12 units of Hispanic Studies above Level I
Offered on an irregular rotation basis.

HISPANIC 4M03  HEROES AND ANTI-HEROES IN SPANISH LITERATURE
The course will examine these two concepts in works ranging from Poema de Mio Cid - the quintessential Spanish hero - to Celestina - the bawd - and the picaresque, from Don Quijote to the tragedy of the ignoble.
Three hours; one term
Prerequisite: 12 units of Hispanic Studies above Level I
Offered on an irregular rotation basis.

HISPANIC 4N03  THE SPANISH AMERICAN SHORT STORY
This course will study the Spanish American Short Story from XIX Century to the present, its development, themes and formal aspects.
Three hours; one term
Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies
Not open to students with credit in HISPANIC 4S03, TOPICS IN SPANISH-AMERICAN LITERATURE, if the topic was The Spanish American Short Story.
Offered on an irregular rotation basis.

HISPANIC 4P03  THE BOOM GENERATION AND THEIR SHORT STORIES
This course will study the concept "Boom" and the short stories of four of its members: Donoso, Cortazar, Vargas Llosa and García Márquez. It will also examine the relation between the short stories and the novels of these authors.
Three hours; one term
Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies
Not open to students with credit in HISPANIC 4S03, TOPICS IN SPANISH-AMERICAN LITERATURE, if the topic was The Boom Generation.
Offered on an irregular rotation basis.

HISPANIC 4Q03  SPANISH AND LATIN AMERICAN CULTURE THROUGH CINEMA
This course is designed to provide students with the background necessary to analyse and interpret Spanish and Latin American culture through cinema. Films will be studied within their social and political context.
Three hours; one term
Prerequisite: 12 units of Hispanic Studies above Level I
Offered on an irregular rotation basis.

HISPANIC 4R03  WOMEN WRITERS OF LATIN AMERICA
Emphasis will be on women writers of the 19th and 20th centuries. Selected readings will be analysed to explore how women have employed literary strategies to represent themselves and others within their oppressive social-cultural milieu.
Three hours; one term
Prerequisite: HISPANIC 2C03, 2L03
Offered on an irregular rotation basis.

HISPANIC 4S03  REPRESENTATIVE DRAMATISTS OF 20TH-CENTURY SPAIN
Recurrent themes such as exile, political oppression, issues of gender identity, race and feminism, will be examined in major important works written by men and women from Spain.
Three hours; one term
Prerequisite: HISPANIC 2L03; and HISPANIC 2X03 or 2XX3
Offered on an irregular rotation basis.

HISPANIC 4T03  TOPICS IN SPANISH LINGUISTICS
This course explores the specific structure of Spanish grammar concentrating on (1) morphology; (2) syntax, and (3) phonology and their associated discourse and semantic issues.
Two hours; one term
Prerequisite: 12 units of Hispanic Studies above Level I

HISPANIC 4X03  LANGUAGE PRACTICE II
With emphasis on precision, conciseness and other pertinent aspects of written communication, students will prepare business documents such as letters, memos, application forms and résumés and will develop related vocabulary.
Three hours; one term
Prerequisite: HISPANIC 3X03

HISPANIC 4Y03  ADVANCED TRANSLATION
Practice in the translation into Spanish of a specialized nature (example: administration, business, medical, etc.), leading to the study of comparative aspects of stylicstics and syntax.
Three hours; one term
Prerequisite: HISPANIC 3Y03

ITALIAN ...
Notes:
1. Students should note that the Department has classified its Italian language courses under the following categories:
   Introductory Level Language Courses
   ITALIAN 1AA3, 1ZZ3
   Intermediate Level Language Courses
   ITALIAN 1A03, 1AA3, 2Z03, 2ZZ3
   Advanced Level Language Courses
   ITALIAN 3A03, 3D03, 4A03, 4B03
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
3. ITALIAN 2B03 will use English as the language of classroom instruction. Students taking this course for credit in Italian will be required to do all their reading, writing, and film viewing in Italian.
4. Students may be required to take a placement test in the Department of Modern Languages and Linguistics to assess their proficiency in the language.

COURSES

ITALIAN 1A03  INTERMEDIATE ITALIAN I
An intensive review of certain grammatical structures of Italian and an introduction to composition, together with oral practice. The sequel to this course is ITALIAN 1AA3.
Four hours; one term
Prerequisite: Grade 12 U or M equivalent (or OAC Italian) or other equivalent or permission of the Department.
Antirequisite: ITALIAN 2003
Not open to students with credit or registration in ITALIAN 1AA3.

ITALIAN 1AA3  INTERMEDIATE ITALIAN II
An intensive review of those grammatical structures not studied previously, together with oral practice. Selected written works in the original will also be studied. The sequel to this course is ITALIAN 3A03.
Four hours; one term
Prerequisite: ITALIAN 1A03 or permission of the Department.
Antirequisite: ITALIAN 2ZZ3

ITALIAN 1Z06  BEGINNER'S INTENSIVE ITALIAN
Formerly: ITALIAN 1C03 and 1CC3
This course gives students the ability to express themselves reasonably well in Italian and acquire the basics of Italian grammar and considerable reading skill. Small tutorial groups will ensure maximum participation by each student. This course is enhanced by a CALL (Computer-Aided Language Learning) module. The sequel to this course is ITALIAN 2Z03.
Four hours; two terms
Prerequisite: Grade 12 U or M equivalent (or OAC Italian), ITALIAN 1CC3, 1DD3, 1ZZ3
Students who have credit in ITALIAN 1C03, but not in ITALIAN 1CC3, will be permitted to take ITALIAN 1Z06; however, they must relinquish credit in ITALIAN 1C03 to do so.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrolment is limited.

ITALIAN 2Z03  IN ITALIAN THROUGH THE CAMERA LENS
This course takes the student on a journey through fifty years of Italian cinematic history using nine movies (in Italian, with subtitles) that represent some of the most critical moments related to Italian culture in post WWII period. (See Note 3 above.)
Three hours; one term
Prerequisite: Registration in Level II or above.
Cross-list: THTR&FLM 2103

ITALIAN 2F03  INTRODUCTION TO THE STUDY OF LITERATURE: IL NEOREALISMO
An introduction to the study of literature in Italian, focusing on the neorealist movement in literature and also in cinema. The course explores principal themes in connection to the socio-historical and political context.
Three lectures; one term
Prerequisite: ITALIAN 1AA3 or 2203 (or concurrent registration in ITALIAN 2203).

ITALIAN 2I03  ITALY THROUGH THE AGES I: THE ORIGINS TO THE RENAISSANCE
A survey of representative works in Italian literature and culture from its origins to the Renaissance.
Three hours; one term
Prerequisite: ITALIAN 1AA3 or 2203 (or concurrent registration in ITALIAN 2203) or permission of the Department.

ITALIAN 2Z03  INTERMEDIATE ITALIAN II
An intensive review of certain grammatical structures not studied previously, together with oral practice. The sequel to this course is ITALIAN 3A03.
Four hours; one term
Prerequisite: ITALIAN 2Z03 or permission of the Department.
Antirequisite: ITALIAN 1AA3, 2ZZ3

ITALIAN 3A03  ADVANCED GRAMMAR PRACTICE
This course is designed to improve the student's written and oral proficiency through exercises, compositions, and analysis of texts. The sequel to this course is ITALIAN 3D03.
Three hours; one term
Prerequisite: ITALIAN 1AA3 or permission of the Department.

ITALIAN 3D03  COMPOSITION AND STYLISTICS I
An introduction to the study of Italian stylistics through an intensive and systematic analysis of Italian clause, sentence and discourse structure in the written and spoken language. The sequel to this course is ITALIAN 4A03.
Three hours; one term
Prerequisite: ITALIAN 3A03 or permission of the Department.

ITALIAN 3I03  ITALY THROUGH THE AGES II: FROM THE BAROQUE TO THE 20TH CENTURY
A continuation of ITALIAN 2I03. Along with a study of representative literary texts from the Baroque to the 20th century, the course will also consider fundamental aspects of Italian culture (history, figurative arts, music).
Three hours; one term
Prerequisite: ITALIAN 2I03 or permission of the Department.

ITALIAN 3X03  CONTEMPORARY ITALY: THE IMAGE OF ITALY TODAY
A study of current trends, literature, new directions, and art in Italy today, in the framework of the European consciousness and market. Images of Italy include its culture, its people, and its tongues.
Three lectures; one term
Prerequisite: ITALIAN 2F03, 2I03; or permission of the Department.

ITALIAN 4Y03  CULTURE AND SOCIETY IN RENAISSANCE ITALY
An exploration of Italian culture in the Renaissance and its impact on the development of modern European thought. Students will be introduced to Renaissance ideas on politics, history, society, the artist and the scientist through the study of representative works.
Three lectures; one term
Prerequisite: ITALIAN 2F03, 2I03; or permission of the Department.

Offered in alternate years.
ITALIAN 4A03  COMPOSITION AND STYLISTICS II
An advanced course in composition and stylistics designed to develop
the student's skills in critical writing and oral expression. The sequel to
this course is ITALIAN 4B03.
Three hours; one term
Prerequisite: ITALIAN 3D03
Antirequisite: ITALIAN 4M03

ITALIAN 4B03  INTRODUCTION TO TRANSLATION
A course designed to introduce the students to the basic techniques of
translation from English to Italian and from Italian to English, including
comparative stylistics. Translation materials will be selected from contem-
porary literary and journalistic sources.
Three hours; one term
Prerequisite: ITALIAN 4A03 or permission of the Department

ITALIAN 4I13  INDEPENDENT STUDY
The student will prepare, under the supervision of a faculty member, a
research paper involving independent study in an area where the stu-
dent has already demonstrated competence.
Prerequisite: 12 units of Italian above Level I and permission of the
Department

ITALIAN 4X03  LOVE AND LIFE IN THE MIDDLE AGES
An exploration of Italian life and culture in the Middle Ages through the
study of the dolce stil nuovo and selected works by Dante, Petrarch and
Boccaccio.
Three lectures; one term
Prerequisite: ITALIAN 2F03, 2I03; or permission of the Department
Antirequisite: ITALIAN 3RR3
Alternates with ITALIAN 4XX3.

ITALIAN 4X33  DANTE'S WORLD
An exploration of Dante's Commedia in the context of medieval culture,
politics and philosophy. The course will also consider the impact of the
Commedia on Western thought.
Three lectures; one term
Prerequisite: ITALIAN 2F03, 2I03; or permission of the Department
Antirequisite: ITALIAN 3RR3
Alternates with ITALIAN 4X03.

ITALIAN 4Y03  RISORGIMENTO:
THE ROMANTIC QUEST FOR A NATION
A study of Italian civilization and culture during the 19th century, focusing
on the fundamental issues of Italian unification. Experential, artistic,
cultural, and literary representatives of the period will be examined.
Three lectures; one term
Prerequisite: ITALIAN 2F03, 2I03; or permission of the Department
Antirequisite: ITALIAN 3RR3
Alternates with ITALIAN 4Y03.

JAPANESE 2Z03  INTERMEDIATE INTENSIVE JAPANESE I
This course develops students' communicative skills in Japanese through
conversational exercises, creative writing and other practices. Empha-
sis will be placed upon refining the knowledge of grammar and expand-
ing vocabulary. The sequel to this course is JAPANESE 2Z03.
Four hours; one term
Prerequisite: A grade of at least B- in JAPANESE 1Z06 or 1ZZ3; or
permission of the instructor
Not open to students with credit in JAPANESE 2Z03.
The Department reserves the right to place students in the course most
appropriate to their abilities.
Enrolment is limited to 70 students.

JAPANESE 3A03  ADVANCED INTENSIVE JAPANESE I
This course continues the study of written and spoken Japanese with
particular attention devoted to the development of the following language
skills: conversational practice based on situational drills; reading skills
based on selected literary materials; writing short essays; and continued
study of Kansai. The sequel to this course is JAPANESE 3AA3.
Four hours; one term
Prerequisite: JAPANESE 2Z03 or permission of the instructor
The Department reserves the right to place students in the course most
appropriate to their abilities.
Enrolment is limited.

JAPANESE 3A03  ADVANCED INTENSIVE JAPANESE II
Emphasis is given to the development of situational conversational skills,
advanced reading skills, and essay writing. The sequel to this course is
JAPANESE 4Z03.
Four hours; one term
Prerequisite: JAPANESE 3A03 or permission of the instructor
The Department reserves the right to place students in the course most
appropriate to their abilities.
Enrolment is limited.

JAPANESE 3B03  BUSINESS JAPANESE I
A study of Japanese language in a context of culture, values and cus-
toms of the Japanese business world. Emphasis on oral and aural
proficiency in Japanese.
Three hours; one term
Prerequisite: JAPANESE 2Z03 or permission of the instructor
Enrolment is limited.

JAPANESE 3CC3  BUSINESS JAPANESE II
A continuation of JAPANESE 3B03. This course focuses on a further
study of Japanese language in a context of Japanese business prac-
tices, values and customs. Oral and aural proficiency are emphasized.
Three hours; one term
Prerequisite: JAPANESE 3B03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

JAPANESE 4A03  ADVANCED READINGS IN
CURRENT AFFAIRS IN JAPANESE
This course will further develop students' comprehensive skills in Japa-
nese through readings of a variety of topics on current affairs. Read-
ings of magazines will be combined with discussions on videos.
Three lectures; one term
Prerequisite: JAPANESE 3A03 or permission of the instructor

JAPANESE 4Z03  ADVANCED ORAL PRACTICE IN JAPANESE
This course will further develop students' spoken discourse skills
through viewing of videos, group discussions and cooperative group
activities. Emphasis will be on over-all communicative competence in
oral Japanese.
Three hours; one term
Prerequisite: JAPANESE 3A03 or permission of the instructor
Enrolment is limited.

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  BEGINNER'S INTENSIVE JAPANESE
Formerly: JAPANESE 1Z03 and 1ZZ3
An introduction to spoken and written Japanese focusing on developing
proficiency in the skills of listening, speaking, reading and writing. Kanji
(Chinese characters) will be introduced. Acquisition of basic grammar,
hiragana and katakana 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.
Four hours; two terms
Prerequisite: JAPANESE 1Z03, 1ZZ3
Students who have credit in JAPANESE 1Z03, but not in JAPANESE
1ZZ3, will be permitted to take JAPANESE 1Z06; however, they must
relinquish credit in JAPANESE 1Z03 to do so.
The Department reserves the right to place students in the course most
appropriate to their abilities.
Enrolment is limited.
MODERN LANGUAGES AND LINGUISTICS

JAPANESE STUDIES ...

Courses If no prerequisite is listed, the course is open.

JAPAN ST 2A03 JAPANESE COMMUNICATION
This course looks at the Japanese language from sociolinguistic and pragmatic points of view identifying the unique characteristics of the target culture that lie behind its use. Such knowledge is invaluable in solving problems of intercultural communication.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2A03
Alternates with JAPAN ST 2F03.

JAPAN ST 2C03 ASIA-PACIFIC ECONOMIES
Economic conditions and factors influencing economic growth in selected countries in the Asia-Pacific region. Topics include government policies related to exchange rates and trade and development, as well as the Japanese style of management, the bonus system and job tenure.
Three hours; one term
Prerequisite: ECON 1A03; or ECON 1B03, 1B83
Cross-list: ECON 2C03.
This course is administered by the Department of Economics.

JAPAN ST 2F03 THE CONTEMPORARY JAPANESE FILM
This course examines the development of Japanese films since the Second World War, including contemporary feature films and animations, exploring the rich legacy of directors such as Akira Kurosawa, Kô Ishikawa, Juzô Itami and Masayuki Suo, and animation directors such as Hayao Miyazaki and Isao Takahata.
Two lectures, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above
Cross-list: THTR&FM 2F03
Alternates with JAPAN ST 2A03.

JAPAN ST 2P06 JAPANESE CIVILIZATION
Introduction to Japanese history, society, and culture through a study of religious traditions, literature, and art of Japan.
Two lectures, one tutorial; two terms
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2P06
This course is administered by the Department of Religious Studies.

JAPAN ST 3B03 MODERN JAPAN
A survey of 19th- and 20th-century Japan, with emphasis on political developments, social change, and Japan's relations with East Asia and the West.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3B03
This course is administered by the Department of History.

JAPAN ST 3E03 JAPANESE RELIGION
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above.
One of RELIG ST 1B06, 2MM6 or JAPAN ST 2P06 is recommended.
Cross-list: RELIG ST 3E03
This course is administered by the Department of Religious Studies.

JAPAN ST 3H03 STORYTELLING IN EAST ASIAN RELIGIONS
An in-depth study of selected examples of story literature in China and Japan with attention to the way religion is represented in them.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3F03
This course is administered by the Department of Religious Studies.

JAPAN ST 3U03 THE EAST ASIAN RELIGIOUS TRADITION
Readings in East Asian religious texts in translation will centre around 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: Registration in Level III or above
Cross-list: ARTS&SCI 3S03, RELIG ST 3S03
This course is administered by the Department of Religious Studies.

JAPAN ST 3T03 MODERN JAPANESE LITERATURE IN TRANSLATION
This is a survey course of major works in 20th-century Japanese literature with an emphasis on fiction published since the Second World War. Readings include Soseki, Toso, Masuji Ibuse, Kenzaburo Oe and Haruki Murakami.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: COMPLIT 3TT3
Offered in alternate years.

JAPAN ST 3U03 BUDDHISM IN EAST ASIA
An examination of myth, history, doctrine, monastic culture, and ritual practice in East Asian Buddhism.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3U03
This course is administered by the Department of Religious Studies.

JAPAN ST 4A06 GUIDED READING IN JAPANESE STUDIES
Independent study on an approved topic. A major essay and/or final examination will be required.
Two terms
Prerequisite: Registration in Level III or IV of the Combined Honours in Japanese Studies program and permission of the Director

JAPAN ST 4B03 GUIDED READING IN JAPANESE STUDIES
Independent study on an approved topic. A research essay and/or final examination will be required.
One term
Prerequisite: Registration in Level III or IV of the Combined Honours in Japanese Studies program and permission of the Director
This course is administered by the Department of Religious Studies.

LINGUISTICS ...

Linguistics courses and programs are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

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.

LINGUIST 1A03 INTRODUCTION TO LINGUISTICS I
This course provides an introduction to the field of linguistics, the scientific study of language. The focus will be on language structure, specifically the core areas of phonetics, phonology and morphology. Topics covered will be exemplified not only through English, but through a wide variety of languages.
Two lectures, one tutorial; one term

LINGUIST 1A03 INTRODUCTION TO LINGUISTICS II
This course is a continuation of LINGUIST 1A03, and completes the introduction to linguistics. Emphasis will be placed on syntax, semantics, typology, historical linguistics and applied linguistics.
Two lectures, one tutorial; one term
Prerequisite: LINGUIST 1A03

LINGUIST 2A03 THE MAKING OF THE EUROPEAN LINGUISTIC LANDSCAPE
The history of language use in Europe from antiquity to the present day. The course will illustrate the different functions of language in social life and the growth of national, standardized idioms. It will also serve as an introduction to the history of linguistics as a discipline.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2U03, EURO ST 2B03
Antirequisite: ANTHROP 2AL3
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2A03 HISTORICAL LINGUISTICS: THE DEVELOPMENT OF INDO-EUROPEAN LANGUAGES
The phonetic, morphological, syntactic and lexical structures of Indo-European languages and the role of these features in the genesis and development of the Indo-European-based languages of Europe.
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: LINGUIST 1A03, 1AA3; or permission of the instructor
Cross-list: CMST 2E03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2L03 PHONETICS
A study of the sounds of language and human articular capabilities.
Three lectures; one term
Prerequisite: LINGUIST 1A03; or permission of the instructor
Cross-list: ANTHROP 2L03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 2LL3 INTRODUCTION TO LINGUISTIC TYPOLOGY
The study of diversity in the languages of the world, language universals and the parameters of cross-linguistic analysis of grammatical systems.
Three hours (lectures and discussion); one term
Prerequisite: LINGUIST 1A03, 1AA3; or permission of the department
Cross-list: CMST 2LL3
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3A03 PHONOLOGY
A study of the patterns of distinctive sounds in the world's languages.
Three lectures; one term
Prerequisite: LINGUIST 2L03; or permission of the department
Prerequisite: (Beginning in 2006-2007) LINGUIST 2L03
Cross-list: ANTHROP 3A03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3B03 PSYCHOLINGUISTICS
The study of perception, production and acquisition of language. Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.
Three hours; one term
Prerequisite: LINGUIST 3L03 or 3M03; or LINGUIST 1A03 and 1AA3 (or 1A08) and PSYCH 2H03; or permission of the department
Cross-list: PSYCH 3B03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3L03 SYNTAX
A study of how words are organized into sentences. The emphasis will be on the Functional approach in comparison with other syntactic theories.
Three hours; one term
Prerequisite: ANTHROP 2LL3 or LINGUIST 2LL3; or permission of the department
Cross-list: ANTHROP 3L03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3L13 SEMANTICS
The study of patterns of meaning in language; a critical survey of theories and issues.
Three hours; one term
Prerequisite: Either ANTHROP 3I03 or LINGUIST 3I03, and six units of a language other than English; or permission of the Department
Cross-list: ANTHROP 3L13
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3M03 MORPHOLOGY
The study of word formation in the languages of the world; a critical survey of current theories and issues.
Three lectures; one term
Prerequisite: Six units of a language other than English and ANTHROP 2LL3 or LINGUIST 2LL3; or permission of the department
Cross-list: ANTHROP 3M03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3P03 PRAGMATICS
A 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 lectures; one term
Prerequisite: LINGUIST 1A03, 1AA3; or permission of the Department
Cross-list: CMST 3P03
Antirequisite: ANTHROP 3L03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 3X03 INTRODUCTION TO SOCIOLINGUISTICS
An introduction to sociolinguistics with particular emphasis on the social situation of the major European languages. Topics covered include language variation (regional, social, situational), language and gender, language and disadvantage/power, language choice, language change, pidgin and creole languages.
Three lectures; one term
Prerequisite: LINGUIST 1A03, 1AA3; or permission of the Department
Cross-list: CMST 3X03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 4B03 APPLIED LINGUISTICS
This course is designed to acquaint the student with the contributions that the linguist, psycholinguist, sociolinguist can make to second language learning and teaching.
Three lectures; one lab; one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department
Cross-list: CMST 4B03
Antirequisite: ANTHROP 4B03
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 4G03 COMPUTERS AND LINGUISTIC ANALYSIS
This course studies the linguistic applications of computer technology in general, and language processing in particular, including parsers and machine translation.
Two lectures, one lab; one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department
Cross-list: CMST 4G03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

LINGUIST 4H03 TESL (TEACHING ENGLISH AS A SECOND LANGUAGE): METHODOLOGICAL CONSIDERATIONS
This course will look at the phenomenon of TESL not only in the Canadian context but also worldwide. There will also be a detailed investigation of the dominant teaching methodologies associated with TESL.
Seminar (two hours); one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department
Offered on an irregular rotation basis.

LINGUIST 4I33 IMMIGRANT CONTACT LANGUAGES AND THE CREATION OF A NEW IDENTITY
This course will look at the genesis, characteristics and usage patterns of "immigrant contact languages" and the characteristics of the resultant "hyphenated" identity (i.e. Spanglish - Latino; Italian - Italo-Canadian).
Seminar (two hours); one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I; or permission of the Department
Offered on an irregular rotation basis.

LINGUIST 4I33 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: 18 units of Linguistics above Level I and permission of the Department
Linguistics 4Lb3  Advanced Phonetics, Phonology and Morphology

This course examines advanced issues in phonetics, phonology and morpho-
logy, 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 of the Caucasus.
Three lectures; one term
Prerequisite: Nine units of Linguistics or Linguistic Anthropology above Level I
Cross-list: Anthropology 4Lb3, Linguistics 4Lb3
This course is administered by the Department of Modern Languages
and Linguistics.

Linguistics 4Lc3  Advanced Syntax and Semantics

This course examines advanced issues in syntax and semantics, seek-
ing 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 of the Caucasus.
Three lectures; one term
Prerequisite: Nine units of Linguistics or Linguistic Anthropology above Level I
Cross-list: Anthropology 4Lc3, Linguistics 4Lc3
This course is administered by the Department of Modern Languages
and Linguistics.

Linguistics 4Mo3  Pidgins and Creoles

A survey of the structure (grammar and vocabulary), genesis, evolution
and social history of the languages that developed as a result of Euro-
pean expansion to Africa, the Americas, Asia and the Pacific. Emphasis
will be placed on the Atlantic (Caribbean and West African) creoles.
Seminar: Two hours; one term
Prerequisite: Linguistics 3X03
Offered on an irregular rotation basis.

Linguistics 4N03  English as a Global Language

This course explores issues arising from the status of English as a
language of international communication, including: the rise of English
as a global language, world Englishes, linguistic power, consequences for
multilingual societies, especially minority languages.
Seminar (two hours); one term
Prerequisite: Linguistics 3X03
Offered on an irregular rotation basis.

Linguistics 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, lan-
guage and perception, emotions across cultures, culture and advertis-
ing, body language and cultural stereotyping.
Seminar (two hours); one term
Prerequisite: Linguistics 1A03, 1A03 and six units of Linguistics above
Level I; or permission of the Department
Cross-list: CMST 4R03
Not open to students with credit in Linguistics 4BB3, Topics in the Ap-
lication of Linguistics, if the topic was Cross-Cultural Communication.
Offered on an irregular rotation basis.

Linguistics 4S03  Interpersonal Communication

This course offers an introduction to contemporary interpersonal com-
munication theories and research. Topics include: small group communi-
cation, persuasive communication, argumentation strategies, conflict
resolution and computer mediated, intercultural, international and political
communication.
Seminar (two hours); one term
Prerequisite: Linguistics 1A03, 1A03 and six units of Linguistics above
Level I; or permission of the Department
Cross-list: CMST 4S03
Not open to students with credit in Linguistics 4BB3, Topics in the Ap-
lication of Linguistics, if the topic was Interpersonal Communication.
Offered on an irregular rotation basis.

Linguistics 4T03  Forensic Linguistics

This course examines issues arising from the language-law interface, includ-
ing: speaker/author identification; interpretation and transcription of police
interrogations, witness statements, trial discourse; written legal language.
Seminar (two hours); one term
Prerequisite: Linguistics 3X03
Cross-list: CMST 4T03
Not open to students with credit in Linguistics 4BB3, Topics in the Ap-
lication of Linguistics, if the topic was Forensic Linguistics.
Offered on an irregular rotation basis.

Linguistics 4XX3  Topics in Linguistic Theory

Issues in different aspects of Linguistic Theory and Advanced Philosophy.
Consult the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite: Linguistics 3I03 or 3M03
Cross-list: Anthropology 4X03
Linguistics 4XX3 may be repeated, if on a different topic, a total of six units.
Offered in alternate years.
This course is administered by the Department of Modern Languages
and Linguistics.

Linguistics 4Z03  Topics in Psycholinguistics

Topics include: First Language Acquisition; Brain and Language. Consult
the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite: Linguistics 3R03 or Psych 3B03
Cross-list: Psychology 4Z03
Linguistics 4Z03 may be repeated, if on a different topic, a total of six units.
Offered in alternate years.
This course is administered by the Department of Modern Languages
and Linguistics.

Linguistics 4zz3  Approaches to Discourse

This course offers an overview of different approaches to the analysis
of discourse, including speech act theory, interactional sociolinguistics,
ethnography of communication, pragmatics, conversation analysis, and
critical discourse analysis.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of a program in Communication
Studies or Linguistics or permission of the Program Counsellor for Com-
munication Studies
Cross-list: CMST 4Z03
Enrolment is limited to 25 students.
This course is administered by Communication Studies.

Polish

Courses in Polish are administered within the Department of Modern Languages
and Linguistics of the Faculty of Humanities. For information and counsel-
ing, please contact the departmental office, Togo Salmond Hall, Room 613.

Notes:
1. Students should note that the Department has classified its Polish
language courses under the following categories:
- Introductory Level Language Courses
  - Polish 2A03, 2AA3
- Intermediate Level Language Courses
  - Polish 3A03, 3AA3
- Advanced Level Language Courses
  - Polish 4A03, 4AA3
2. Polish 2A03 and 2AA3 are open only to students with no prior
knowledge of Polish. Students with some knowledge of written
oral Polish are advised to enrol in Polish 3A03 or 3AA3. Students
with a good command of Polish should enrol in Polish 4A03 or 4AA3.
3. Courses are offered on a three-year rotation basis. Students should
consult the timetable for available courses.

Courses If no prerequisite is listed, the course is open.

Polish 2A03 Beginner's Polish I
An introduction to basic conversational and written Polish, teaching the skills
of listening, speaking, and writing. The sequel to this course is Polish 2AA3.
Four hours; one term
Prerequisite: Polish 1203
Not open to students with a prior knowledge of Polish.
The Department reserves the right to place students in the course most
appropriate to their abilities.
Offered on a three-year rotation basis. Offered in 2005-2006.
Enrolment is limited.

Polish 2AA3 Beginner's Polish II
A course designed to further the student's command of oral and written
Polish. The sequel to this course is Polish 3A03.
Four hours; one term
Prerequisite: One of Polish 1203, 2A03 or permission of the Department
Antirequisite: Polish 12Z3
The Department reserves the right to place students in the course most
appropriate to their abilities.
Offered on a three-year rotation basis. Offered in 2005-2006.
Enrolment is limited.
POLISH 3A03  INTERMEDIATE POLISH I
This course concentrates on the study of Polish grammar and develops skills for conversation, reading and writing. The sequel to this course is POLISH 3A03.
Four hours; one term
Prerequisite: One of POLISH 1ZZ3, 2A03 or permission of the Department
Antirequisite: POLISH 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis. Not offered in 2005-2006. Enrolment is limited.

POLISH 3A03  INTERMEDIATE POLISH II
This course concentrates on the study of grammatical structures and rules of composition. It develops written and oral skills. The sequel to this course is POLISH 4A03.
Four hours; one term
Prerequisite: POLISH 3A03 or permission of the Department
Antirequisite: POLISH 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis. Not offered in 2005-2006. Enrolment is limited.

POLISH 4A03  ADVANCED POLISH I
This course focuses on the study of more advanced syntax, composition and conversation, using short modern texts and films.
Three hours; one term
Prerequisite: POLISH 3A03 or permission of the Department
Antirequisite: POLISH 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis. Not offered in 2005-2006. Enrolment is limited.

POLISH 4A03  ADVANCED POLISH II
This course focuses on the study of stylistic variation of different text types and on translation practice to and from Polish.
Three hours; one term
Prerequisite: POLISH 4A03 or permission of the Department
Antirequisite: POLISH 2Z06
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis. Not offered in 2005-2006. Enrolment is limited.

RUSSIAN ...

Courses in Russian are administered within the Department of Modern Languages and Linguistics of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 615.

Notes:
1. Students should note that the Department has classified its Russian language courses under the following categories:
   - Introductory Level Language Courses
     RUSSIAN 2A03, 2A03
   - Intermediate Level Language Courses
     RUSSIAN 3A03, 3A03
   - Advanced Level Language Courses
     RUSSIAN 4B03, 4B03
2. Courses are offered on a three-year rotation basis. Students should consult the timetable for available courses.

Courses  If no prerequisite is listed, the course is open.

RUSSIAN 2A03  INTENSIVE BEGINNER’S RUSSIAN I
Formerly: RUSSIAN 1Z03
Designed for students with no prior knowledge of Russian, the course covers basic Russian vocabulary and grammatical structures, while emphasizing spoken Russian. This course is enhanced by CALL (Computer-Assisted Language Learning) module. The sequel to this course is RUSSIAN 2A03.
Four hours; one term
Antirequisite: Grade 12 U or M equivalent (or OAC Russian), RUSSIAN 1Z03
Not open to students with credit or registration in RUSSIAN 2A03 or credit in RUSSIAN 1Z03. The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

RUSSIAN 2AA3  INTENSIVE BEGINNER’S RUSSIAN II
Formerly: RUSSIAN 1Z23
This course consists of an intensive study of Russian vocabulary and grammar, with further emphasis on spoken Russian and enhancement by CALL (Computer-Assisted Language Learning) module. The sequel to this course is RUSSIAN 3A03.
Four hours; one term
Prerequisite: RUSSIAN 1Z03 or 2A03
Antirequisite: Grade 12 U or M equivalent (or OAC Russian), RUSSIAN 1Z23
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

RUSSIAN 3A03  INTERMEDIATE RUSSIAN I
Formerly: RUSSIAN 2Z03
This course introduces the study of Russian grammar with emphasis on extending skills for conversation, reading and writing. Video film and interactive computer software will be used to supplement traditional printed materials. The sequel to this course is RUSSIAN 3A03.
Four hours; one term
Prerequisite: RUSSIAN 1Z03 or 2A03
Antirequisite: RUSSIAN 2Z03, 2AA3
Not open to students with credit or registration in RUSSIAN 3A03 or credit in RUSSIAN 2Z23.
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

RUSSIAN 3AA3  INTERMEDIATE RUSSIAN II
Formerly: RUSSIAN 3Z03
This course focuses on the study of the compound and complex sentences. Emphasis will be on the reading of selected texts, advanced composition, and stylistics.
Three hours; one term
Prerequisite: RUSSIAN 2Z03 or 3A03
Antirequisite: RUSSIAN 2Z03, 3Z03
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

RUSSIAN 4B03  ADVANCED LANGUAGE PRACTICE I
Formerly: RUSSIAN 3G03
The course focuses on the structure of a simple sentence. Reading, writing and conversational skills are developed through the reading and discussion of narrative texts and the writing of short composition. The sequel to this course is RUSSIAN 4B03 (formerly RUSSIAN 3G03).
Three hours; one term
Prerequisite: One of RUSSIAN 2C06, 2Z23, 3A03 or permission of the Department
Antirequisite: RUSSIAN 3C06, 3G03
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

RUSSIAN 4BB3  ADVANCED RUSSIAN GRAMMAR
AND STYLISTICS
Formerly: RUSSIAN 3H03
This course focuses on the study of the compound and complex sentences. Emphasis will be on the reading of selected texts, advanced composition, and stylistics.
Three hours; one term
Prerequisite: RUSSIAN 3G03, 4B03; or permission of the Department
Antirequisite: RUSSIAN 3C06, 3H03
The Department reserves the right to place students in the course most appropriate to their abilities.
Offered on a three-year rotation basis.

MOHAWK

(SEE INDIGENOUS STUDIES, MOHAWK)

MOLECULAR BIOLOGY

The Molecular Biology courses are administered within the Faculty of Science through a Committee of Instruction, and are taught in the Departments of Biochemistry and Biomedical Sciences, Biology and Pathology and at the McMaster Institute for Molecular Biology and Biotechnology. Information and counselling can be obtained from the Program Coordinator in the Health Sciences Centre, Room 4H43.
Courses  If no prerequisite is listed, the course is open.

MOL BIO 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. Two lectures; one tutorial; one term.
Prerequisite: One of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03, 3HH3 or permission of the instructor

MOL BIO 4J03 MOLECULAR IMMUNOLOGY
This advanced course applies small group based learning to immunological problems. Topics concern development of immunosassays, resistance to infection and immunity in health and disease. One session (two hours), one tutorial; one term.
Prerequisite: One of BIOLOGY 3X03 or MOL BIOLOGY 3J03, and one of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03; or permission of the instructor
Cross-list: BIOCHEM 4J03, HTH SCI 4J03
This course is administered by the Bachelor of Health Sciences (Honours) Program.

MOL BIO 4R09 SENIOR THESIS
A thesis based on a research project in molecular biology supervised or co-supervised by a member of the Department of Biology or the Department of Biochemistry and Biomedical Sciences.
Prerequisite: Registration in Level IV Honours Molecular Biology and permission of the Course Coordinator. Application for permission should be made through the Office of the Associate Dean of Science (Studies) by the end of March in Level III. Normally, a CA of at least 8.5 is required.
Antirequisite: BIOCHEM 4L03, 4P03, BIOLOGY 4C09, 4F06, 4FF3, 4GG9, 4G03, HTH SCI 3L03, 3L09, 4G06
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

MULTIMEDIA

WEB ADDRESS:  http://www.humanities.mcmaster.ca/~macmedia/
Togo Salmon Hall, Room 414
Ext. 27671

Multimedia is administered within the School of the Arts in the Faculty of Humanities.

Courses  If no prerequisite is listed, the course is open.

MMEDIA 1A03 INTRODUCTION TO DIGITAL MEDIA IN THE HUMANITIES
Students will be introduced to the history, theory and design of digital media in the context of the arts and humanities. Students will learn to use Internet research resources to create digital media.
One lecture (two hours), one tutorial; one term
Antirequisite: COMP SCI 1A53, 1S53, 1T53
Enrolment is limited.

MMEDIA 1B03 THE DIGITAL IMAGE
An introduction to the critique and creation of digital images. Readings will explore issues concerning the digital image and graphic design for the Internet. Students will be expected to use graphics software and create web pages in order to complete design assignments.
One lecture (two hours), one tutorial; one term
Antirequisite: MMEDIA 1B03
Enrolment is limited.

MMEDIA 1B03 THE DIGITAL IMAGE FOR SOFTWARE ENGINEERING
An introduction to the critique and creation of digital images. Readings will explore issues concerning the digital image and graphic design for the Internet. Students will be expected to use graphics software and create web pages in order to complete design assignments.
One lecture (two hours), one tutorial; one term
Antirequisite: MMEDIA 1B03
Enrolment is limited.

MMEDIA 2A03 INTRODUCTION TO MULTIMEDIA
This course presents arts students with the fundamentals of computer-based multimedia. Students will read about and discuss how to critique multimedia works, create such works, and consider the application of multimedia technology.
One lecture (two hours), one tutorial; one term
Antirequisite: Registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 2B03 DIGITAL MEDIA (AUDIO AND VIDEO)
A study of digital media where students will create and critique digital audio and video. Readings will explore the evolution of digital media and the technical and social aspects of digital audio and video.
One lecture (two hours), one tutorial; one term
Antirequisite: Registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 2BE3 DIGITAL MEDIA (AUDIO AND VIDEO) FOR SOFTWARE ENGINEERING
A study of digital media where students will create and critique digital audio and video. Readings will explore the evolution of digital media and the technical and social aspects of digital audio and video.
One lecture (two hours), one tutorial; one term
Antirequisite: MMEDIA 1BE3 and registration in the Software Engineering and Game Design program
Enrolment is limited.

MMEDIA 2D03 ELECTRONIC TEXTUALITY AND PROGRAMMING
An introduction to the fundamentals of markup languages for multimedia and programming information applications. Students will develop a markup model, create an electronic text database, and write style sheets and programs to transform the data within the context of an original project.
One lecture (two hours), one tutorial; one term
Antirequisite: One of MMEDIA 1A03, 1B03, 1C03, 2B03, 2J03
Enrolment is limited.

MMEDIA 2E03 COMPUTER GRAPhICS
This course develops both technical and conceptual aspects of computer drawing using standard computer graphics tools. Students will concentrate on developing drawing abilities through the computer and will be expected to present their work and discuss that of others.
One lecture (one hour), one tutorial (one hour), one hour of independent study; one term
Antirequisite: MMEDIA 1A03 or 1B03
Enrolment is limited.

MMEDIA 2F03 THE HISTORY OF GRAPHIC DESIGN
An introduction to the history of graphic, two-dimensional design. The course covers a broad admixture of design and popular culture which informs advertising, posters, book design and illustration, etc. Students will be introduced to desktop publishing.
Three lectures; one term
Antirequisite: Registration in Level II or above of a program in Art History, Communication Studies or Multimedia. Prior completion of ART HIST 1A03 and 1AA3 is recommended.
Cross-list: ART HIST 2F03, CMST 2N03

MMEDIA 2G03 INTRODUCTION TO MUSIc AND COMPUTER MUSIC
Basic electroacoustic theory; introduction digital music composition techniques, MIDI applications; computer music notation; aesthetics of music composition. Students produce at least one original work. Experience with computers/music composition not required.
Two lectures, one tutorial; one term
Antirequisite: Registration in the Combined Honours in Multimedia program or registration in Level II or above of a Music program
Cross-list: MUSIC 2Z03
Enrolment is limited.

MMEDIA 2H03 INTRODUCTION TO ANIMATION
An introduction to the history and basic principles of animation. Students will create a significant work of computer animation displaying a variety of techniques. Readings and discussions will cover theatre, film studies and narrative. Students will be expected to attend screenings.
One lecture (two hours), one tutorial/screening; one term
Antirequisite: Registration in the Combined Honours in Multimedia program
Enrolment is limited.
MMEDIA 2HE3 INTRODUCTION TO ANIMATION FOR SOFTWARE ENGINEERING

An introduction to the history and basic principles of animation. Students will create a significant work of computer animation displaying a variety of techniques. Readings and discussions will cover theatre, film studies, and narrative. Students will be expected to attend screenings.

One lecture (two hours), one tutorial/screening; one term
Prerequisite: MMEDIA 2BE3 and registration in the Software Engineering and Game Design program
Antirequisite: MMEDIA 2H03
Enrolment is limited.

MMEDIA 2I03 DIGITAL RHETORIC AND COMMUNICATION

An introduction to the history of rhetoric, the study of classical and electronic examples of oral discourse. Students analyze the persuasive technique of oral communication and deliver an expository speech with multimedia support.

Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Enrolment is limited.

MMEDIA 2J03 WRITING IN THE ELECTRONIC AGE

An introduction to grammar and essay composition in the context of new writing technologies. Students will use supplementary writing software, WWW materials, email discussion lists and readings to explore the effects of information technology on communication.

One lecture, one tutorial, one lab; one term
Prerequisite: Registration in Level II or above
Antirequisite: MMEDIA 1C03
Enrolment is limited.

MMEDIA 3A03 ADVANCED MULTIMEDIA

A study of multimedia programming, expanding upon the issues and techniques introduced in MMEDIA 2A03. Students will design and develop multimedia applications that combine text, images, sound, video, and animation. Critical readings and discussion will cover theories of interactivity, hypertext, and instructional technology.

One lecture (two hours), one tutorial; one term
Prerequisite: MMEDIA 2A03 and registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 3B03 TOPICS IN THE PHILOSOPHY AND HISTORY OF COMPUTING

The history and philosophy of computing and communications technology; topics may include: Computers and Culture; The History of Computers and Communications Technology; Computers and Education; and Privacy and the Freedom of Speech in the Electronic Age.

Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Multimedia program

MMEDIA 3C03 ADVANCED MIDI AND DIGITAL AUDIO FOR MULTIMEDIA

The creation of digital music and audio. Students work individually and in teams to develop skills for multimedia audio production. Topics include: advanced MIDI, mixing, audio processing, and frequency equalization.

Two lectures, one tutorial; one term
Prerequisite: MMEDIA 2G03 or MUSIC 2Z03
Cross-list MUSIC 3203
Enrolment is limited.

MMEDIA 3D03 TECHNICAL WRITING AND COMMUNICATION

Students will explore issues such as audience analysis, the role of jargon and the conventions of report writing. Students will be introduced to XML and use it to complete a project of their own devising, from proposal to final report and presentation.

One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level II or above
Enrolment is limited.

MMEDIA 3E03 INTERACTIVE DIGITAL CULTURE

Covers works, forms, theories of digitally interactive culture. Works may include hypertext fiction, computer games, interactive digital art, video, music; theories may cover hypertext, interactivity, immersion, simulation, reception, participatory culture.

One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level III of the Combined Honours in Multimedia program
Antirequisite: MMEDIA 3E03
Alternates with MMEDIA 3E03.

MMEDIA 3EE3 INTERACTIVE DIGITAL CULTURE FOR SOFTWARE ENGINEERING

Covers works, forms, theories of digitally interactive culture. Works may include hypertext fiction, computer games, interactive digital art, video, music; theories may cover hypertext, interactivity, immersion, simulation, reception, participatory culture.

One lecture (two hours), one tutorial; one term
Prerequisite: MMEDIA 2HE3 and registration in the Software Engineering and Game Design program
Antirequisite: MMEDIA 3E03
Enrolment is limited.

MMEDIA 3F03 HUMAN COMPUTER INTERFACE DESIGN

Explores history and design of computer interfaces, focusing on the relationship between computers and people. Topics include computer interface usability/evaluation; drama, narrative, and interface; interface and representation; the politics of interface design.

One lecture (two hours), one tutorial; one term
Prerequisite: Six units of MMEDIA courses beyond Level I and registration in the Combined Honours in Multimedia Program
Enrolment is limited.

MMEDIA 3G03 NETWORK SERVICES FOR MULTIMEDIA

This course covers network systems/services for multimedia, emphasizing diagnostic knowledge of networked systems and services used for multimedia deployment. Focus on Web servers; also history of networking, the Internet, and the WWW.

One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia Program
Enrolment is limited.

MMEDIA 3H03 ADVANCED COMPUTER ANIMATION

An advanced study of computer animation with a focus on 3D animation. Students will create a significant work of 3D animation and critique different examples. Readings may cover theories and techniques of animation, performance, film and narrative. Students will attend screenings.

One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2H03 and registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 3I03 ADVANCED DIGITAL VIDEO

This course covers advanced techniques in digital video production, post production and delivery (i.e. interactive video, streaming media, video in multimedia.). Readings explore video art, digital and visual culture. Students create/curate digital video projects.

One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2B03 and registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 3J03 PROGRAMMING FOR THE WEB

Students build dynamic web sites driven by databases and programmed with server-side and client-side scripting languages; examine, operational database driven sites, interface design and documentation; create database-driven sites. Programming experience required.

One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2D03, 3A03 and registration in the Combined Honours in Multimedia program
Enrolment is limited.

MMEDIA 3K03 DIGITAL GAMES

A 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.

One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level III or above of the Combined Honours in Multimedia program
Alternates with MMEDIA 3E03.
Enrolment is limited.

MMEDIA 4A03 THE MANAGEMENT OF MULTIMEDIA

Students build and manage content collections; lead and participate in team based multimedia production; study case histories. Readings cover the design of large media collections, management theory, copyright and intellectual property.

One lecture (two hours), one tutorial; one term
Prerequisite: Registration in Level IV of the Combined Honours in Multimedia Program (See Program Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)
MMECA 4B03   SENIOR THESIS PROJECT
This course provides an opportunity to pursue individual advanced multimedia projects under the supervision of a Thesis Committee. Students will propose a multimedia project, have it approved by the Multimedia Program Committee and present their completed project publicly. One term
Prerequisite: MMECA 4A03 and registration in Level IV of the Combined Honours in Multimedia Program (See Program Note under the heading Multimedia in the Faculty of Humanities section of the Calendar.)

MMECA 4C03   COMPUTERS AND EDUCATION
A survey of the history of instructional technology and uses of computers in education. Students review instructional materials; create, evaluate, and maintain instructional application; and study effects of technology on education.
One lecture (two hours), one tutorial; one term
Prerequisite: MMECA 3A03

MMECA 4D03   THE VISUALIZATION OF SPACE
This course will introduce students to the design and theory of the visualization of space. Projects may include the digital design of fictional spaces, sculptural objects, dramatic settings, or archaeological re-creations.
One lecture (two hours), one lab; one term
Prerequisite: Registration in Level III or above of the Combined Honours in Multimedia Program
Enrolment is limited.

MUSIC
WEB ADDRESS: http://www.humanities.mcmaster.ca/~sota/
Togo Salmon Hall, Room 414
Ext. 27671

Courses and programs in Music are administered within the School of the Arts of the Faculty of Humanities.

Courses   If no prerequisite is listed, the course is open.

MUSIC 1A03   INTRODUCTION TO THE HISTORY OF 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. No previous knowledge of music required.
Three lectures; one term
Antirequisite: MUSIC 1A06
Not open to students registered in any Music program.

MUSIC 1A13   INTRODUCTION TO THE HISTORY OF 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. No previous knowledge of music required.
Three lectures; one term
Antirequisite: MUSIC 1A05
Not open to students registered in any Music program.

MUSIC 1C03   RUDIMENTS OF WESTERN MUSIC
A first course in hearing, reading, and writing Western music, at the level of Grade 2 rudiments of the Royal Conservatory of Music. Topics include pitches and rhythms; intervals, scales, chords, keys, and modes; musical terms, melody, elementary cadences, transposition, and open score.
Two lectures, one tutorial; one term
Not open to students registered in any Music program.

MUSIC 1CC3   HARMONY
The analysis and writing of functional harmony. Includes study of music by J.S. Bach and others.
Two lectures; two terms
Prerequisite: Registration in a Music program; or a grade of at least B- in MUSIC 1C03; or qualifying tests and permission of the School of the Arts

MUSIC 1D03   AURAL SKILLS
Sight-singing and dictation.
Two lectures, one lab; two terms
Prerequisite: Registration in a Music program; or qualifying tests

MUSIC 1E06   SOLO PERFORMANCE
Intensive study of the technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone, or guitar.
12 one-hour meetings per term; two terms
Prerequisite: Registration in a Music program; or a successful audition at a minimum level of Honours Grade 8 RCM or equivalent and permission of the School of the Arts

Lesson fees are charged to students taking MUSIC 1E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

MUSIC 1G03   ENSEMBLE PERFORMANCE
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, McMaster Vocal Ensemble, or any other ensemble approved by the School of the Arts.
Prerequisite: Successful audition required

MUSIC 1H03   MUSIC AND CULTURE
An introduction to the study of music as a cultural practice, including the exploration of issues such as gender in composition and performance, the relationship of music to spiritual practices, the body in performance, and the roles musicians have in society. Both contemporary and historical musical examples will be drawn from various cultures. Competence in reading music is required.
Three lectures, one tutorial; one term
Prerequisite: Registration in a Music Program or permission of the School of the Arts
Antirequisite: MUSIC 1B06

MUSIC 1Y03   HISTORY OF WESTERN MUSIC: BAROQUE AND CLASSICAL
A survey of Baroque and Classical music. Includes consideration of performance practices, influences of the other arts and socio-political developments.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 2Q03
Antirequisite: MUSIC 4X03
Offered in alternate years.

MUSIC 1Y03   HISTORY OF WESTERN MUSIC: BAROQUE AND CLASSICAL
A continuation of MUSIC 1CC3. Chromatic harmony and the completed major-minor system.
One lecture, term one; two lectures, term two
Prerequisite: MUSIC 1C03

MUSIC 2D03   KEYBOARD HARMONY
Keyboard Harmony.
Two lectures; two terms
Prerequisite: Registration in a Music program or qualifying tests

MUSIC 2E06   SOLO PERFORMANCE
A continuation of MUSIC 1E06.
12 one-hour meetings per term; two terms
Prerequisite: MUSIC 1E06; and registration in a Music program or permission of the School of the Arts
Lesson fees are charged to students taking MUSIC 2E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

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: Registration in Level II or above
Cross-list: CMST 2T03, HTR&FLM 2T03
Antirequisite: SADM 3A03

MUSIC 2G03   ENSEMBLE PERFORMANCE
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, McMaster Vocal Ensemble, or any other ensemble approved by the School of the Arts.
Prerequisite: MUSIC 1G03 and successful audition

MUSIC 2H03   ANALYSIS
The traditional forms of Western art music as found in works by composers such as Bach, Mozart, Beethoven, and Brahms.
Three lectures; one term
Prerequisite: MUSIC 1CC3
MUSIC 2103

POPULAR MUSIC IN NORTH AMERICA AND THE UNITED KINGDOM: PRE-WORLD WAR II

Two centuries of popular music, its social meanings, and media and technology interactions, emphasizing the early twentieth century. Topics include minstrelsy, early blues, and musical theatre.

Three lectures; one term
Prerequisite: MUSIC 2203
Cross-list: CMST 2RR3

MUSIC 2113

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: Registration in Level II or above
Cross-list: CMST 2RR3
Antirequisite: MUSIC 2AA3

MUSIC 2Y03

HISTORY OF WESTERN MUSIC: ROMANTIC TO THE PRESENT


Three lectures; one term
Prerequisite: MUSIC 1Y03
Antirequisite: MUSIC 2BA3, 2BB3

MUSIC 2Y13

HISTORY OF WESTERN MUSIC: MEDIEVAL AND RENAISSANCE

A survey of Medieval and Renaissance music. Includes consideration of performance practices, influences of the other arts and socio-political developments.

Three lectures; one term
Prerequisite: MUSIC 1Y03
Antirequisite: MUSIC 1B03

MUSIC 2203

INTRODUCTION TO MIDI AND COMPUTER MUSIC

Basic electroacoustic theory, introduction to techniques of digital music composition, emphasizing MIDI applications; computer music notation; aesthetics of music composition. Students will be expected to produce at least one original work. Prior experience with computers and/or music composition is strongly encouraged, though not required. Independent studio work will be required.

Two lectures, one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia Program or registration in Level II or above of a Music program.
Cross-list: MMEDIA 2G03
Enrolment is limited.

MUSIC 3A03

ELEMENTARY MUSIC EDUCATION

A survey of elementary music education methods such as those of Kodaly, Orff and Suzuki.

Three lectures; one term
Prerequisite: MUSIC 1A03 and 1AA3 (or 1A06); or 1B units of Music

MUSIC 3C03

MODAL COUNTERPOINT

The writing and analysis of modal counterpoint in the style of the late renaissance. Includes study of music by composers such as Palestrina and Lasso.

Three lectures; one term
Prerequisite: MUSIC 2C03 and registration in Honours Music
Antirequisite: MUSIC 2C03
Offered in alternate years.
Enrolment is limited.

MUSIC 3C13

TONAL COUNTERPOINT

The writing and analysis of tonal counterpoint in Baroque style. Includes study of music by major composers of the 17th and early 18th centuries.

Three lectures; one term
Prerequisite: MUSIC 2C03 or 2C23; and registration in Honours Music
Antirequisite: MUSIC 3C03
Offered in alternate years.
Enrolment is limited.

MUSIC 3E03

SOLO PERFORMANCE

The technique and repertoire of any orchestral instrument, piano, organ, harpsichord, voice, recorder, saxophone or guitar.

12 one-hour meetings; one term
Prerequisite: MUSIC 2E06
Antirequisite: MUSIC 3E06
Lesson fees are charged to students taking MUSIC 3E03 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 3E06

SOLO PERFORMANCE

A continuation of MUSIC 2E06.

12 one-hour meetings per term; two terms
Prerequisite: MUSIC 2E06
Antirequisite: MUSIC 3E03
Lesson fees are charged to students taking MUSIC 3E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

MUSIC 3G03

ENSEMBLE PERFORMANCE

McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, McMaster Vocal Ensemble, or any other ensemble approved by the School of the Arts.
Prerequisite: MUSIC 2G03 and successful audition

MUSIC 3H03

ANALYSIS

Techniques of analysis applied to selected works of the 20th century.
Seminar (two hours); one term
Prerequisite: MUSIC 2C03, 2H03 and registration in Honours Music
Offered in alternate years.
Enrolment is limited.

MUSIC 3J03

ORCHESTRATION AND ARRANGING

A study of the orchestral/band instruments; scoring of music for various ensembles.

Two lectures; two terms
Prerequisite: MUSIC 2C03, 2D03 and registration in a Music program

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: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4K03.
Enrolment is limited.

MUSIC 3L03

WOODWIND METHODS

Basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. The instruments studied differ from those studied in MUSIC 4L03.

Two lectures; one lab; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4L03.
Enrolment is limited.

MUSIC 3M03

STRING METHODS

Basic techniques of playing string instruments. String literature for various educational levels. The instruments studied differ from those studied in MUSIC 4M03.

Two lectures; two terms
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4M03.
Enrolment is limited.

MUSIC 3N03

VOCAL METHODS

Basic techniques of singing; organization, conducting, and rehearsing a choir; choral literature for primary and junior levels.

Two lectures; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 4N03.
Enrolment is limited.

MUSIC 3P03

CONDUCTING

Fundamental conducting techniques applied to works selected from the standard repertoire.

Three lectures; one term
Prerequisite: MUSIC 2D03 and registration in Honours Music; or permission of the School of the Arts
Enrolment is limited.

MUSIC 3P03

PERCUSSION METHODS

Basic techniques of playing percussion instruments. Percussion literature for various educational levels.

Two lectures; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Antirequisite: MUSIC 4P03
Enrolment is limited.
MUSIC 3SS3  SPECIAL STUDIES IN CHAMBER MUSIC OR ACCOMPANYING
Advanced supervised studies in chamber music performance or oral or instrumental accompanying.
Times to be arranged between the students and instructor; one term
Prerequisite: A grade of at least A- in MUSIC 2E06; and registration in Level III or IV of a 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 April 15. This course is primarily for students pursuing the Diploma in Music Performance.
Antirequisite: MUSIC 3S03
Fees are charged to students taking MUSIC 3SS3. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 3T03  CANADIAN MUSIC
A historical survey of music in Canada, in the context of social and political developments, from c. 1600 to the present.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Offered in alternate years.

MUSIC 3U03  JAZZ
An historical survey of jazz, focusing on selected performers and arrangements.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above

MUSIC 3V03  FOUNDATIONS OF MUSIC EDUCATION
A study of the philosophical, psychological and sociological foundations of music education, leading to the formation of a personal philosophy of music education.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Honours Music program
Offered in alternate years.
Enrolment is limited.

MUSIC 3Y03  TOPICS IN MUSIC HISTORY: MUSIC FOR THE ORCHESTRA
A study of selected orchestral music in its historical, socio-political and artistic contexts. Possible topics include: the concerto, the symphonic poem, orchestral music, 1830-present.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level III or IV of an Honours Music program or permission of the instructor
Alternates with MUSIC 3YY3.

MUSIC 3Y3Y  TOPICS IN MUSIC HISTORY: OPERA AND/OR MUSICAL THEATRE
A study of selected music for the stage in its historical, socio-political and artistic contexts. Possible topics include: Mozart's operas, Wagner's Ring, American musical theatre.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level III or IV of an Honours Music program or permission of the instructor
Alternates with MUSIC 3Y03.

MUSIC 3Z03  ADVANCED MIDI AND DIGITAL AUDIO FOR MULTIMEDIA
The creation of digital music and audio. Students work individually and in teams to develop skills for multimedia audio production. Topics include: advanced MIDI, mixing, audio processing and frequency equalization.
Two lectures, one tutorial; one term
Prerequisite: MMEDIA 2G03 or MUSIC 2Z03
Cross-list: MMEDIA 3C03
Enrolment is limited.

MUSIC 4C03  TOPICS IN HARMONY AND COUNTERPOINT
Advanced studies in writing an analysis. Possible topics include: sonatas, songs, jazz arranging and scoring.
Seminar (two hours); one term
Prerequisite: MUSIC 2C03 and registration in Honours Music
Offered in alternate years.
Enrolment is limited.

MUSIC 4E03  SOLO PERFORMANCE
A continuation of MUSIC 3E03 or 3E06.
12 one-hour meetings; one term
Prerequisite: MUSIC 3E03 or 3E06
Antirequisite: MUSIC 4E06, 4E09
Lesson fees are charged to students taking MUSIC 4E03 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 4E06  SOLO PERFORMANCE
A continuation of MUSIC 3E06 or 3E03.
12 one-hour meetings per term; two terms
Prerequisite: MUSIC 3E03 or 3E06
Antirequisite: MUSIC 4E03, 4E09
Lesson fees are charged to students taking MUSIC 4E06 if the course is not a specific requirement for their music degree program. Lesson fees must be paid by September 1.

MUSIC 4E09  SOLO PERFORMANCE, DIPLOMA
Advanced technique and repertoire of any approved instrument, leading to a final examination in a recital presentation of approximately forty minutes duration.
Individual instruction; two terms
Prerequisite: MUSIC 3E08 with a grade of at least A- and permission of the School of the Arts
Antirequisite: MUSIC 4E03 or 4E06
Open only to students pursuing the Diploma in Music Performance.
Students requesting this course must apply in writing to the School of the Arts in March.
Fees are charged to students taking MUSIC 4E09. Lesson fees must be paid by September 1.

MUSIC 4G03  ENSEMBLE PERFORMANCE
McMaster Chamber Orchestra, McMaster University Choir, McMaster Concert Band, McMaster Jazz Band, McMaster Vocal Ensemble, or any other ensemble approved by the School of the Arts.
Prerequisite: MUSIC 3G03 and successful audition; or a grade of at least A- in MUSIC 2E08 and registration in the Diploma in Music Performance program
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.

MUSIC 4H03  TOPICS IN ANALYSIS
Advanced studies in analysis. Possible topics include: Schenkerian analysis, song cycles of Schubert, advanced set theory.
Seminar (two hours); one term
Prerequisite: MUSIC 2CC3, 2H03 and registration in Honours Music
Offered in alternate years.
Enrolment is limited.

MUSIC 4K03  BRASS METHODS
A study of the basic techniques of playing brass instruments. Brass literature for various educational levels. The instruments studied differ from those studied in MUSIC 3K03.
Two lectures, one lab; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3K03.
Enrolment is limited.

MUSIC 4L03  WOODWIND METHODS
A study of the basic techniques of playing woodwind instruments. Woodwind literature for various educational levels. The instruments studied differ from those studied in MUSIC 3L03.
Two lectures, one lab; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3L03.
Enrolment is limited.

MUSIC 4M03  STRING METHODS
A study of the basic techniques of playing string instruments. String literature for various educational levels. The instruments studied differ from those studied in MUSIC 3L03.
Two lectures; two terms
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3M03.
Enrolment is limited.

MUSIC 4N03  VOCAL METHODS
Basic techniques of singing; organization, conducting, and rehearsing a choir; choral literature for intermediate and senior levels.
Two lectures; one term
Prerequisite: Registration in Honours Music or permission of the School of the Arts
Alternates with MUSIC 3N03.
Enrolment is limited.
MUSIC 40C3 ADVANCED CONDUCTING: CHORAL
Rehearsal and conducting techniques, including warm-up exercises, tone, intonation, balance, attack, sustain, cueing, repertoire, score reading, and score preparation.
Three lectures; one term
Prerequisite: MUSIC 3003; and registration in Honours Music or permission of the School of the Arts
Enrollment is limited.

MUSIC 40I3 ADVANCED CONDUCTING: INSTRUMENTAL
A continuation of MUSIC 30I3. Refinement and development of conducting techniques. Exploration of in-depth score preparation, rehearsal techniques, odd and shifting meters, subdivision.
Three lectures; one term
Prerequisite: MUSIC 30I3; and registration in Honours Music or permission of the School of the Arts
Enrollment is limited.

MUSIC 4P03 PERCUSSION METHODS
A continuation of MUSIC 3P03.
Two lectures; one term
Prerequisite: MUSIC 3P03; and registration in Honours Music or permission of the School of the Arts
Enrollment is limited.

MUSIC 4Q03 PIANO LITERATURE AND PEDAGOGY
Study of piano repertoire and teaching methods for various age groups.
Three lectures; one term
Prerequisite: Registration as a piano major in Level III or IV of an Honours Music program and permission of the School of the Arts
Offered in alternate years.
Enrollment is limited.

MUSIC 4R03 ISSUES AND METHODS IN CURRENT MUSICOLOGY
An exploration of historical, analytical and critical methods of research in music, including models of analysis derived from cultural studies, gender studies, literary theory, etc.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours Music program or permission of the instructor
Enrollment is limited.

MUSIC 4S03 SPECIAL STUDIES
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: Registration in Level IV of an Honours 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 April 15th.

MUSIC 4S53 SPECIAL STUDIES IN CHAMBER MUSIC OR ACCOMPANYING II
Advanced supervised studies in chamber music performance or instrumental accompanying.
Times to be arranged between the students and instructor; one term
Prerequisite: MUSIC 3S53; and registration in Level III or IV of a 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 April 15th. This course is primarily for students pursuing the Diploma in Music Performance.

Fees are charged to students taking MUSIC 4S53. Lesson fees must be paid by September 1 for Term 1 and by January 1 for Term 2.

MUSIC 4U03 JAZZ IMPROVISATION
Study and performance of jazz improvisations in various styles.
Two hours; one term
Prerequisite: MUSIC 3U03 and permission of the instructor
Offered in alternate years.

MUSIC 4V03 CURRENT ISSUES IN MUSIC EDUCATION
An investigation of new political initiatives, philosophical views, developing research, and curricular and administrative changes that are currently influencing the practice of music in the schools.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Honours program in Music
Alternates with MUSIC 3V03
Enrollment is limited.

MUSIC 4Y03 TOPICS IN MUSIC HISTORY
An intensive examination of a composer, period, genre, or issue from the style areas of "classical" music, film music, popular music, or jazz.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of an Honours Music program or permission of the instructor
Enrollment is limited.

MUSIC 4Z03 COMPOSITION
The composition of various instrumental or vocal works.
Times to be arranged between the student and instructor; one term
Prerequisite: Registration in Level III or IV of an Honours Music program and permission of the instructor

NEURAL COMPUTATION

WEB ADDRESS: http://www.psychology.mcmaster.ca/NeuralComp

The Neural Computation subject area is administered within the Faculty of Science through a committee of instruction consisting of Dr. S. Haykin (Electrical and Computer Engineering), Dr. R. Racine (Psychology), Dr. S. Becker (Psychology), Dr. N. Balakrishnan (Mathematics and Statistics) and Dr. D. Jones (Electrical and Computer Engineering) and draws on courses offered by the Departments of Psychology, Mathematics and Statistics and Computing and Software. Information and counselling may be obtained through the Department of Psychology.

COURSES

NEURCOMP 4D09 NEURAL COMPUTATION THESIS
Students conduct research projects with individual faculty members.
Prerequisite: Registration in Level IV of Honours Neural Computation

NURSE PRACTITIONER

(SEE NURSING, NURSE PRACTITIONER (C) STREAM)

NURSING

WEB ADDRESS: http://www.fhs.mcmaster.ca/nursing

Health Sciences Centre, Room 1M7

Ex. 22694

Faculty as of January 15, 2005

Associate Dean of Health Sciences (Nursing) and Director of the School of Nursing
Catherine Tompkins

Professors
Heather Arthur/B.Sc.N. (McMaster), M.Sc.N., Ph.D. (Toronto), R.N.
Andrea Baumann/B.Sc.N. (Windsor), M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Donna Ciliska/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Alba DiCenso/B.Sc.N., M.Sc.N. (McMaster), Ph.D. (Waterloo), R.N.
Basant Majumdar/B.Sc. (Delhi), M.Sc.N. (Delhi), M.Ed. (Columbia), Ph.D. (Michigan), R.N.
Janet Pinell/B.Sc. (Boston), M.Sc.N. (Toronto), D.N.S. (Buffalo), R.N.
John Vickers/B.Sc. (McMaster), Ph.D. (York)

Associate Professors
Margaret Black/B.Sc.N. (McGill), M.Sc.N. (Case Western Reserve), Ph.D. (Michigan), R.N.
Jennifer Blythe/B.A. (Hull), M.A., Ph.D. (McMaster), M.L.S. (Toronto)
Barbara Brown/B.Sc.N. (Windsor), M.Sc.N. (Toronto), R.N.
Barbara Carnegie/B.Sc.N. (Alberta), M.Sc.N. (Toronto), M.Sc. (McMaster), R.N.
Patricia Ellis/B.Sc.N. (Wagner), M.Sc. (Maryland), R.N.
Anita Fisher/B.A. (Windsor), M.H.Sc. (McMaster), R.N.
Mabel Hunsberger/B.S. (Goshen), M.Sc.N. (Pennsylvania), Ph.D. (Waterloo), R.N.
Janet Landeen/B.Sc.N. (Connecticut), M.Ed. (Victoria), Ph.D. (Toronto), R.N.
Ann Mohide/B.Sc.N. (Toronto), M.H.Sc., M.Sc. (McMaster), R.N.
Jerri Pioe/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Elizabeth Rideout/B.N. (New Brunswick), M.H.Sc. (McMaster), Ph.D. (Toronto), R.N.
Jennifer Skelly/M.Sc.N., R.N. (McMaster), Ph.D. (Toronto), R.N.
Wendy Sword/B.Sc.N., M.Sc.T. (McMaster), Ph.D. (Guelph), R.N.
Helen Thomas/B.Sc.N. (Queen’s), M.Sc. (Waterloo), R.N.
Catherine Tompkins/B.Sc.N. (Western Ontario), M.Ed. (Toronto), Ph.D. (California), R.N.
Ruta Valaitis/B.A., B.Sc.N. (Windsor), M.H.Sc. (McMaster), Ph.D. (Toronto), R.N.

Assistant Professors
Noori Askhar-Danesht, B.Sc., M.Sc. (Iran), Ph.D. (Newcastle-upon-Tyne)
Gertrude Benson/B.N. (McGill), M.Sc.N. (Boston), R.N.
Lynda Bentley Poole/B.Sc.N. (McMaster), M.Sc.N. (Toronto), R.N.
Sheyl Boblin/B.Sc.N. (Alberta), M.Ed. (Alberta), Ph.D. (Toronto), R.N.
Denise Bryant-Lukosius/B.Sc.N. (McMaster), M.Sc. (D’Youville), Ph.D. (McMaster), R.N.
Ruth Cheni/B.A. (California-Berkeley), M.Sc. (Yale), R.N.
Kristen Cufi/B.Sc.N. (Queen’s), Ph.D. (McMaster), R.N.
Maureen Dobbins/B.Sc.N. (McMaster), Ph.D. (Toronto), R.N.
Michelle Drummond-Young/B.Sc.N., M.H.Sc. (McMaster), R.N.
Anne Ehrlich/B.Sc.N. (Queen’s), M.H.Sc. (Toronto), R.N.
Eileen Grace/M.Sc.N. (McMaster), M.Sc.N. (Waterloo), R.N.
Ruth Hannon/B.Sc.N. (Queen’s), M.H.A. (Wales), M.S.F.N.P. (D’Youville)
Carolyn Ingram/B.Sc.N. (Pittsburg), M.Sc.N. (Maryland) D.S.N. (SUNY), R.N.
Susan Jacik/B.Sc.N. (Alberta), Ph.D. (McMaster), R.N.
Sharon Kasasakarinen/B.Sc.N. (McMaster), M.Sc. (Toronto), Ph.D. (McMaster), R.N.
Michael Ladouceur/B.S.N. (Victoria), M.P.H. (Boston), R.N.
Yvonne Lawlor/B.Sc.N. (New Brunswick), M.Ed. (Brock), R.N.
Jeanette LeGras/B.N. (Manitoba), M.H.Sc. (McMaster), R.N.
Barbara Love/B.Sc.N. (Toronto), M.H.Sc. (McMaster), R.N.
Ola Lunyk-Child/B.Sc.N. (McMaster), M.Sc.N. (Toronto), R.N.
Maureen Markle-Reid/B.Sc.N. (McMaster), M.Sc.N. (Toronto), Ph.D. (McMaster), R.N.
Lynn Martin/B.Sc.N. (McMaster), M.Sc.N. (Western Ontario), Ph.D. (McMaster), R.N.
Colleen McKay/B.Sc.N. (Niagara), M.Sc. (D’Youville), Ph.D. (Capella), R.N.
Karen Moncrieff/B.Sc.N. (McMaster), M.Sc. (D’Youville), R.N.
Mandi Newton/B.Sc.N., Ph.D. (McMaster)
Charlotte Noesgaard/B.N. (McGill), M.Sc.N. (Western Ontario), R.N.
Cottie Otosu/B.A. (McMaster), M.Ed. (Brock), Ph.D. (Toronto)
Linda O’Marra/B.N., M.Sc.N. (McGill), M.Sc.N. (Toronto), R.N.
Marilyn Parsons/B.N.Sc. (Queen’s), M.H.Sc. (McMaster), R.N.
Chris Patterson/B.Sc. (Waterloo), B.Sc.N. (McMaster), M.Sc.N. (Western Ontario), R.N.
Gladya Peachey/B.N., M.Ed. (Memorial), M.H.Sc. (Toronto), Ph.D. (McMaster)
Joanna Pierazzo/B.Sc.N., M.Sc.N. (Western Ontario), R.N.
Jennine Salt/B.Sc.N., M.Sc., Ph.D. (McMaster), R.N.
Ruth Sohfield/B.Sc.N., M.Sc. (T) (McMaster), R.N.
Dyanne Semogas/B.N. (McGill), M.N. (Washington), R.N.
Kathy Sleeth/B.Sc.N., M.Sc.(T) (McMaster), R.N.
Eric Staples/B.A.A. (N) (Ryerson), M.Sc. (D’Youville), R.N.
Catherine Thomas/B.Sc.N., M.Sc. (New York), R.N.
Olive Wahoush/M.Sc. (U of St. John’s), R.N.

Lecturers
Iris Mujica/B.Sc.N., M.Sc. (McMaster), R.N.
Marilyn O’B.B.Sc.N., M.Sc.N. (Western Ontario)

Note:
The School of Nursing has a large number of part-time faculty appointed from community health-care agencies. A complete list is available from the office of the Associate Dean of Health Sciences (Nursing).

School Notes:
1. Normally, registration in all courses above Level I will require satisfactory completion of the prerequisite Nursing courses with a grade of at least C- in graded courses or a pass in clinical practice courses. (See the Faculty of Health Sciences, School of Nursing, Academic Regulations section in this Calendar.)
2. Normally, Level I, II, III, and IV Nursing courses are available only to students registered in the B.Sc.N. Program.
3. A satisfactory Police Records Check may be required for some clinical placements. All costs associated with this procedure are the responsibility of the student.
4. Students are responsible for arranging their own travel to and from learning settings external to the University and for covering any costs incurred. All students who enrol in the B.Sc.N. Program are expected to travel to any learning setting in Hamilton and the surrounding area (McMaster and Mohawk) and Kitchener-Waterloo and surrounding area (Conestoga).
5. Students in any stream who register for a clinical lab course in Level III or above must also submit a Placement Preference form to the Placement Coordinator. The Student Placement Information System (SPIS) at www.fhs.mcmaster.ca/nursing/placements features detailed information about the selection of placement settings and deadlines for submission of Placement Preferences. Students who fail to meet the published deadline but who register for the course at least two months prior to the date it is to commence will be assigned a placement setting without consideration of their preferences. Students who do not register two months in advance and who fail to meet the submission deadlines will normally be required to defer their placement until the next term in which the course is offered.
6. 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.
7. The Nursing Leadership/Management courses are open only to students registered in the Nursing Leadership/Management program, which was previously administered and is currently endorsed by the Canadian Nurses Association. Students in the B.Sc.N. (B) Stream may apply to the coordinator of the Nursing Leadership/Management program for permission to take these courses.
8. The Psychiatric-Mental Health courses are open to nurses working in or who have an interest in psychiatry and mental health. A candidate must be currently registered as a nurse in a province or territory in Canada.

Courses
NURSING 1F04
INTRODUCTION TO NURSING AND HEALTH
An introduction to definitions of nursing and health. Emphasis is on the relevance of context and on caring. Nursing process, beginning level skills in assessment, including physical assessment, and communication are stressed. A clinical practice component includes laboratory and community experience.
Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term
Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream

NURSING 1G04
INTRODUCTION TO NURSING AND HEALTH II
A continuation of NURSING 1F04. An introduction to reflective practice. Concepts and theories related to specific priority health issues are studied. There is continued development of skills in health assessment and an introduction to health education. A clinical practice component includes laboratory and community experience.
Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term
Prerequisite: NURSING 1F04

NURSING 2L03
GUIDED NURSING PRACTICE I
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 acute care institutions, including adult medical and surgical and paediatric settings. This course is evaluated on a Pass/Fail basis.
Nine hours (clinical lab); one term
Prerequisite: NURSING 1F04, 1G04

Normally to be taken concurrently with NURSING 2M03.
NURSING 2M03
NURSING CONCEPTS IN HEALTH AND ILLNESS
Integration of nursing, biological, psychological and social sciences theory is developed through work in problem-based tutorials, in which students apply concepts related to nursing, teaching-learning and group processes to a variety of patient situations.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 1P04, 1Q04
Normally to be taken concurrently with NURSING 2L03.

NURSING 2N03
NURSING CONCEPTS IN HEALTH AND ILLNESS II
A continuation of NURSING 2M03. Integration of nursing, biological, psychological, and social sciences theory in problem-based tutorials.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 2M03
Normally to be taken concurrently with NURSING 2P03.

NURSING 2P03
GUIDED NURSING PRACTICE II
A continuation of NURSING 2L03. Planned and guided clinical practice in institutional settings. This course is evaluated on a Pass/Fail basis.
Nine hours (clinical lab); one term
Prerequisite: NURSING 2L03
Normally to be taken concurrently with NURSING 2N03.

NURSING 3A03
ONCOLOGY HEALTH ASSESSMENT
This course assists the oncology nurse to refine advanced history-taking and physical assessment skills specific to the individual and family experiencing the cancer continuum. This course is evaluated on a Pass/Fail basis.
Three hours (problem-based tutorial, clinical lab); one term
Prerequisite: Registration in Oncology Program or permission of the instructor.
Antirequisite: NURSING 2A02, 3G05, 3L05, 3L73, 3V05

NURSING 3C03
CONCEPTS AND THEORIES IN ADULT ONCOLOGY NURSING I
Biological, psychological, physical, social sciences, and nursing theory are integrated and applied to selected health care situations related to adult oncology through the problem-based format.
Three hours (problem-based tutorials, lectures, self-directed study); one term
Prerequisite: Registration in the Adult Oncology Program or registration in Level III of the B.Sc.N. (B) Stream and permission of the Instructor.
Antirequisite: NURSING 2C03, 3S03

NURSING 3D03
CONCEPTS AND THEORIES IN ADULT ONCOLOGY NURSING II
A continuation of NURSING 3C03. A problem-based course where students integrate and apply theories from the biological, physical, psychological, social, and nursing sciences to selected adult oncology situations. Within the cancer care continuum, health care situations focus on assisting clients, families and the community.
Three hours (problem-based tutorials, lectures, self-study); one term
Prerequisite: NURSING 3C03; and either registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor, or registration in the Adult Oncology Program.
Antirequisite: NURSING 3T03

NURSING 3E03
CONCEPTS AND THEORIES IN PSYCHIATRIC-MENTAL HEALTH NURSING I
Biological, psychological, physical, social sciences and nursing theory are integrated and applied to selected health care situations related to psychiatric-mental health.
Three hours (problem-based tutorials, lectures, self-directed study); one term
Prerequisite: Registration in the Psychiatric-Mental Health Nursing Program; or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor.
Antirequisite: NURSING 3N03, 3S03

NURSING 3F03
CONCEPTS AND THEORIES IN PSYCHIATRIC-MENTAL HEALTH NURSING II
A continuation of NURSING 3E03. Students integrate and apply theories from the biological, physical, psychological, social and nursing sciences to selected psychiatric-mental health situations. Within the mental health continuum, health care situations focus on assisting clients, families and communities.
Three hours (problem-based tutorials, lectures, self-directed study); one term
Prerequisite: NURSING 3E03; and either registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor, or registration in the Psychiatric-Mental Health Nursing Program.
Antirequisite: NURSING 3T03

NURSING 3G03
SELECTED TOPICS IN PSYCHIATRIC-MENTAL HEALTH NURSING
Psychiatric-mental health nurses will acquire advanced competencies in working with individuals, families, and communities. Topic modules include: cognitive-behavioural therapy, inter-personal therapy, working with families, and group psychoeducational approaches.
Three hours (problem-based tutorials, lectures, self-directed study); one term
Prerequisite: NURSING 3E03, 3H03

NURSING 3H03
THERAPEUTIC USE OF SELF IN PSYCHIATRIC HEALTH NURSING
Nurses will enhance their therapeutic use of self through examining the reciprocal and multi-level nature of conversations that empower and lead to collaborative partnerships. Developed through small-group tutorials and use of standardized patients.
Three hours (problem-based tutorials); one term
Prerequisite: Registration in the Psychiatric-Mental Health Nursing Program.

NURSING 3I03
CLIENT HEALTH ASSESSMENT
This course focuses on knowledge and skills related to the assessment of the client in a community-based health care setting. History-taking and physical assessment skills are developed. This course is evaluated on a Pass/Fail basis.
Three hours (problem-based tutorials, clinical lab, self-study); one term
Prerequisite: Registration in Level III of the B.Sc.N. (B) Stream or permission of the instructor.
Antirequisite: NURSING 3A03, 3G05, 3L05, 3L25, 3V05

NURSING 3J03
COMMUNICATION SKILLS FOR INDIVIDUALS, FAMILIES AND COMMUNITIES
Communication skills relevant to the complex nursing care of individuals, families and communities are developed through small-group tutorials and use of standardized patients.
Three hours (problem-based tutorials); one term
Prerequisite: Registration in Level III of the B.Sc.N. (B) Stream or Oncology Program.
Antirequisite: NURSING 3G05, 3L05, 3V05
Not open to students with credit in NURSING 3H03.

NURSING 3K03
INTRODUCTION TO NURSING CONCEPTS AND THEORIES IN HEALTH AND ILLNESS
Biological, physical, psychological, social sciences, and nursing theory are integrated and applied to health care situations through problem-based learning. Principles and strategies for lifelong learning are introduced.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: Registration in Level III of the B.Sc.N. (B) Stream.
Antirequisite: NURSING 3C03, 3E03, 3P03, 3S03

NURSING 3L03
CONCEPTS AND THEORIES IN PAEDIATRIC ONCOLOGY NURSING I
Biopsychosocial sciences and nursing theory are integrated and applied to health care situations through problem-based learning. Concepts and theories will focus on assisting the child, family and community in responding to the oncological process.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: Registration in Paediatric Oncology Program; or registration in Level III of the B.Sc.N. (B) Stream.
Antirequisite: NURSING 3C03, 3E03, 3P03, 3S03

NURSING 3M03
CONCEPTS AND THEORIES IN PAEDIATRIC ONCOLOGY NURSING II
A continuation of NURSING 3L03. A problem-based course in which students integrate theories from biological, physical, psychological, social and nursing sciences and apply them to paediatric haematology-oncology situations.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 3P03; and registration in the Paediatric Oncology Program; or registration in Level III of the B.Sc.N. (B) Stream and permission of the instructor.
Antirequisite: NURSING 3T03
NURSING 3S03  NURSING CONCEPTS IN HEALTH AND ILLNESS II
Biological, physical, psychological, social sciences, and nursing theory are integrated and applied to health care situations through problem-based learning.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: Registration in Level III of the B.Sc.N. (A), (B) or (D) Stream or Nurse Practitioner (C) Stream
Antirequisite: NURSING 3C03, 3E03, 3N03, 3P03
Normally to be taken concurrently with NURSING 3X04 (for (A) and (D) Stream students).

NURSING 3T03  NURSING CONCEPTS IN HEALTH AND ILLNESS IV
A continuation of NURSING 3S03. A problem-based course in which students integrate theories from biological, physical, psychological, social and nursing sciences and apply them to health care situations.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 3S03
Antirequisite: NURSING 3DD3, 3F03, 3Q03
Normally to be taken concurrently with NURSING 3Y04 (for (A) and (D) Stream students).

NURSING 3U02  INTEGRATIVE NURSING PRACTICE SEMINAR
This course is an in-depth analysis of the scientific basis of nursing practice. Selected scientific mechanisms are studied and applied to nursing practice.
Two hours (lecture/student presentations); one term
Prerequisite: Registration in Level III of the B.Sc.N. (A) or (D) Stream
Normally to be taken concurrently with NURSING 3X04 or 3Y04.

NURSING 3V03  COMMUNITY HEALTH
Introduction to assessment of the health status of communities within a Primary Health Care framework. Models of community development and community assessment, health promotion and health education are critiqued and applied to clinical scenarios.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: HTH SCI 3B03 and registration in B.Sc.N. (B) Stream
Antirequisite: NURSING 3M05, 3V02
Normally to be taken concurrently with NURSING 3T03.

NURSING 3W03  GUIDED NURSING PRACTICE I - COMMUNITY-BASED CARE
An applied nursing practice experience in a community-based health care setting with emphasis on skill development in health promotion, health education and community assessment. This course is evaluated on a Pass/Fail basis.
Eight hours (clinical lab) and one hour (independent study); one term
Prerequisite: NURSING 3V02 or 3V03; and permission of the instructor
Antirequisite: NURSING 3M05

NURSING 3X04  GUIDED NURSING PRACTICE II
Planned and guided clinical practice in a variety of institutional and community settings emphasizing that nursing is contextual and relational. Nursing practice roles and selected theories/models are tested with individuals and groups. Emphasis is given to formulating nursing interventions. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical lab); one term
Prerequisite: NURSING 2P03
Normally to be taken concurrently with NURSING 3S03.

NURSING 3Y04  GUIDED NURSING PRACTICE IV
A continuation of NURSING 3X04 with emphasis on integration of scientific mechanisms.
Twelve hours (clinical lab); one term
Prerequisite: NURSING 3X04
Normally to be taken concurrently with NURSING 3T03.

NURSING 4A02  CURRENT TRENDS AND ISSUES IN NURSING
This course considers issues facing the profession, and the implications of current changes in the health field for future nursing practice.
Two hours (lecture); one term
Prerequisite: Registration in Level IV of the B.Sc.N. (A), (B) or (D) Stream; and permission of the instructor

NURSING 4B06  INTRODUCTION TO NURSING LEADERSHIP/MANAGEMENT
Introduction to theories and methods of leadership and management integrating the nursing and management disciplines. Given in both distance education and problem-based tutorial formats. A document of recognition is granted on course completion. Enrolment in tutorial format is limited.
Four hours (problem-based tutorial or equivalent); six hours (independent study at a clinical site); one term
Prerequisite: Registered Nurse with a minimum of one year clinical experience or permission of the instructor
Antirequisite: HTH SCI 4E03

NURSING 4C01  NURSING BUDGETING
Introduction to sources of health care funding in Canada and the principles of decentralized financial management. Given in distance education and problem-based tutorial formats. This course is evaluated on a Pass/Fail basis.
One hour (lecture or equivalent); one term
Prerequisite: Registered Nurse or permission of the instructor

NURSING 4D01  TOTAL QUALITY MANAGEMENT IN NURSING
Introduction to total quality management, quality assurance, quality improvement, risk management and utilization management. Given in distance education. This course is evaluated on a Pass/Fail basis.
One hour (lecture or equivalent); one term
Prerequisite: Registered Nurse or permission of the instructor

NURSING 4E03  ADVANCED NURSING CONCEPTS I
A problem-based course in which students focus on theories and concepts related to client/patient care e.g., leadership and management, education of clients/patients, students, and staff. Student participation includes selecting appropriate situations and related theories for study, and identifying interventions and evaluation strategies.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 4G03 and permission of the instructor
Antirequisite: NURSING 4Q04
Normally to be taken concurrently with NURSING 4K07 or NURSING 4T06.

NURSING 4F03  ADVANCED NURSING CONCEPTS II
A continuation of NURSING 4E03. A problem-based course in which students integrate concepts and theories related to clinical practice issues.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: NURSING 4E03 and permission of the instructor
Antirequisite: NURSING 4Q04
Normally to be taken concurrently with NURSING 4K07 or NURSING 4T06.

NURSING 4G03  SELECTED TOPICS IN NURSING
Topics of contemporary interest in nursing. Emphasis may be upon theory, research or clinical application. Consult the School regarding the topics to be examined.
Three hours (problem-based tutorial or equivalent); one term
Prerequisite: Permission of the instructor

NURSING 4I03  ISSUES IN INTERNATIONAL AND INTERCULTURAL HEALTH
An introduction to health issues in a rural Canadian and international context including theories of: development; political economy; medical and social anthropology; and intercultural health care practice.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: HTH SCI 3B03 and registration in Level III or IV of the B.Sc.N. Program; and permission of the instructor
Antirequisite: HTH SCI 4H03

NURSING 4J03  LEADING EFFECTIVE TEAMS IN HEALTH CARE ORGANIZATIONS
This course introduces health care providers to the concepts and dynamics of teams within health care organizations. Theories and concepts related to leadership, communication and health systems are applied in the current work environment. Distance education and tutorial formats.
Three hours (problem-based tutorial or equivalent); one term
Prerequisite: Registered Nurse and permission of the instructor
Antirequisite: HTH SCI 4I03

NURSING 4K07  GUIDED NURSING PRACTICE V
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. This course is evaluated on a Pass/Fail basis.
Twenty-four hours (clinical lab, including tutorials); one term
Prerequisite: NURSING 3X04, 3Y04
Normally to be taken concurrently with NURSING 4E03.

NURSING 4L07  GUIDED NURSING PRACTICE VI
A continuation of Nursing 4K07. This course is evaluated on a Pass/Fail basis.
Twenty-four hours (clinical lab, including tutorials); one term
Prerequisite: NURSING 4K07
Normally to be taken concurrently with NURSING 4F03.
NURSING 4L06 GUIDED NURSING PRACTICE IN PSYCHIATRIC MENTAL HEALTH
An applied nursing practice course which emphasizes integration of multiple ways of knowing, including evidence-based, humanistic and experiential, in a selected area of psychiatric mental health clinical practice. Twelve hours (clinical site), two hours (tutorials); one term
Prerequisite: Registration in the Psychiatric Mental Health Nursing Program

NURSING 4M06 GUIDED NURSING PRACTICE IN ADULT ONCOLOGY
An applied nursing practice course which emphasizes integration of evidence-based, humanistic and experiential knowledge in a selected area of adult oncology clinical practice. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical site), two hours (tutorials); one term
Prerequisite: Registration in the Adult Oncology Nursing Program

NURSING 4N06 GUIDED NURSING PRACTICE IN PAEDIATRIC ONCOLOGY
An applied nursing practice course which emphasizes integration of evidence-based, humanistic and experiential knowledge in a selected area of paediatric oncology clinical practice. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical site), two hours (tutorials); one term
Prerequisite: Registration in the Paediatric Oncology Nursing Program

NURSING 4P04 ADVANCED NURSING CONCEPTS I
Students focus on the integration and application of scientific and humanistic theories and concepts to the exploration and suggested resolution of client/patient case scenarios.
Three and one half hours (student-facilitated tutorials), resource lectures; one term
Prerequisite: Registration in Level IV of the BScN Program
Antirequisite: NURSPRAC 4E03
 Normally to be taken concurrently with NURSPRAC 4J07, 4S06 or 4T06

NURSING 4Q04 ADVANCED NURSING CONCEPTS II
A continuation of NURSPRAC 4P04. Students focus on the integration and application of relevant concepts and theories to the exploration of professional issues in nursing and the health care system.
Three and one half hours (student-facilitated tutorials), resource lectures; one term
Prerequisite: NURSPRAC 4P04
Antirequisite: NURSPRAC 4F03
 Normally to be taken concurrently with NURSPRAC 4K07, 4S06 or 4T06

NURSING 4S06 GUIDED NURSING PRACTICE III - COMMUNITY-BASED CARE
An applied nursing practice experience in a community-based health care setting with emphasis on skill development in health promotion, health education and community assessment. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical lab), two hours (tutorials); one term
Prerequisite: NURSPRAC 3V03 and registration in Level IV of the BScN (B) Stream
 Normally to be taken concurrently with NURSPRAC 4E03.

NURSING 4T06 GUIDED NURSING PRACTICE IV
An applied nursing practice course which emphasizes integration of theory and development of independent decision-making capacity in a selected area of clinical practice. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical lab), two hours (tutorials); one term
Prerequisite: Registration in Level IV of the BScN (B) Stream
 Normally to be taken concurrently with NURSPRAC 4L06, 4M06, 4N06.

NURSE PRACTITIONER (C) STREAM ...

Notes:
1. The Ontario Primary Health Care Nurse Practitioner Program (C) Stream is being phased out. The last entry into this program was in September 2004. The following courses will be available to those students currently completing the program.
2. Distance education modalities are employed in all courses in the Nurse Practitioner (C) Stream and Nurse Practitioner Certificate Stream. Tutorial sessions are held on site at the University. Field experience is required for several courses. Students must attend McMaster for the clinical laboratory components of the program.

Courses

NURSPRAC 4A05 ADVANCED HEALTH ASSESSMENT AND DIAGNOSIS I
This course focuses on the development of clinical decision making and advanced health assessment knowledge and skills in providing primary health care for the adult client.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: Credit or registration in NURSPRAC 4P03 and registration in Level IV of the BSc.N. Nurse Practitioner (C) Stream
Antirequisite: NURSPRAC 4A05, 4A10

NURSPRAC 4A05 ADVANCED HEALTH ASSESSMENT AND DIAGNOSIS II
A continuation of NURSPRAC 4A05. This course applies frameworks, concepts and methods of health assessment and clinical decision making to specific populations across the lifespan, families and communities. Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4A05, 4A10

NURSPRAC 4C13 NURSE PRACTITIONER INTEGRATIVE PRACTICUM
An intensive field study with a focus on assessment, diagnosis and management of the care of clients. Emphasis is on synthesizing advanced knowledge and applying evidence-based health care to clinical practice.
Three hours (tutorial); two terms
Prerequisite: HTH SCI 1C07, 2C07; and registration in Level IV of the BSc.N. N.P. (C) Stream

NURSPRAC 4P03 PATHOPHYSIOLOGY FOR NURSE PRACTITIONERS
This course uses a systems approach to examine concepts in pathophysiology as a basis for advanced nursing practice in primary health care. The course will provide a comprehensive overview of anatomy, physiology and clinical manifestation of diseases in adults and children found in primary care.
Three hours (tutorial); two terms
Prerequisite: HTH SCI 1C07, 2C07; and registration in Level IV of the BSc.N. N.P. (C) Stream

NURSPRAC 4R03 NURSE PRACTITIONER ROLES AND RESPONSIBILITIES
This course examines and analyzes the political, economic, social, ethical and legal issues related to the role and scope of practice of Nurse Practitioners. Three hours (tutorial); two terms
Prerequisite: Registration in Level III or IV of the BScN. N.P. (C) Stream

NURSPRAC 4T04 THERAPEUTICS IN PRIMARY HEALTH CARE I
Concepts integral to pharmacotherapy, advanced counselling and complementary therapies related to episodic conditions across the lifespan are introduced. The therapeutic care plan approach is emphasized.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: HTH SCI 1C07, 2C07; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream
Antirequisite: NURSPRAC 4T04, 4T10, 4T15

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE II
A continuation of NURSPRAC 4T04. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T04; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE III
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE IV
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE V
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE VI
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE VII
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE VIII
A continuation of NURSPRAC 4T05. This course applies the frameworks and concepts of pharmacotherapy, advanced counselling and complementary therapies to clients with chronic conditions and to specific populations.
Three hours (tutorial), three hours (clinical lab); one term
Prerequisite: NURSPRAC 4T05; and credit or registration in NURSPRAC 4A05, 4P03; and registration in Level IV of the BScN. Nurse Practitioner (C) Stream

Notes:
1. Former NURSECON courses are now listed as COLLAB courses.
2. Students with credit in NURSECON courses may not take the corresponding course under the COLLAB designation.
3. 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 BScN program with the exception of COLLAB 2F03 (Medical Informatics) and COLLAB 2K03 (Introduction to Health Informatics) which are only open to students registered in the BSc.N.(A) Stream.
**Courses**

**COLLAB 1A03  INTRODUCTION TO PSYCHOLOGY**
Formerly: NURSECON 1A03
An introduction to the basic principles of scientific psychology related to the understanding of “normal” human behaviour.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: COLLAB 1C03, NURSECON 1C03
Not open to students with credit or registration in PSYCH 1A03.

**COLLAB 1B03  DEVELOPMENTAL PSYCHOLOGY**
Formerly: NURSECON 1B03
The study of human psychological development from the pre-natal period to old age.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: COLLAB 1D03, NURSECON 1B03, 1D03
Not open to students with credit or registration in PSYCH 1A03.

**COLLAB 1C03  PSYCHOLOGY: BASIC PROCESSES OF BEHAVIOUR**
Formerly: NURSECON 1C03
Basic concepts of psychological research methods, learning, memory, perception, states of consciousness, motivation and emotion.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: COLLAB 1A03, NURSECON 1A03, 1C03
Not open to students with credit or registration in PSYCH 1A03.

**COLLAB 1D03  PSYCHOLOGY: DYNAMICS OF HUMAN BEHAVIOUR**
Formerly: NURSECON 1D03
Stress and stress management, thinking and intelligence, the biological basis of behaviour, social psychology, personality theory and measurement, abnormal behaviour and therapies.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: COLLAB 1B03, NURSECON 1D03, 1D03
Not open to students with credit or registration in PSYCH 1A03.

**COLLAB 1F03  POLITICAL STRUCTURES AND ISSUES**
Formerly: NURSECON 1F03
Introduction to the study of politics within the Canadian context.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: COLLAB 1F03

**COLLAB 1G03  MULTICULTURALISM**
Formerly: NURSECON 1G03
An examination of the ethnic and cultural diversity of Canadian society, including an investigation of Canada’s multicultural policy.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: NURSECON 1G03

**COLLAB 1H03  INTRODUCTION TO CRITICAL THINKING IN THE SOCIAL SCIENCES**
Formerly: NURSECON 1H03
The basic principles of the social sciences disciplines, Economics, Sociology and Politics. The development of critical thinking by focusing on inequalities in contemporary Canadian society.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: NURSECON 1H03

**COLLAB 1I03  SOCIOLOGY I**
Formerly: NURSECON 1I03
An analysis of Canadian social institutions and social processes.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: NURSECON 1I03

**COLLAB 2A03  ABNORMAL PSYCHOLOGY**
Formerly: NURSECON 2A03
Applied principles and related theories of normal and abnormal personality development.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2A03

**COLLAB 2B03  FRENCH IN A CANADIAN CONTEXT**
Formerly: NURSECON 2B03
An introduction to French culture in a Canadian context.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2B03

**COLLAB 2C03  SOCIOLOGY II**
Formerly: NURSECON 2C03
The study of various aspects of Canadian society including social class, gender, religion, education, health and family.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2C03

**COLLAB 2D03  HUMAN SEXUALITY**
Formerly: NURSECON 2D03
An introduction to biological, behavioural and cultural aspects of human sexuality.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2D03

**COLLAB 2E03  LITERATURE: A PRACTICAL APPROACH**
Formerly: NURSECON 2E03
Various literary, cinematic and non-fiction works will be used to develop aesthetic judgment.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2E03

**COLLAB 2F03  MEDICAL INFORMATICS**
Formerly: NURSECON 2F03
A study of current topics in Medical Informatics and their practical application in the workplace.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (A) or (D) Stream (Mohawk College site)
Antirequisite: NURSECON 2F03
Enrolment is limited.

**COLLAB 2G03  QUEST FOR MEANING**
Formerly: NURSECON 2G03
Using insights from the arts, humanities and sciences, students will explore ways in which meaning is sought.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: NURSECON 2G03

**COLLAB 2H03  PRINCIPLES OF ETHICAL REASONING**
Formerly: NURSECON 2H03
A study of ways to clarify values and establish a framework for ethical decision making. Students examine professional ethical codes and apply ethical decision-making models to dilemmas in their personal and professional lives.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
Antirequisite: NURSECON 2H03

**COLLAB 2I03  THE USES OF LAUGHTER: COMEDY AND SATIRE**
This course will explore the history of comedy and satire through works ranging from ancient Greek comedy to contemporary film and fiction.
One hour (lecture), two hours (discussion/seminar); one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)

**COLLAB 2J03  DESIRE IN LITERATURE**
The historical and cross-cultural coverage of this course will lead to in-depth consideration of the ways culture, society and art shape desire and are in turn informed by it.
One hour (lecture), two hours (discussion/seminar); one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Conestoga College site)
COLLAB 2K03 INTRODUCTION TO HEALTH INFORMATICS
An introduction to the theory of data and information needs of health care professionals and the role of information management in patient care. Topics include decision support systems, electronic records, telemedicine, security, privacy and future trends.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (A) or (D) Stream (Conestoga College site)

COLLAB 3A03 SOCIOLOGY: SOCIETY, TECHNOLOGY AND SOCIAL ISSUES
Formerly: NURSECON 3A03
An examination of technologies that have influenced society.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 3A03

COLLAB 3B03 SOCIOLOGY: DIVERSITY AND INEQUALITY
Formerly: NURSECON 3B03
A study of the problems of daily life and social issues.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 3B03

NURSING CONSORTIUM
(SEE NURSING, NURSING CONSORTIUM (D) STREAM)

OJIBWE
(SEE INDIGENOUS STUDIES, OJIBWE)

ONCOLOGY
(SEE NURSING)

ORIGINS
WEB ADDRESS: http://origins.mcmaster.ca/
Life Sciences Building, Room 327
Ext. 26136

Notes:
1. ORIGINS courses are normally available to students who are registered in the Origins Research Specialization.
2. All Level III Origins courses will be first offered in 2006-2007 and the Level IV course will commence in 2007-2008.

Courses
If no prerequisite is listed, the course is open.

ORIGINS 2B03 BIG QUESTIONS
An introductory survey concerning the ultimate questions in modern science, with an emphasis on physical sciences: origin of our universe, nature of space-time, formation of the elements, and search for other planets.
Three lectures, one tutorial; first term.
Prerequisite: Registration in Level II or above
Cross-list: SCIENCE 2B03

ORIGINS 2F03 ORIGINS AND EVOLUTION OF ORGANISMS
An introductory survey concerning the origin and evolution of organisms. A tree-of-life will be examined internally from the root to terminal branch tips, by evaluating critically the data and analytical techniques with which the tree was constructed.
Three lectures, one tutorial; one term.
Prerequisite: BIOLOGY 1A03, CHEM 1A03, MATH 1A03, PHYSICS 1B03
First offered in 2005-2006.

ORIGINS 2G03 ORIGINS SEMINAR I
An introductory survey concerning the concepts, literature, and research skills relevant to origins research. Faculty from the Origins Institute will provide papers for discussion.
Seminar (one hour); two terms.
Prerequisite: Registration in the Origins Research Specialization
Enrolment is limited.
First offered in 2005-2006.

ORIGINS 3A03 ORIGIN OF SPACE-TIME
The mathematics, particle physics, and astronomy that are required to understand the Big Bang and how our universe formed.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3B03 ORIGIN OF THE ELEMENTS
The nuclear physics, chemistry, and astrophysics that are required to understand the formation of elements and how they are distributed in our universe.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3C03 ORIGINS OF STRUCTURE IN OUR UNIVERSE
Topics about structure in our universe will be explored: planet, star, galaxy, and large-scale structure formation.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3D03 ORIGIN OF LIFE
Topics in the emerging field 'Astrobiology' will be explored: planetary system formation, conditions in extra-solar systems, criteria for defining and sustaining life, and 'extremophile' systems on Earth and, possibly, elsewhere in the solar system.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3E03 ORIGINS OF SPECIES
The concepts that are required to understand how species originate: natural selection, species definitions, temporal and spatial origins for organisms on Earth, adaptations.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3F03 ORIGIN OF HUMANS
Topics in genetics, anthropology, and archaeology will be explored to discuss when, where, and how humans arose.
Three hours; one term
Prerequisite: Registration in Level III of the Origins Research Specialization or permission of the instructor
Enrolment is limited.

ORIGINS 3G03 ORIGINS SEMINAR II
Practical experience with the concepts, literature, and research skills relevant to origins research. Faculty from the Origins Institute will describe their research to students for discussion.
Seminar (one hour); two terms
Prerequisite: ORIGINS 2G03 and registration in the Origins Research Specialization
Enrolment is limited.

ORIGINS 4A09 ORIGINS RESEARCH THESIS
An individual thesis involving a research project carried out by a student under supervision by a faculty member in the Origins Institute (with a committee including at least one member from the student's home department).
Two terms
Prerequisite: Registration in Level IV of the Origins Research Specialization
Enrolment is limited.

PEACE STUDIES
WEB ADDRESS: http://www.humanities.mcmaster.ca/~peace
Togo Salmon Hall, Room 726
Ext. 24265

Acting Director
Stephen M. Streeter
PEACE STUDIES

Committee of Instruction

Chair
Stephen Streeter(History)
Virginia Aksan (History)
James Alsep (History)
Martin Horn (History)
Jeanna Santa-Barbara (Health Sciences)

Courses
If no prerequisite is listed, the course is open.

PEACE ST 1A03  INTRODUCTION TO PEACE STUDIES
An introduction to the discipline of peace research, focusing on the concepts of peace, war, security, conflict, violence and nonviolence, and examining the roles of values and ideologies in the attainment of peace.
Three hours (two lectures, one tutorial); one term

PEACE ST 1B03  INTRODUCTION TO THE STUDY OF WAR
A Peace Studies approach to the study of war, including the effects of war on people, societies and the earth. War prevention processes will be examined at the levels of interstate and state politics, social movements, and individual peace.
Three hours (two lectures, one tutorial); one term

PEACE ST 2A03  CONFLICT TRANSFORMATION: THEORY AND PRACTICE
An examination of ways of preventing, resolving and transforming conflicts in everyday life, in our own culture and others, and in the arenas of family, business, the law, schools and large-scale political conflicts.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above or permission of the Director of Peace Studies.
Cross-list: CMST 2V03

PEACE ST 2A03  THE MODERN CARIBBEAN
An examination of the nineteenth- and twentieth-century Caribbean, focusing on the end of slavery; the arrival of indentured Asian immigrants; pan-Africanism; anti-colonial movements and revolution.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2AA3
This course is administered by the Department of History.

PEACE ST 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 lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2G03

PEACE ST 2I03  SOCIAL AND POLITICAL ISSUES
A philosophical examination of some contemporary issues in public policy, such as environmental problems, the question of a just distribution of society's goods and services, and problems of liberty and coercion.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: PHLOS 2G03
This course is administered by the Department of Philosophy.

PEACE ST 2S03  WAR IN THE WEST, 1768-1945
A survey of the development of warfare in the Western world from 1768 to 1945. Particular attention is paid to the French Revolutionary and Napoleonic Wars, and the two World Wars in the twentieth century.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2S03
This course is administered by the Department of History.

PEACE ST 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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies, Women's Studies or permission of the Departmental Counsellor for English and Cultural Studies.
Cross-list: COMP LIT 3R03, CSCT 3A03, ENGLISH 3A03, WOMEN ST 3H03
This course is administered by the Department of English and Cultural Studies.

PEACE ST 3B03  PEACE-BUILDING THROUGH HEALTH INITIATIVES
An examination of the multiple links between health and peace, concentrating on the strategic use of health initiatives to encourage peace in zones of potential or existing armed conflict.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

PEACE ST 3E06  POSTCOLONIAL CULTURES: THEORY AND PRACTICE
A study of contemporary texts including literature, film, art and other forms of popular culture that engage the implications of living in a postcolonial world. Close consideration will be given to issues of imperialism, globalization, race, gender, ethnicity, nation, language and representation.
Three hours; two terms
Prerequisite: Registration in the Combined Honours in Peace Studies Program or permission of the Departmental Counsellor for English and Cultural Studies.
Cross-list: COMP LIT 3R06, CSCT 3R06, ENGLISH 3R06
This course is administered by the Department of English and Cultural Studies.

PEACE ST 3F03  THE MODERN MIDDLE EAST
A survey of the political and social history of the Middle East from 1800 to the present, with an emphasis on contemporary issues, such as the Islamic impulse and the Arab-Israeli conflict.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3AA3
This course is administered by the Department of History.

PEACE ST 3G03  HISTORY OF MODERN GERMANY
This course examines the complexities of German social and political history since 1890, including World War One, the Third Reich, cold war division, questions of national identity, and the peaceful revolution of 1989.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3G03
This course is administered by the Department of History.

PEACE ST 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: Registration in Level II or above
Cross-list: HISTORY 3I03
This course is administered by the Department of History.

PEACE ST 3I3  HISTORY OF 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 hours (lecture and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3I3
This course is administered by the Department of History.

PEACE ST 3KK3  HISTORY OF 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: Registration in Level II or above
Cross-list: HISTORY 3KK3
Antirequisite: GSCH 4H93
This course is administered by the Department of History.

PEACE ST 3L03  THE HISTORY OF SOCIAL ACTIVISM, 1500-2000
A thematic study of community activism in Europe and North America. Students will be exposed to the religious, socio-economic and political contexts of social activism, and the historical theory and practice of community-based actions.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3L03
This course is administered by the Department of History.
This course focuses on how gender research.

Cross-list: PHILOS 4B03

Offered in alternate years.
This course is administered by the Department of Philosophy.

PEACE ST 3M03

PHILOSOPHIES OF WAR AND PEACE

A philosophical appraisal of the rationality and morality of the conduct of war and proposals for fostering peace among nations.

Three lectures; one term

Prerequisite: At least six units of Philosophy, and registration in Level III or IV of any program; or registration in Level III or IV of the Combined Honours in Peace Studies Program

Cross-list: PHILOS 3P03

Offered in alternate years.
This course is administered by the Department of Philosophy.

PEACE ST 3P03

SLAVERY IN THE ATLANTIC WORLD

An examination of slavery in the Americas, from the fifteenth to the nineteenth centuries. Topics to be examined include plantations and labour regimes, gender, slave health, slave resistance, Afro-Creole cultures, emancipation.

Three hours (lecture and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 3D03

This course is administered by the Department of History.

PEACE ST 3W03

CONTEMPORARY NATIVE LITERATURE IN CANADA

A 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: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCST 3W03, ENGLISH 3W03, DIGIT ST 3D03

This course is administered by Indigenous Studies.

PEACE ST 3X03

CONTEMPORARY NATIVE LITERATURE IN THE UNITED STATES

A study of contemporary works by Native writers in the United States within the context of American society and Post-Modern and Post-Colonial Literary Theory.

Three hours (lectures and seminars); one term

Prerequisite: Six units of Level II Indigenous Studies or six units of Level II English or permission of the instructor

Cross-list: CSCST 3X03, ENGLISH 3X03, DIGIT ST 3E03

This course is administered by Indigenous Studies.

PEACE ST 3Y03

SPECIAL TOPICS IN PEACE STUDIES

Guided reading in and/or independent study of selected topics of relevance to Peace Studies.

Prerequisite: Registration in Level III or IV of the Combined Honours in Peace Studies Program and permission of the Director of Peace Studies

PEACE ST 3Z03

WOMEN AND MEN IN WAR AND PEACE

This course focuses on how gender and other differences shape our experiences of war and struggles for a more peaceful world.

Three hours: one term

Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or Peace Studies Program or permission of the Director of either program

Cross-list: WOMEN ST 3Z03

PEACE ST 4A03

RESEARCH SEMINAR

An interdisciplinary examination of selected topics of current relevance to peace research.

Seminar (two hours); one term.

Prerequisite: Registration in Level III or IV of the Combined Honours in Peace Studies Program

Enrolment is limited.

PEACE ST 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: Registration in Level III or IV of the Combined Honours in Peace Studies Program with a Cumulative Average of at least B.5, and permission of the Director of Peace Studies

PEACE ST 4C03

THEORY OF VALUE

A study of human practices of evaluation in morality, politics, art, religion, and economics.

Seminar (two hours); one term

Prerequisite: PHILOS 3G03 and registration in Level III or above

Cross-list: PHILOS 4B03

Offered in alternate years.
This course is administered by the Department of Philosophy.

PEACE ST 4D03

LITERATURE AS PEACE RESEARCH

An exploration of new ways of thinking about war, peace, human security and conflict transformation, with emphasis on a close study of selected literary texts.

Two hours; one term

Prerequisite: Registration in Level III or IV of a program in Comparative Literature or Peace Studies, or permission of the Director of either program

Cross-list: COMP LIT 4D03

This course is administered by Comparative Literature.

Note:
The following courses may be used to meet some of the requirements of Peace Studies Course Lists 1 or 2, provided the prerequisite requirements of the home department are fulfilled:

COURSE LIST 1

PHILOS 4E03

Human Diversity and Human Nature

COURSE LIST 2

POL SCI 4D06

Human Rights and International Politics

POL SCI 4M06

Topics in International Politics

PHARMACOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/biopharm

These courses are available only to those students registered in Honours Biology and Pharmacology.

Note:

PHARMAC 3A06, 3B06, 4A03, 4A04, 4C03, 4D03 and 4E03 will be based on self-directed problem based learning.

Courses

PHARMAC 3A06

INTRODUCTION TO PHARMACOLOGY

Receptor theory and classification, receptor response coupling, mechanisms of drug absorption, distribution, metabolism and excretion and their role in drug selectivity.

One tutorial (one hour), one tutorial (two hours); two terms

Prerequisite: Registration in the Honours Biology and Pharmacology program

PHARMAC 3B06

METHODS IN PHARMACOLOGY

Methods to study effects of drugs in vitro (such as organ baths, ligand binding, and electrophysiological actions) and analysis of pharmacological data.

One lab (six hours); two terms

Prerequisite: Credit or registration in PHARMAC 3A06

PHARMAC 4A03

RECEPTOR-DRUG INTERACTIONS

Introduction to the effects of drugs on communication by chemical signals in biological systems.

One tutorial (one hour), one tutorial (two hours); one term

Prerequisite: PHARMAC 3A06

PHARMAC 4A04

ADVANCED TOPICS IN PHARMACOLOGY

The continuation of Pharmacology 4A03.

One tutorial (three hours); one term

Prerequisite: PHARMAC 4A03

PHARMAC 4C03

PRINCIPLES OF TOXICOLOGY

General principles of toxicology, adverse effects of selected agents on man and other organisms.

One tutorial (one hour), one tutorial (two hours); one term

Prerequisite: PHARMAC 3A06

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 (one hour), one tutorial (two hours); one term

Prerequisite: PHARMAC 3A06, 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 (one hour), one tutorial (two hours); one term

Prerequisite: PHARMAC 3A06

PHARMAC 4F09

SENIOR THESIS

A thesis based upon a research project carried out under the direction of a member of the Faculty.

Prerequisite: PHARMAC 3A06

Antirequisite: BIOLOGY 4C09, 4D05, 4FF3, 4GG9, 4I03, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4R09
Faculty as of January 15, 2005

Chair
Richard T.W. Arthur

Professors
Barry Allen/B.A., (Lethbridge), Ph.D. (Princeton)
Nicholas Griffin/B.A. (Leicester), Ph.D. (Australian National)
David L. Hitchcock/B.A. (McMaster), Ph.D. (Claremont)
Wilfrid Wlehchow/B.A. M.A. (Western Ontario), D.Phil. (Oxford)

Adjunct Professor
Kenneth M. Blackwell/(Russell Archivist, Mills Library), B.A. (Victoria), M.L.S. (Western Ontario), M.A. (McMaster), Ph.D. (Guelph)

Associate Professors
Elisabeth Gedge/B.A., M.A. (Alberta), Ph.D. (Calgary), M.T. (Newman Theological College)
Jill LeBlanc/B.A. (McMaster), M.A., Ph.D. (Toronto)
Spiro Panagiotou/B.Sc., M.A. (Guelph), Ph.D. (St. Andrews)
Brigite Sassen/B.A. (Toronto), M.A., Ph.D. (Pennsylvania State)
Mark Vorobe/B.A. (Carleton), M.A., Ph.D. (Toronto)

Assistant Professors
Diane Enns/B.A. (Ottawa), M.A. (Guelph), Ph.D. (SUNY-Binghamton)
Brian Garrett/B.A., M.A. (Auckland), Ph.D. (McGill)
Violeta Igneski/B.A., M.A. (Western Ontario), Ph.D. (Toronto)

Associate Members
Caroline Bayard/French) L. és L., M. és L. (Toulouse), M.A., Ph.D. (Toronto)
Howard Jones/(Classics) B.A. (London), M.A. Ph.D. (Indiana)
Geoffrey Rockwell/(School of the Arts), B.A. (Haverford), M.A. Ph.D. (Toronto)

Department Notes:
1. The Department of Philosophy offers courses in four major areas of Philosophy, namely History of Philosophy, Logic, Ethics and Theory of Value, and Theory of Knowledge and Metaphysics. Students are advised to include courses from each of these areas in their programs.
2. Students who do not meet the specified prerequisites for a course may, in exceptional circumstances, obtain permission of the instructor to take the course.
3. An Undergraduate Philosophy Handbook is available in the Departmental Office.
4. Students interested in registering in PHILS 5003, 4W03 or 4D06 are strongly encouraged to obtain permission from the Departmental Undergraduate Counsellor by the end of May of the preceding year. Access to these courses cannot be guaranteed beyond that date.

Courses

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
Antirequisite: PHILS 1B06, 1D06

PHILOS 1B03  PHILOSOPHY, LAW AND SOCIETY
An introduction to social, political, legal and moral philosophy. Topics to be discussed may include, ecology, health-care ethics, civil rights, and alternative views of human nature, the state, social conflict, inequality and justice.
Two lectures, one tutorial; one term
Antirequisite: PHILS 1B06, 1D06
Alternates with PHILS 1C03.

PHILOS 1C03  PHILOSOPHY IN LITERATURE
An introduction to philosophy through the study of literature. The course shows how works of literary art treat such philosophical issues as the nature of moral, the possibility of freedom, human nature, the self, and religious belief.
Two lectures, one tutorial; one term
Antirequisite: PHILS 1B06, 1D06
Alternates with PHILS 1B03.

PHILOS 1D03  PHILOSOPHY AND THE SCIENCES
An introduction to philosophical issues arising from modern science and technology. Topics to be discussed may include science versus pseudo-science, the nature of scientific explanation, the impact of science on society, and the contribution of society to the development of science.
Two lectures, one tutorial; one term
Antirequisite: PHILS 1B06, 1D06
Not open to students with credit or registration in PHILS 3D03.

PHILOS 1E03  PROBLEMS OF PHILOSOPHY
A critical investigation of philosophical arguments concerning such topics as God, politics, morality, human nature, knowledge, and art.
Two lectures, one tutorial; one term
Antirequisite: PHILS 1B06, 1D06

PHILOS 2A06  ANCIENT GREEK PHILOSOPHY
A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.
Three lectures; two terms
Prerequisite: One of three units of Philosophy, ARTS&SCI 1A06, registration in a program in Classics or Philosophy, or permission of the Department.
Cross-list: CLASSICS 2P06

PHILOS 2B03  INTRODUCTORY LOGIC
Sentential and quantification logics are introduced and applied to arguments in English.
Three lectures; one term
Prerequisite: Registration in Level II or above

PHILOS 2C06  DESCARTES TO HUME
A comprehensive survey of early modern philosophy, concentrating on the metaphysical and epistemological innovations of the period.
Three lectures; two terms
Prerequisite: Registration in Level II or above

PHILOS 2D03  MORAL ISSUES
An introduction to moral philosophy, through a consideration of issues in health care ethics. Topics such as abortion, human experimentation, euthanasia, and genetic screening will be investigated.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 2C03
Enrolment is limited to 475 students.

PHILOS 2F03  PHILOSOPHICAL PSYCHOLOGY
A 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?
Three lectures; one term
Prerequisite: Registration in Level II or above

PHILOS 2G03  SOCIAL AND POLITICAL ISSUES
A philosophical examination of some contemporary issues in public policy, such as environmental problems, the question of a just distribution of society's goods and services, and problems of liberty and coercion.
Two lectures; one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2G03

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: Registration in Level II or above
Cross-list: ART HIST 2H03, CMST 2003
Offered in alternate years.

PHILOS 2N03  BUSINESS ETHICS
An analysis of ethical issues arising in contemporary business life. Sample topics include: fair and unfair competition; responsibilities of business to employees, society, and the environment; honesty and integrity in business; the moral status of corporations.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: COMMERCE 2S03
PHILOS 3A06  FROM KANT TO HEGEL
The philosophies of Kant and Hegel viewed in relation to other and
to other philosophies of the period, such as those of Rousseau or Schelling.
Three lectures; two terms
Prerequisite: PHILOS 2D06

PHILOS 3B03  PHILOSOPHIES OF EXISTENCE
An examination of the 19th-century forerunners of contemporary existen­
tial philosophy, concentrating principally on the thought of Kierkegaard
and Nietzsche.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III
or above
Offered in alternate years.

PHILOS 3C03  ADVANCED BIOETHICS
An advanced study of the application of ethical theory to selected prob­lems in health care, such as our reproductive practices, care of the
dying, the therapeutic relationship.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Offered in alternate years.

PHILOS 3D03  PHILOSOPHY OF SCIENCE
A survey of philosophical problems concerning science. Topics to be
considered include explanation, causation, scientific laws, and
instrumentalism vs. realism.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Offered in alternate years.

PHILOS 3E03  PHILOSOPHY OF LANGUAGE
A survey of philosophical problems concerning language. Topics to be
considered include reference, synonymy, truth, and linguistic knowledge.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Cross-list: CMST 3Y03
Offered in alternate years.

PHILOS 3F03  INTERMEDIATE LOGIC
Selected topics in the study of formal languages and their interpretations,
metalogic, and the philosophy of logic.
Three lectures; one term
Prerequisite: PHILOS 2B03
Offered in alternate years.

PHILOS 3G03  ETHICS
An introduction to the major types of ethical theory and the problem of
their justification.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above

PHILOS 3H03  PHILOSOPHY OF RELIGION
An analysis of the concept of religion in light of the philosophical claims
of religious experience, practice, and belief.
Three lectures; one term
Prerequisite: Six units of Philosophy and registration in Level III or above
Offered in alternate years.

PHILOS 3I03  PHILOSOPHY AND FEMINISM
A study of philosophical issues in feminist thought.
Three lectures; one term
Prerequisite: Six units of Philosophy or WOMEN ST 1A06; and registration
in Level III or above
Cross-list: WOMEN ST 3I03
Offered in alternate years.

PHILOS 3J03  MODERN JEWISH THOUGHT
Introduction to different conceptions of the connection between Jewish
traditions and philosophical questioning. Authors may include: Maimonides,
Spinoza, Mendelssohn, Cohen, Buber, Rosenzweig, Strauss, Levinas,
Sorowitch.
Three hours (lectures and discussion); one term
Cross-list: RELIG ST 3J03
This course is administered by the Department of Religious Studies.

PHILOS 3K03  ENVIRONMENTAL PHILOSOPHY
A consideration of the characterization of nature and/or our evaluative
responses to it.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Offered in alternate years.

PHILOS 3L03  ARGUMENTATION THEORY
The theory of argumentation is central to any sort of social or dialectical
approach to the theory of knowledge. The theoretical issues discussed
in this course would include the concept of an argument, the analysis of
arguments and the evaluation of arguments.
Three hours (lectures and discussion); one term
Prerequisite: CMST 2W03 or PHILOS 2B03; and registration in Level II or
above
Cross-list: CMST 3L03

PHILOS 3M03  POLITICAL PHILOSOPHY
A study of major political concepts and issues, such as social contrac­
t, ideology, justice, freedom vs. equality, reform vs. revolution,
state vs. individual.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Offered in alternate years.

PHILOS 3N03  THEORY OF KNOWLEDGE
A study of scepticism and certainty, knowledge and belief, perception,
memory, and truth.
Three lectures; one term
Prerequisite: PHILOS 2D06

PHILOS 3O03  PHILOSOPHIES OF WAR AND PEACE
A philosophical appraisal of the rationality and morality of the conduct of
war and proposals for fostering peace among nations.
Three lectures; one term
Prerequisite: At least 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 Program
Cross-list: PEACE ST 3O03
Offered in alternate years.

PHILOS 3P03  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.
Three lectures; one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above

PHILOS 3Q03  READING COURSE
A tutorial course in which individual students meet regularly with an
instructor on a list of readings outside normally available course offer­
ings. It is the student’s responsibility to secure the agreement of an
instructor and to complete a proposal form (available in the Philosophy
Department office), before attempting to register in the course.
Prerequisite: Registration in Level III or IV of any program in Philosophy, with
a Cumulative Average of at least 8.5 and permission of the Department

PHILOS 3R03  EARLY MODERN PHILOSOPHY
A critical study of one or more 17th or 18th-Century European or British
philosophers, such as Descartes, Leibniz, Hume.
Seminar (Two hours); one term
Prerequisite: PHILOS 2C06 and registration in Level III or above
Offered in alternate years.

PHILOS 3S03  THEORY OF VALUE
A study of human practices of evaluation in morality, politics, art, religion,
and economics.
Seminar (Two hours); one term
Prerequisite: PHILOS 3G03 and registration in Level III or above
Cross-list: PEACE ST 4G03
Offered in alternate years.

PHILOS 3T03  20TH-CENTURY ANALYTIC PHILOSOPHY
A study of some main currents of 20th-Century philosophy, including the
work of such figures as Russell, Wittgenstein, Quine, and Davidson.
Seminar (two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or
above
Offered in alternate years.
PHILOS 4E03 EXISTENTIALISM AND PHENOMENOLOGY
A study of selected texts of major existential and phenomenological philosophers in the 20th-century, such as Camus, Heidegger, Jaspers, Marcel.
Seminar (two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or above

PHILOS 4F03 recent European Philosophy
Contemporary trends in European Philosophy as represented by such writers as Derrida, Foucault and Habermas.
Seminar (two hours); one term
Prerequisite: At least six units of Philosophy and registration in Level III or above
Offered in alternate years.

PHILOS 4G03 METAPHYSICS
An in-depth study of metaphysical concepts, such as existence, individuality, identity, essence, quality, process, mind, time and causality. Some contemporary criticisms of metaphysics will be discussed.
Seminar (two hours); one term
Prerequisite: PHILOS 2A06 and registration in Level III or above
Offered in alternate years.

PHILOS 4H03 MEDIEVAL PHILOSOPHY
A study of one or more central medieval philosophers, such as Augustine, Aquinas, or William of Ockham.
Seminar (two hours); one term
Prerequisite: PHILOS 2A06 or 2C06
Offered in alternate years.

PHILOS 4I03 ANCIENT PHILOSOPHY
A critical study of one or more ancient Greek philosophers such as Parmenides, Plato, Aristotle.
Seminar (two hours); one term
Prerequisite: PHILOS 2A06 and registration in Level III or above
Antirequisite: PHILOS 4C03, 4J03
Cross-list: CLASSICS 4K03
Offered in alternate years.

PHILOS 4J03 INDEPENDENT STUDY
In consultation with a member of the Department of Philosophy, students will prepare an essay on an approved topic, on the basis of a list of readings usually available in the course offerings. It is the student's responsibility to secure the agreement of an instructor and to complete a proposal form (available in the Philosophy Department office), before attempting to register in the course.
Prerequisite: Registration in Level IV of any Honours program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department
Antirequisite: PHILOS 4Z06

PHILOS 4K03 THESIS
Reading and research under the supervision of two members of the Department. A major paper is required as well as a formal examination. It is the student's responsibility to secure the agreement of an instructor and in consultation with the Department, to complete a proposal form (available from the Philosophy Department office), before attempting to register in the course.
Prerequisite: Registration in Level IV of any Honours program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department
Antirequisite: PHILOS 4W03

PHYSICS AND ASTRONOMY

WEB ADDRESS: http://www.physics.mcmaster.ca/
A.N. Bourns Science Building, Room 241
Ext. 24559

Faculty as of January 15, 2005

Chair
A.J. Berlinsky

Associate Chair
G.M. Luke

Distinguished University Professor
Jules P. Carbotte/B.Sc. (Manitoba), M.Sc., Ph.D. (McGill), D.Sc. (Waterloo), F.R.S.C.

Professor
A. John Berlinsky/B.Sc. (Fordham), M.Sc., Ph.D. (Pennsylvania)
Hugh M. Couchman/B.A., M.A., Ph.D. (Cambridge)
Bruce D. Gaulin/B.Sc. (McGill), Ph.D. (McMaster), Brockhouse Chair in the Physics of Materials
William E. Hamns/B.Sc. (Alberta), M.Sc., Ph.D. (Toronto)
Harold K. Haugen/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)
Paul G. Higgins/B.Sc., Ph.D. (Cambridge), Senior Canada Research Chair
Catherine Kallin/B.Sc. (British Columbia), A.M., Ph.D. (Harvard)
Ralph E. Pudritz/B.Sc. (British Columbia), M.Sc. (Toronto), Ph.D. (British Columbia)
A. -Chang Shi/B.Sc. (Fudan), M.Sc., Ph.D. (Illinois)
Peter G. Sutherland/B.Sc. (McGill), M.Sc., Ph.D. (Illinois)
David E. Venus/B.Sc. (Queen's), Ph.D. (Toronto)
Douglas L. Welch/B.Sc., Ph.D. (Toronto)
Christine D. Wilson/B.Sc. (Toronto), Ph.D. (California Institute of Technology)

Associate Professor
Takashi Imai/B.Sc., M.Sc., Ph.D. (Tokyo)
Graeme M. Luke/B.Sc. (Queen's), Ph.D. (British Columbia)
Karl Dairiki-Veress/B.Sc., M.Sc., Ph.D. (Guelph)
Eric Sorensen/B.Sc., M.Sc. (Aarhus), Ph.D. (California-Santa Cruz)

Assistant Professor
Alan A. Chen/B.Sc. (Toronto), Ph.D. (Yale)
Cécile Fradin/B.Sc., M.Sc. (Ecole Normale Supérieure), Ph.D. (Paris VI), Canada Research Chair
Karen Hughes/B.Sc. (Lakehead), M.Sc., Ph.D. (McMaster)
Brian E. King/B.Sc. (Simon Fraser), M.Sc., Ph.D. (Colorado)
Neil McKay/B.Sc. (Queen's), M.Sc., Ph.D. (McMaster)
Reza Neiat/B.Sc. (Tehran), M.Sc., Ph.D. (Missouri-Rolla)
Allison Sills/B.Sc. (Western Ontario), Ph.D. (Yale)
James Wadley/B.Sc. (Monash), M.Sc., Ph.D. (Toronto)

Associate Member
John S. Preston/(Engineering Physics) B.Sc., M.Sc., Ph.D. (Toronto)

Lecturers
Ken Sills/B.Sc. (Western Ontario), M.Sc. (St. Mary's), Ph.D. (Ohio)

Instructional Assistant
Alex Vorobyyov/M.S., Ph.D. (Kharkov

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 four.
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 Geography and Earth Sciences.

ASTRONOMY...

Courses if no prerequisite is listed, the course is open.

ASTRON 1F03 INTRODUCTION TO ASTRONOMY AND ASTROPHYSICS
Topics include orbital motion, electromagnetic radiation, telescopes, the solar system, stars and stellar evolution, the Milky Way Galaxy, galaxies and quasars, the evolution of the universe.
Three lectures; one term
Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U (or OAC Calculus) and Grade 12 Physics U (or OAC Physics); or PHYSICS 1P03
Antirequisite: SCIENCE 1D03, 2D03
Intended for Science students. Non-science students interested in these topics are directed to SCIENCE 1D03.

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 and the origin and evolution of the solar system and planets around other stars.
Three lectures; one term
Prerequisite: One of PHYSICS 1B03, 1D03 or ARTS & SCI 2D06; and one of MATH 1A03, 1N03 or ARTS & SCI 1D06
PHYSICS 1B03 MECHANICS AND WAVES
Mechanics of a point particle, emphasizing work and energy, fluids. Simple Harmonic Motion and Waves, including properties of sound and light waves, interference and diffraction.
Three lectures, one lab (two hours) every week; one term
Prerequisite: Either PHYSICS 1A03 or 1A04 at least 60% in Grade 12 Physics U (or OAC Physics); and credit or registration in SCIENCE 1A00 and either MATH 1A03 or 1A04

PHYSICS 1B03 INTRODUCTION TO MODERN PHYSICS A
A course for students intending to proceed in the physical sciences. Linear and angular momentum. Atomic and quantum physics. Nuclear and Particle Physics. Cosmology.
Three lectures, one lab (three hours) every other week; one term
Prerequisite: PHYSICS 1B03
Antirequisite: PHYSICS 1B03

PHYSICS 1A03 INTRODUCTION TO MODERN PHYSICS B
Three lectures, one lab (three hours) every other week; one term
Prerequisite: PHYSICS 1B03
Antirequisite: PHYSICS 1B03

PHYSICS 1B03 INTRODUCTORY MECHANICS
A course for engineering students. Statics, kinematics, Newtonian dynamics, energy.
Three lectures, one lab (three hours) every other week; one term
Prerequisite: Registration in Engineering I

PHYSICS 1E03 WAVES, ELECTRICITY AND MAGNETIC FIELDS
A 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: Registration in Engineering I

PHYSICS 1P03 INTRODUCTORY PHYSICS
Foundations of physics for students without Grade 12 Physics U (or OAC Physics). Topics include vectors, graphical analysis, kinematics and Newton's Laws.
Three lectures; one term
Prerequisite: Any Grade 12 U or M (or OAC) Mathematics Credit
Not open to students with 60% or higher in Grade 12 Physics U (or OAC Physics).

PHYSICS 2A03 INTRODUCTORY ELECTRICITY AND MAGNETISM
Electrostatics, D.C. circuits, the magnetic field; Faraday's law of induction; Maxwell's equations.
Three lectures; one term
Prerequisite: PHYSICS 1B03; and ARTS & SCI 1D06 or MATH 1A03
Antirequisite: PHYSICS 2B06

PHYSICS 2B06 ELECTRICITY AND MAGNETISM
Electrostatics, D.C. and A.C. circuits, the magnetic field; Faraday's law of induction; Maxwell's equations.
Three lectures, first term; two lectures, second term; one lab (three hours) every other week; two terms
Prerequisite: PHYSICS 1B03
Corequisite: MATH 2A03, 2C03
Antirequisite: PHYSICS 2A03

PHYSICS 2C03 MODERN PHYSICS
Special Relativity. Introductory quantum physics.
Three lectures; first term
Prerequisite: PHYSICS 1B03
Antirequisite: PHYSICS 2K03, 2X03

PHYSICS 2D03 MECHANICS
Dynamics of a particle, central field problem, many-particle systems, the mechanics of rigid bodies, Lagrange's equations.
Three lectures; first term
Prerequisite: Registration in a program in the Faculty of Engineering; or permission of the instructor
Antirequisite: PHYSICS 2E03, 2K03

PHYSICS 2E03 MECHANICS
Dynamics of a particle, central field problem, many-particle systems, the mechanics of rigid bodies, Lagrange's equations.
Three lectures; second term
Prerequisite: Registration in a program in Physics or Medical and Health Physics; or PHYSICS 1B03 and credit or registration in MATH 2C03
Antirequisite: PHYSICS 2D03, 2K03

PHYSICS 2F03 SCIENTIFIC COMPUTING
A comprehensive introduction to modern, scientific structured program­ming using FORTRAN 95. The course will discuss modules, operator overloading, scripting, program management, etc., and features a series of programming problems under Linux.
Three lectures; one term
Prerequisite: MATH 1A03

PHYSICS 2G03 THERMODYNAMICS
An introduction to thermodynamics and its statistical basis at the microscopic level, with applications.
Three lectures, one lab (three hours), tutorial every other week; second term
Prerequisite: MATH 2A03, PHYSICS 1B03; and credit or registration in MATH 2C03 and PHYSICS 1B03 (or 1B04)
Antirequisite: CHEM 2PA3, 2R03, ENGINEER 2H03, MATLAS 2B03
Cross-listed: ENG PHYS 2H04
This course is administered by the Department of Engineering Physics.

PHYSICS 3A03 RELATIVITY
An introduction to general relativity.
Three lectures; one term
Prerequisite: PHYSICS 2C03 or 2K03; and registration in any Honours program in Science or any program in the Faculty of Engineering
Alternates with PHYSICS 3C03.

PHYSICS 3B06 ELECTRONICS
Circuit theorems, principles of semiconductor devices, and bipolar junc­tion transistor (DC biasing and AC model), amplifier circuits (single and multi-stage), feedback amplifiers and circuits, difference amplifier, feedback, oscillators, operational amplifiers and applications.
Two lectures, both terms: one lab (two hours); two terms
Prerequisite: ENG PHYS 2A03, 2E04; or PHYSICS 2B06
Antirequisite: PHYSICS 3B03, 3BB3

PHYSICS 3B06 ELECTRONICS I
Circuit theorems, principles of semiconductors and devices, bipolar junc­tion transistor (DC biasing and AC model), amplifier circuits (single and multi-stage).
Two lectures, one lab (two hours); first term
Prerequisite: ENG PHYS 2A03, 2E04; or PHYSICS 2B06
Antirequisite: PHYSICS 3B06

PHYSICS 3BB3 ELECTRONICS II
Field effect transistors and circuits, difference amplifier, feedback, oscill­ators, operational amplifier and applications.
Two lectures, one lab (two hours); second term
Prerequisite: PHYSICS 3B03
Antirequisite: PHYSICS 3B06

ASTRON 3X03 GALAXIES AND COSMOLOGY
Basic stellar evolution, 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 and occasional lab periods; one term
Prerequisite: One of PHYSICS 2D03, 2E03 or 2K03; and one of ENG PHYS 2A03, PHYSICS 2A03 or 2B06; and either one of CHEM 2R03, ENG PHYS 2H04 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3
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: One of PHYSICS 2D03, 2E03 or 2K03; and one of ENG PHYS 2A03, PHYSICS 2A03 or 2B06; and either one of CHEM 2R03, ENG PHYS 2H04 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3. COMP SCI 1SA3 is strongly recommended.
Alternates with ASTRON 3X03.
PHYSICS 3C03: ANALYTICAL MECHANICS
Stability theory; Lagrange's equations, conservative Hamiltonian systems; transformation theory and action angle variables; perturbation theory, resonances; non-integrable systems and chaos.
Three lectures; one term
Prerequisite: PHYSICS 2B06; and credit or registration in one of PHYSICS 2C03, 3M03, 3C03
Antirequisite: PHYSICS 3H04, 3HC1

PHYSICS 3H03: INTERMEDIATE LABORATORY
Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics.
One lecture, one term; one lab (three hours), two terms
Prerequisite: PHYSICS 2B06; and credit or registration in one of PHYSICS 2C03, 3M03, 3C03
Antirequisite: PHYSICS 3H04, 3HC1

PHYSICS 3HC1: INTERMEDIATE LABORATORY (I)
Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics.
One lecture, one lab (three hours), first term
Prerequisite: PHYSICS 2B06; and credit or registration in one of PHYSICS 2C03, 3M03, 3C03; and registration in Level III of Honours Physics Co-op or Honours Medical and Health Physics Co-op
Antirequisite: PHYSICS 3H04, 3H05

PHYSICS 3HD2: INTERMEDIATE LABORATORY (II)
The continuation of PHYSICS 3HC1.
One lab (three hours); second term
Prerequisite: PHYSICS 3HC1

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: MATH 2A03, 2C03, PHYSICS 2H04
Antirequisite: CHEM 4Y03

PHYSICS 3M03: QUANTUM MECHANICS AND ITS APPLICATIONS
Phenomenological basis for quantum physics, topics from atomic and photon physics, wave phenomena; Schrödinger equation for one dimensional systems, barriers, harmonic oscillator.
Three lectures; one term
Prerequisite: One of MATH 3C03 or 3I03, and either ENGINEER 2M03 or PHYSICS 2B06, or both ENG PHYS 2A03 and 2E04; or registration in Honours Mathematics and Physics. MATH 3C03 or 3I03 may be taken concurrently.
Antirequisite: PHYSICS 2C03

PHYSICS 3MM3: QUANTUM MECHANICS I
Schrödinger equation for 3D systems with applications to atomic and modern physics.
Three lectures; one term
Prerequisite: MATH 3C03; and PHYSICS 2C03 or 3M03

PHYSICS 3N03: PHYSICAL OPTICS
Interference; Fraunhofer and Fresnel diffraction; Maxwell's equations and the electromagnetic character of light; polarization and double refraction; interference of polarized light; selected topics in modern optics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2Q04; and MATH 2C03 or 2P04; and either PHYSICS 2B05 or both ENG PHYS 2A03 and 2E04

PHYSICS 3S03: SOFT CONDENSED MATTER PHYSICS
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; first term
Prerequisite: CHEM 2R03 or PHYSICS 2H04

PHYSICS 4A03: INQUIRY IN PHYSICS
Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; two terms
Prerequisite: Registration in a program in which PHYSICS 4A03 is required or is a specified option
Antirequisite: MED PHYS 4A03, 4AA1, 4AB2, PHYSICS 4AA1

PHYSICS 4A01: INQUIRY IN PHYSICS (I)
Independent study of the scientific literature, including the preparation of seminars and reports on assigned topics.
Two lectures or seminars; first term
Prerequisite: Registration in Level IV of Honours Physics Co-op
Antirequisite: MED PHYS 4A03, PHYSICS 4A03

PHYSICS 4A02: INQUIRY IN PHYSICS (II)
The continuation of PHYSICS 4A01.
Two lectures or seminars; second term
Prerequisite: PHYSICS 4A01

PHYSICS 4B03: ELECTROMAGNETIC THEORY
Potential theory, electrostatics and magnetostatics in matter, electrodynamics, electromagnetic waves and wave guides.
Two lectures; one term
Prerequisite: MATH 3D03 and either PHYSICS 2B06 or both ENG PHYS 2A03 and 2E04
Antirequisite: COMP ENG 3D4J, 3H3B, PHYSICS 4DA3, 4DB3

PHYSICS 4D03: DIGITAL LOGIC AND COMPUTER SYSTEMS I
The design and use of digital logic systems and their application to data acquisition and control techniques. The project-oriented laboratory involves both hardware and software.
Two lectures, one lab (three hours); two terms
Prerequisite: PHYSICS 2B06; or ENG PHYS 2A03 and 2E04
Antirequisite: COMP ENG 3D4J, 3H3B, PHYSICS 4DA3, 4DB3

PHYSICS 4D04: DIGITAL LOGIC AND COMPUTER SYSTEMS II
The continuation of PHYSICS 4D03.
Two lectures, one lab (three hours); second term
Prerequisite: PHYSICS 4DA3
Antirequisite: PHYSICS 4D06

PHYSICS 4E03: NUCLEAR PHYSICS
Nuclear masses and stability; radioactivity and nuclear reactions; elementary nuclear models.
Three lectures; one term
Prerequisite: PHYSICS 3M03 or a grade of at least B+ in PHYSICS 3Q03

PHYSICS 4F03: QUANTUM MECHANICS II
A sequel to PHYSICS 3MM3, including general structure of quantum mechanics, matrix mechanics, scattering, perturbation theory and the variational method.
Three lectures; one term
Prerequisite: MATH 3D03, PHYSICS 3M03; or registration in Honours Mathematics and Physics

PHYSICS 4G03: COMPUTATIONAL PHYSICS
A course using computers to solve selected problems in physics. The emphasis is in applying computational methods to physics, rather than numerical methods or computer programming.
One lab (three hours); one term
Prerequisite: PHYSICS 2G03, 3M03

PHYSICS 4J03: ADVANCED LABORATORY
Projects in atomic, nuclear and solid state physics. Four projects are required, one of which should be associated with a faculty research program.
One lab (three hours); two terms
Prerequisite: Registration in a program in which PHYSICS 4J03 is required or in a specified option; or permission of the Chair of the Department
Antirequisite: PHYSICS 4J04

PHYSICS 4K03: SOLID STATE PHYSICS
Crystal structure and bonding; lattice vibrations; electron energy bands; metals and semiconductors; magnetism.
Three lectures; one term
Prerequisite: PHYSICS 3M03; or a grade of at least B in Physics 3Q03 and 3C03; or registration in Level IV of an Honours Medical and Health Physics program

PHYSICS 4P06: SENIOR RESEARCH PROJECT
An experimental or theoretical project to be carried out under the supervision of a faculty member. A report will be required.
Two terms
Prerequisite: Registration in Level IV of any Physics program; and a CA of at least 9.0; and permission of the Chair of the Department.
POLITICAL SCIENCE

(SEE MODERN LANGUAGES AND LINGUISTICS, POLISH)

POLITICAL SCIENCE

WEB ADDRESS: http://www.sosc.mcmaster.ca/polisci/

Kenneth Taylor Hall, Room 527
Ext. 24741

Faculty as of January 15, 2005

Chair
Tory Porter

Distinguished University Professor
William D. Coleman/B.A. (Carleton), A.M., Ph.D. (Chicago)/Canada Research Chair in Public Governance and Public Policy

Professors
Barbara A. Carroll/B.A. (Manitoba), M.A. (Carleton), Ph.D. (American)
Henry J. Jacek/B.S.S. (Fairfield), M.A., Ph.D. (Georgetown)
Tory Porter/B.A. (McGill), M.A., Ph.D. (Carleton)
Thomas J. Lewis/B.A. (Carleton), M.A., Ph.D. (SUNY-Buffalo)
Mark Sproule-Jones/B.Sc. (London), M.A., Ph.D. (Indiana)/V.K. Copp Chair in Urban Studies
Michael B. Stein/B.A. (McGill), M.A., Ph.D. (Princeton)
Richard W. Stubbs/B.Sc. (Wales), M.A. (Lancaster), Ph.D. (Alberta)
Charlotte A. B. Yates/Labour Studies B.A. (Winnipeg), M.A. (Queen’s), Ph.D. (Carleton)

Associate Professors
Karen Bird/B.A. (Wilfrid Laurier), Ph.D. (Minnesota)
Nicolás H. Galleguilla/B.A. (Chile), M.A., Ph.D. (Toronto)
Stefania Szlak Miller/M.A., (McMaster), Ph.D. (Toronto)
John W. Seaman/B.A. (Mount Allison), M.A. (Dalhousie), Ph.D. (Toronto)
Donald M. Wells/Labour Studies B.A. (Western Ontario), M.A. (British Columbia), Ph.D. (Toronto)

Assistant Professors
Marshall Beier/B.A., M.A., Ph.D. (York)
Catherine Frost/Communication Studies B.A. (Lakehead), M.A., Ph.D. (Toronto)
Alina Gidner/Health Studies B.Sc., M.Sc., Ph.D. (Toronto)
Peter Greafe/B.A. (McGill), M.A. (York), Ph.D. (Montreal)
Martin Hering, B.A., M.A., Ph.D. (Philippa-Universitat Marburg), Ph.D. (John Hopkins)

Associate Members
Julia Abelson/C.E.P.A, B.A., B.Sc.(McMaster), M.Sc., (Harvard), Ph.D. (Bath)
Robert C. A. Andersen/Sociology B.A., M.A. (Western), Ph.D. (McMaster)
James J. Ricel/Social Work B.A. (Sir George Williams), B.S.W., M.S.W. (Calgary), Ph.D. (Exeter)

Department Notes:
1. The Department of Political Science offers courses in Canadian Politics, Comparative Politics, Political Theory, International Politics and Research Methods.
2. Not every Political Science course listed in this Calendar is offered every year. Students should consult 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. POL SCI 2006 (previously 2F06) and 3N06 are required for students in Honours Political Science programs. These two courses are recommended for students in B.A. programs.
5. 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.

6. Level III courses identified as enrollment is limited have a limit of 50 students. Although priority is given to students registered in Level III or above of a Political Science program, many Level III courses have spaces for other students.

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. With the exception of POL SCI 4206, enrolment in all Level IV courses is limited. In courses cross-listed in the Graduate Calendar (POL SCI 4BB6, 4E06, 4C06), the limit is 14 undergraduate students; in all others, the limit is 18. Admission to Level IV limited enrolment courses is by pre-registration preferential ballot.

Permission from the Department of Political Science is required before students can register in any Level IV Political Science course. POL SCI 4206 requires written permission from the faculty member supervising the Honours Essay. Permission to take all other Level IV courses will be granted based on a preferential ballot which all full- and part-time students are required to fill out and submit to the Department of Political Science (Kenneth Taylor Hall, Room 527) no later than May 7, 2005. Priority for all Level IV courses will be given to students registered in Level IV of any Honours Political Science program. Ballots may be picked up from the Department of Political Science in mid-April, or will be available on the Department's website.

Courses

POL SCI 1G06 POLITICAL GOVERNMENT
An introduction to the study of politics, emphasizing critical discussion of issues of social conflict, prospects for democracy, citizens' rights and responsibilities and Canada's future as a state and its role in the world. Antirequisite: POL SCI 1A06, 1B03, 1C03, 2G06

POL SCI 2A06 COMPARATIVE POLITICS
An introduction to comparative politics with emphasis on the different forms of government in a number of selected countries including Canada. Three hours (lectures and tutorials); two terms

POL SCI 2B06 U.S. POLITICS
A study of the development, nature, and functioning of the political system of the U.S.A. Three hours (lectures and tutorials); two terms

POL SCI 2C03 FOREIGN AND FEAR
This course examines the use of state force as a means of addressing and instilling fear in North America and the United Kingdom. Three hours (lectures and tutorials); one term

POL SCI 2D03 PARTICIPATION AND ELITIST POLITICS IN CANADA
An examination of the changing impact of citizen participation and of elitist politics on major Canadian political institutions and on the overall performance of the Canadian political system. Three hours (lectures and tutorials); one term Antirequisite: POL SCI 3D03, 3D06

POL SCI 2H03 GLOBALIZATION AND THE STATE
An overview of the impact that globalization has had on the powers of the state and an assessment of how states have tried to preserve their authority in the face of globalization. Three hours (lectures and tutorials); one term

POL SCI 2I03 GLOBAL POLITICS
A study of institutions and processes of the international political system. Three hours (lectures and tutorials); one term Antirequisite: POL SCI 2E06

POL SCI 2J03 GLOBAL POLITICAL ECONOMY
A study of institutions and processes of the international political economy. Three hours (lectures and tutorials); one term Antirequisite: POL SCI 2E06

POL SCI 2K03 INTRODUCTION TO CANADIAN PUBLIC POLICY
An introduction to the study of public policy in Canada with particular attention to how formal political institutions and patterns of social inequality shape policy-making processes and outcomes. Three hours (lectures and tutorials); one term

POL SCI 2N06 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 4 above.)

POL SCI 2XX3 POLITICS OF THE THIRD 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 Antirequisite: POL SCI 3XX3

POL SCI 2Z03 POLITICS AND THE MEDIA
Theories and practices of the reciprocal relationship between the communications media and the political system. Three hours (lectures and tutorials); one term Prerequisite: CMST 1A03 and 1B03; or POL SCI 1G06 Cross-list: CMST 2205

POL SCI 3A06 HISTORY OF POLITICAL IDEAS
A study of the political ideas of some eminent thinkers from classical times to the 19th century. Three hours; two terms Prerequisite: Registration in Level III or above Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3A03 INTERNATIONAL POLITICS IN THE POSTWAR PERIOD
A survey of international relations from 1945 focusing on the various approaches to international politics. Three hours; one term Prerequisite: Registration in Level III or above Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3B03 POLITICAL COMMUNICATION
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. Three hours; one term Prerequisite: Registration in a Communication Studies or Political Science program Cross-list: CMST 3D03

POL SCI 3C03 GOVERNMENT AND POLITICS OF INDIGENOUS PEOPLES
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. Three hours; one term Cross-list: INDIG ST 3J03 Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3C03 POLITICAL AUTHORITY: 20TH CENTURY POLITICAL THEORY
An examination of major themes in political theory in the twentieth century focusing on concerns about legitimate political authority and the nature of power and human relations in modern society. Three lectures; one term Prerequisite: Registration in Level III or above.

POL SCI 3D03 POLITICS OF RESTRUCTURING: THE STATE AND THE ECONOMY
An examination of the politics of economic restructuring in selected industrialized countries during the past decade; major issues include privatization, labour policies, and trade agreements. Three lectures; one term Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3E03 THE POLITICS OF INTERNATIONAL ECONOMIC ORGANIZATIONS
An analysis of the structure, function and politics of the principal multilateral organizations governing the postwar international economy. Three lectures; one term Prerequisite: Registration in Level III or above Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

Note: Other courses that are required to qualify for a number of Level IV courses are listed above.

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POLITICAL SCIENCE 283
POL SCI 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; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3FF3 CONTEMPORARY SOCIAL MOVEMENTS AND POPULAR COALITIONS
An examination of selected social movements and popular coalitions primarily in Canada and the United States. Movements may include the labour, environmental, peace, feminist, indigenous rights, and/or religious fundamentalist movements.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3G03 ETHNICITY AND MULTICULTURALISM: THEORY AND PRACTICE
An examination of ethnicity, multiculturalism and citizenship in theoretical and comparative perspectives, principally in industrially advanced societies.
Three lectures; one term
Prerequisite: Registration in Level III or above
Prerequisite (Beginning 2006-2007): Six units of Political Science and registration in Level III or above. (See Note 7 above.)
Not open to students with credit in POL SCI 3WW3 if the topic was Ethnicity and Multiculturalism: Theory and Practice.

POL SCI 3G33 FEDERALISM: THEORETICAL, CONSTITUTIONAL AND INSTITUTIONAL ISSUES
An analysis of the constitutional framework, evolution, and structure of the federal system in Canada and/or other Western countries.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3HH3 INTERGOVERNMENTAL POLICY ISSUES IN CANADA
A survey of the policy processes and substantive policy concerns in the operation of the federal system of Canada, including economic, social and ethno-cultural policy areas.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3I03 TOPICS IN AMERICAN POLITICS
The study of a central component of the U.S. political system.
Three hours; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3JJ3 PROVINCIAL POLITICS IN CANADA
A study of the development, nature and functioning of the political systems of the Canadian provinces.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3KK3 GENOCIDE: SOCIOLOGICAL AND POLITICAL PERSPECTIVES
An examination of genocide and other extreme crimes against humanity.
Three hours; one term
Cross-list: SOCIOL 3KK3
Prerequisite: Registration in Level III or above
Antirequisite: SOC SCI 2003
Enrolment is limited. Priority will be given to students registered in a Political Science or Sociology program. (See Notes 6 and 7 above.)

POL SCI 3M03 HEALTH POLICY IN A CHANGING WORLD
This course examines major models of health care and policy systems, and the key ideas and instruments that underlie health policy in selected countries such as Canada.
Three hours; one term
Prerequisite: Registration in Level III or above of a Political Science or Health Studies program
Cross-list: HEALTHST 3M03
Not open to students with credit in POL SCI 3YY3 if the topic was Health Policy in a Changing World.

POL SCI 3M33 THE INTERNET AND PUBLIC LIFE
This course examines how the Internet and other digital media may be reshaping political and personal relationships and altering the nature of the public sphere.
Three hours; one term
Prerequisite: One of CMST 2Z03 or POL SCI 2Z03; and registration in Level III or above
Cross-list: CMST 3M33

POL SCI 3N06 RESEARCH METHODS, STATISTICS AND POLITICAL ANALYSIS
An introduction to the study of concept and theory formation, and an overview of the scope, research methods and statistical techniques of political science.
Three hours; two terms
Prerequisite: Registration in Level III or above
Antirequisite: POL SCI 2P06
(See Notes 4 and 7 above.)

POL SCI 3N66 PUBLIC LAW
A study of the nature and function of public law, with special reference to constitutional law and judicial behaviour.
Three hours; two terms
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3O06 MODERN POLITICAL THOUGHT
A critical analysis of modern political ideas, from the early nineteenth century to the present time, with special emphasis on the theories of modern conservatism, liberalism, socialism, fascism and democracy.
Three hours; two terms
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3P03 THE POLITICAL ECONOMY OF REGIONAL INTEGRATION
An examination of regional integration in Europe, the Americas and Asia-Pacific and the implications for global politics and global economics.
Three hours; one term
Prerequisite: POL SCI 2E06 or POL SCI 2103 and 2J03

POL SCI 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; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3R03 POLITICAL PSYCHOLOGY
Psychological explanations for the political behaviour of elites and masses.
Three hours; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3S03 LOCAL GOVERNMENT AND POLITICS IN CANADA
A description of the laws and institutions of local government; examination of relationships with citizens and other levels of government; the dynamics of local politics.
Three hours; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3T03 PROBLEMS OF POST-COMMUNIST TRANSITION
An examination of the legacy of communism and system transformation in selected countries, including Poland and the successor states of Czechoslovakia and the former Yugoslavia.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)
Antirequisite: POL SCI 3M06, 4J06
POL SCI 3U03 POLITICS IN EUROPE
Politics, government and policies of the European Union and/or selected countries within Europe.
Three hours; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 8 and 7 above.)

POL SCI 3U03 READING COURSE
Topics to be arranged between an individual student and instructor.
One term
Prerequisite: 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.

POL SCI 3V03 WOMEN AND POLITICS
An introduction to a broad range of theoretical and empirical approaches to the study of women and politics, including feminist theory and the history and evolution of the organized women's movement.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3W03 ISSUES IN COMPARATIVE POLITICS
An examination of emerging theoretical and substantive issues in a comparative context.
Three hours; one term
Prerequisite: Registration in Level III or above
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3X03 CONTEMPORARY SECURITY ISSUES
This course critically examines developments in theory and practice of international security since the end of the cold war.
Three hours; one term
Prerequisite: Either POL SCI 2E06 or both POL SCI 2J03 and 2J03; and registration in Level III or above

POL SCI 3Y03 DEMOCRATIZATION AND HUMAN RIGHTS
A 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; one term
Prerequisite: Registration in Level III or above

POL SCI 3Y03 TOPICS IN PUBLIC POLICY
An examination of emerging theoretical and substantive issues in the field of public policy studies.
Three hours; one term
Prerequisite: Registration in Level III or above
POL SCI 3Y03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3Z03 PUBLIC ADMINISTRATION: STRUCTURES AND PROGRAM DELIVERY
The organizational arrangements for implementing public policies in Canada, including an assessment of their efficiency, effectiveness and accountability.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)
Antirequisite: POL SCI 3Z06

POL SCI 3Z03 PUBLIC ADMINISTRATION: THEORY AND DECISION-MAKING
Explanations of organizational design, bureau resources and other public management issues in Canada.
Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)
Antirequisite: POL SCI 3Z06

POL SCI 4A06 PROBLEMS IN AMERICAN POLITICS
An examination in depth of one of the important dimensions of the American political system.
Three hours (seminar); two terms
Prerequisite: One course in American or Comparative Politics and permission of the Department
Enrolment is limited.

POL SCI 4B06 THE TRIAL OF SOCRATES
Plato's understanding of the status of philosophy with respect to politics and rhetoric on the basis of the dialogues thematically connected to the trial and death of Socrates.
Three hours (seminar); two terms
Prerequisite: Registration in Level IV of any Honours program, and a course in Political Theory, and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4D06 HUMAN RIGHTS AND INTERNATIONAL POLITICS
An examination of the concept of human rights as reflected in international declarations and practices.
Three hours (seminar); two terms
Prerequisite: A course in International Relations and permission of the Department
Antirequisite: POL SCI 4D03, 4F06
Enrolment is limited. (See Note 8 above.)

POL SCI 4E06 ISSUES IN LIBERAL-DEMOCRATIC THEORY
An analysis of liberal and liberal-democratic approaches to a select issue, such as justice, religion, education, political authority or community.
Three hours (seminar); two terms
Prerequisite: Registration in Level IV of any Honours program; and a course in Political Theory; and permission of the Department
Antirequisite: Not open to students with credit in POL SCI 4U06 PROBLEMS OF POLITICAL PHILOSOPHY if taken in 1995-1996.
Enrolment is limited. (See Note 8 above.)

POL SCI 4G06 COMPARATIVE PUBLIC POLICY
A critical analysis of the interaction, content and impact of public policy within advanced industrial societies.
Three hours (seminar); two terms
Prerequisite: Six units of Comparative Politics and permission of the Department

POL SCI 4H03 ADVANCED STATISTICAL ANALYSIS
An outline of advanced levels of measurement and descriptive statistics, and a study of the logic of statistical inference and its applications.
Three hours (lectures and labs); one term
Prerequisite: POL SCI 3N06 and permission of the Department
Antirequisite: SOCIO 4Z03

POL SCI 4M06 TOPICS IN INTERNATIONAL POLITICS
An examination of selected topics in international politics and foreign policy.
Three hours (seminar); two terms
Prerequisite: A course in International Relations and permission of the Department
Antirequisite: Beginning (2006-2007): POL SCI 2J03 and 2J03; (or POL SCI 2E06); and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4M06 TOPICS IN INTERNATIONAL POLITICAL ECONOMY
An examination of selected topics in the international political economy.
Three hours (seminar); two terms
Prerequisite: A course in International Relations and permission of the Department
Antirequisite: Beginning (2006-2007): POL SCI 2J03 and 2J03; (or POL SCI 2E06); and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4O06 CANADIAN PUBLIC POLICY
An examination of the patterns of public policy in Canada and a critical evaluation of several types of explanation.
Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G06; and registration in Level IV of any honours program; and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4O06 POLITICS AND SOCIETY IN LATIN AMERICA
An examination of Latin America's longstanding hegemonic crisis and corresponding ideologies such as populism, corporatism, and authoritarianism.
Three hours (seminar); two terms
Prerequisite: POL SCI 2XX3 and permission of the Department
Enrolment is limited.

POL SCI 4Z06 HONOURS ESSAY
A major research paper, supervised by a faculty member. The subject matter is to be different from that covered in 3U03, if the student is registered or has credit in that course.
Prerequisite: Registration in Level IV of an Honours Political Science program and written permission of the faculty member supervising the student's Honour Essay.
Faculty as of January 15, 2005

Chair
Ronald J. Racine

Associate Chairs
Allison Sekuler/Graduate Studies
Judith M. Shedden/Undergraduate Studies

Distinguished University Professor
Shepard 286

Professors
Lorraine O. Allan/B.A. (Toronto), Ph.D. (McMaster)
Suzanne Becker/B.A., M.Sc. (Queen's), Ph.D. (Toronto)
Patrick Bennett/B.Sc. (Tufs), Ph.D. (California-Berkeley)/Senior Canada Research Chair
Martin Daly/B.A. (Toronto), M.A. (McGill), Ph.D. (Toronto)
Dennis deCatalanaro/B.A., M.A. (Carleton), Ph.D. (British Columbia)
Betty A. Levy/B.A. (Dalhousie), M.A., Ph.D. (Toronto)
Terri L. Lewis/B.A. (Toronto), Ph.D. (McMaster)
Daphne M. Maurer/B.A. (Swarthmore), M.A. (Pennsylvania), Ph.D. (Minnesota)
Kathryn M. Murphy/B.A. (Western Ontario), M.A., Ph.D. (Dalhousie)
Ronald J. Racine/B.Sc. (Oregon), M.Sc., Ph.D. (McGill)
Allison Sekuler/B.A. (Pomona), Ph.D. (California-Berkeley)/Canada Research Chair
Laurel J. Trainor/B.Mus., M.A., Ph.D. (Toronto)

Adjunct Professors
Mirtice M. Clark/B.A., Ph.D. (McMaster)
Bruce A. Linden/B.E.S. (Minnesota), Ph.D. (McMaster)

Associate Professors
Richard B. Day/B.A. (Massachusetts), M.A. (Iowa), Ph.D. (McMaster)
Bruce Miliken/B.A., Ph.D. (Waterloo)
Louise L. Schmeltz/B.A. (Maryland), M.S. (Baltimore), Ph.D. (Maryland)
Judith M. Shannon/B.Sc. (Alberta), M.S., Ph.D. (Pittsburgh)
Hongzun Sun/B.Sc., M.S. (Peking), M.A. (Western Ontario), Ph.D. (Queen's)

Assistant Professors
Sigal Bashir-Earn/B.Sc. (Toronto), Ph.D. (Cambridge)
Reuven Dukes/B.Sc. (Jerusalem), Ph.D. (North Carolina State)
Paul Faure/B.Sc., M.Sc. (Calgary), Ph.D. (Cornell)
Karin Humphreys/B.A. (Queensland), A.M. (Illinois), Ph.D. (Illinois)
Mel D. Rutherford/B.A. (Yale), Ph.D. (California-Santa Barbara)
David I. Shore/B.Sc. (McMaster), M.A., Ph.D. (British Columbia)
Tracy Valliant/B.A., M.A., Ph.D. (British Columbia)

Associate Members
Suzanne M. Archie/Pharmacology B.Sc., M.D. (McMaster), F.R.C.P.S.
Charles E. Cunningham/Pharmacology B.A. (California State), M.A. (San Diego State), Ph.D. (The American University)
Eleni Hapaidou/Pharmacology B.A. (The American College of Greece), M.A. (New Brunswick), Ph.D. (McMaster)
Joel P. Hunecker/Pharmacology B.A., M.A. (McMaster), Ph.D. (Western Ontario)
David G. Jones/Electrical and Computer Engineering B.Sc. (Western Ontario), Ph.D. (Stanford)
Ivan Klass/Neuroscience B.Sc. (Toronto), M.A., Ph.D. (Concordia)
Ellen Lipmani/Pharmacology B.Sc. (Western Ontario), M.D., M.Sc. (McMaster)
Harriet L. Macmillan/Pharmacology M.D. (Queen's), M.Sc. (McMaster), F.R.C.P.S.
William Mahoney/Pediatrics M.D. (McMaster)
Catherine L. Manconi/Pharmacology B.Sc., M.Sc., M.D. (Western Ontario)
Allison G. Nicola/Pharmacology B.A., M.A., Ph.D. (York)
Geoff R. Norman/Statistics and Biostatistics B.Sc. (Manito-oba), M.A. (Michigan State), Ph.D. (McMaster)
Christopher David Rollo (Biology) B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
Patrikka I. Rosebush/Pharmacology B.Sc.N., M.Sc.N. (Toronto), Ph.D. (McMaster), F.R.C.P.S.
William Suits/Pharmacology B.Sc. (Carleton), M.D., D.A., Ph. (Western Ontario), F.R.C.P.C.
Henry Szczeklik/Biomedical Sciences B.Sc., Ph.D. (Pittsburgh)
Larry Tuft/Pharmacology B.Sc., Ph.D. (McMaster)
Michael A. Van Ameringen/Pharmacology B.Sc., M.D. (McMaster)
Priyanty Weerasekara/Pharmacology B.A., M.D. (McMaster), M.Ed. (Harvard)

Department Notes:
1. The University reserves the right to limit enrollment in any course. Where priorities have to be established first consideration will be given to Honours B.Sc and Honours B.A. Psychology students.
2. If Psychology courses are limited enrollment which requires permission by preregistration ballot, students must complete and submit a ballot by April 20, 2005. Ballots are obtained on the Psychology Department website at http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology and Combined Honours Psychology programs.
3. The course PSYCH 1A03 and 1A03 are available for elective credit for students enrolled in a non-Psychology program. In the case of PSYCH 2A03, B03, 2003, 2003, 2003, 2003, 2003, 3003, 3003, 3003, 3003, 3003, 3003, 3003, 3003, 3003, enrolment for non-Psychology students is limited.

Courses
If no prerequisite is listed, the course is open.

PSYCH 1A03 INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY
This course introduces experimental psychology, and includes basic research methods in psychology, the relationship between the brain and behaviour, sensation and perception, conditioning and learning, and memory and reasoning.
Three hours (lectures and tutorials); one term
Antirequisite: PSYCH 1A06
Not open to students registered in the Bachelor of Health Sciences (Honours) program or the B.Sc.N. (D) Stream (Mohawk College and Conestoga College site).

PSYCH 1A03 THE PSYCHOLOGY OF INTERPERSONAL BEHAVIOUR
A discussion of phenomena and theory in areas of psychology related to interpersonal behaviour. Topics include child development, personality, abnormal psychology, social psychology, and sociobiology.
Three hours (lectures and tutorials); one term
Prerequisite: PSYCH 1A03; or registration in the Bachelor of Health Sciences (Honours) program or Level II of a Medical Radiation Sciences Specialization Antirequisite: PSYCH 1A06
Not open to students registered in the B.Sc.N. (D) Stream (Mohawk College and Conestoga College site).

PSYCH 1A03 SURVEY OF DEVELOPMENTAL PSYCHOLOGY
A general survey of theories and mechanisms of development, illustrated through examples from neural, perceptual, cognitive, social and emotional development. This is a general survey course and is an anti-requisite for students registered in the Bachelor, Psychology or registration in Honours Biology and Psychology programs.
Three hours (lectures and tutorials); one term
Prerequisite: PSYCH 1A03, 1A03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program Antirequisite: PSYCH 2A03, 3G03, 3G03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, exemption for such students is limited.

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: PSYCH 1A03, 1A03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program Antirequisite: PSYCH 2A03, 3G03, 3G03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, exemption for such students is limited.
PSYCH 2D03 INTRODUCTION TO SOCIAL PSYCHOLOGY
An overview of research and theory in areas such as social perception, attitude and attitude change, social influence, interpersonal attraction, altruism, aggression; small group processes.

Three lectures; one term
Prerequisite: PSYCH 1A03, 1A13 or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 2D03 NEUROPSYCHOLOGY
Neural organization and the relationship between human brain function and behaviour.

Three lectures; one term
Prerequisite: PSYCH 1A03, 1A13 or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
Antirequisite: PSYCH 2003
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

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: PSYCH 1A03, 1A13 or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 2F03 FUNDAMENTALS OF NEUROSCIENCE
Fundamentals of nervous system and endocrine function in humans and animals, including neurophysiology, neural transmission and neuroanatomy.
Prerequisite: PSYCH 1A03, 1A13, and credit or concurrent registration in BIOLOGY 1A03 or 1K03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

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 tutorial; one term
Prerequisite: PSYCH 1A03, 1A13 or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 2Q03 RESEARCH PRACTICUM
Independent research practicum that provides students the opportunity to participate in experimental psychology projects in a research laboratory. Students must obtain permission from a faculty supervisor and the course coordinator.

One lab; one or two terms
Prerequisite: A grade of at least B in PSYCH 1A03; and registration in Level II of an Honours Psychology program; and permission of the course coordinator.
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 2R3 RESEARCH DESIGN AND STATISTICS FOR PSYCHOLOGISTS
Advanced statistical principles in the design and analysis of experiments in psychology. Parametric and non-parametric techniques for two sample and multi sample designs.

Three lectures; one term
Prerequisite: One of HTH SCI 1F03, 2A03 or STATS 1C03 and registration in an Honours Psychology program, the Bachelor of Health Sciences (Honours) program or Honours Biology and Pharmacology. Students who require this course for completion of their degree program are guaranteed admission.
Antirequisite: STATS 2M03, 2R06

PSYCH 2T3 ANIMAL BEHAVIOUR
A discussion of the major classes of behaviour shared by most animals including humans. The course will integrate evolutionary analyses with an in-depth discussion of the genetic and cognitive mechanisms that generate behaviour.

Three lectures; one term
Prerequisite: PSYCH 1A03, 1A13 and one of BIOLOGY 1A03, 1K03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
Antirequisite: PSYCH 2T03, 3R03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

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 term
Prerequisite: One of BIOLOGY 2A03, PSYCH 2E03 or 2F03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3A03 PERCEPTION AND COGNITION OF MUSIC
The perception and neural basis of melody, harmony, rhythm and expectation will be considered in relation to innate and experiential factors.

Three lectures; one term
Prerequisite: Registration in an Honours program and either PSYCH 2E03 or both PSYCH 1A03 and SCIENCE 2J03; or permission of the instructor
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3B03 SPECIAL POPULATIONS
Discusses selected topics related to normal and abnormal development in children, including behavioral and affective disorders, developmental disability, and perceptual or cognitive disorder.

Three lectures; one term
Prerequisite: PSYCH 3G03 or 3N03; and six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T73; and one of HTH SCI 1F03, 2A03, STATS 1A03, 1C03, 2D03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3B03 PSYCHOLOGICALS
The course discusses biological foundations of language and the way language is represented and processed in the brain (in norm and pathology). Special attention is paid to methods of psycho- and neurolinguistic research and to their connection with theoretical linguistics.

Three lectures (lectures and discussion); one term
Prerequisite: LINGUIST 3G03 or 3M03; or LINGUIST 1A03, 1AA3, PSYCH 2H03; or permission of the Department
Cross-list: LINGUIST 3B03
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

PSYCH 3B03 LABORATORY IN HUMAN ELECTROPHYSIOLOGY
Principles of acquisition and analysis of functional brain imaging data, including electroencephalography (EEG), event-related potentials (ERP), magnetoencephalography (MEG) and other techniques, applied to the design, conduct and analysis of experiments on human cognition and behaviour.

One lab (three hours); one term
Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03; and one of PSYCH 2R3 or STATS 2M03
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3B03 BEHAVIOURAL NEUROSCIENCE I: SURVEY
An introduction to the behavioural neurosciences, which are aimed at the study of psychological, computational, and neuroscientific bases of perception and cognition. The course will focus on behavioural neuroscience methods and their application to contemporary research issues.

Three lectures; one term
Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03; and one of PSYCH 2R3 or STATS 2M03
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)
PSYCH 3EE3 PERCEPTION LABORATORY
Students will conduct experiments in visual and auditory perception with an emphasis on research methods, data analysis and writing skills. One tutorial (one hour), one lab (three hours); one term
Prerequisite: PSYCH 2R93 or STATS 2MB3; and PSYCH 2E03; and registration in Level III or IV of an Honours Psychology program
Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 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: PSYCH 2TT3 or six units of Level I Biology
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3FA3 THE NEUROBIOLOGY OF LEARNING AND MEMORY
Learning and memory mechanisms will be discussed from several perspectives ranging from cognitive neuroscience to synaptic physiology.
Three lectures; one term
Prerequisite: PSYCH 2F03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3GG3 ESSENTIALS OF DEVELOPMENTAL PSYCHOLOGY
This course concentrates on theories and mechanisms of development. The evidence for biological and environmental influences on development are examined and the principles and mechanisms of development are illustrated through examples from neural, perceptual, cognitive, social and emotional development.
Three lectures; one term
Prerequisite: Six units from PSYCH 2E03, 2E03, 2F03, 2H03, 2T03, 2TT3; and one of HTH SCI 1FO3, 2A03, STATS 1CC3, 2D03
Antirequisite: PSYCH 2A03, 2A03, 3GG3
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3H03 DEVELOPMENT DURING INFANCY
An intensive examination of development during the first year of life, with an emphasis on perceptual development.
Three lectures; one term
Prerequisite: PSYCH 2F03, 3GG3
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3I06 PRACTICA IN PSYCHOLOGY
Supervised laboratory and field placements will be arranged for a maximum of 16 students each year. The placements may vary from year to year, but will include cognitive, language, perceptual, memory, neuropsychological and behavioural disorders. A 20-page final report must be submitted to the coordinator by April 1. Applications must be submitted to the coordinator by February 1 of the preceding academic year, with selection for placements announced by March 15.
Prerequisite: PSYCH 2R93 or STATS 2M83; and registration in Level III or IV of an Honours Psychology or Combined Honours Psychology program; and permission of the coordinator. This course cannot be combined with any independent study course (PSYCH 3C03, 3C03, 4Q03, 4Q03, 4Q03, 4Q03) with the same supervisor.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 3I3 COGNITIVE DEVELOPMENT
The development of attention, concepts, memory, reasoning and language.
Three lectures; one term
Prerequisite: PSYCH 2H03, 3GG3
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3J03 VISUAL NEUROSCIENCE
Visual perception and attention as revealed by behavioural, brain-imaging, and physiological studies examining anatomy, circuity, and function of visual processing systems.
Three lectures; one term
Prerequisite: PSYCH 2E03; and PSYCH 2D03 or 2H03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

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: PSYCH 2C03, 3GG3
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3K03 PSYCHOLOGICAL MEASUREMENT
Theory of psychological testing and measurement. Topics include the statistical bases and assumptions of measurement, test validity and reliability and the measurement of human characteristics.
Three lectures; one term
Prerequisite: PSYCH 1A03, 1A03, and one of HTH SCI 1FO3, 2A03, STATS 1CC3, 2D03; or registration in Honours Biology and Psychology; or registration in the Bachelor of Health Sciences (Honours) program.
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3L03 NEUROSCIENCE LABORATORY
Seminars and laboratory experience in current problems in neuroscience. Two hours, seminar; three hours lab; one term
Prerequisite: One of PSYCH 2E03, 2F03, BIOLOGY 3P03; and registration in Level III or IV of an Honours program
Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 above.)

PSYCH 3LL3 GENERAL EXPERIMENTAL PSYCHOLOGY LABORATORY
Working in research teams, students select a topic area, design an experiment based on background readings, obtain ethical approval, collect and analyze data, make oral presentations, and prepare written reports. One lecture, one lab (two hours); one term
Prerequisite: PSYCH 2R93 or STATS 2MB3; and registration in an Honours Psychology program
Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 above.)

PSYCH 3M03 MOTIVATION AND EMOTION
Theory and data concerning human and nonhuman motivation and emotion, drawn on perspectives from evolution, physiology, learning, and culture.
Three lectures; one term
Prerequisite: One of PSYCH 2F03, 2T03, 2TT3
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3N03 ABNORMAL PSYCHOLOGY I (FUNDAMENTALS)
Fundamentals of clinical psychology, including viewpoints on the nature of behavioural disorder, diagnostic systems, clinical judgement, and treatment approaches.
Three lectures; one term
Prerequisite: Six units from PSYCH 2D03, 2E03, 2F03, 2H03, 2T03, 2TT3; or nine units of Psychology and registration in Level III or IV of a Nursing or Social Work program or the Bachelor of Health Sciences (Honours) program.
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3N03 ABNORMAL PSYCHOLOGY II (MAJOR DISORDERS)
A review of the major forms of mental disorder including dementia, neuropsychological disorder, schizophrenia, mood and anxiety disorders, psychophysiological disorders, addiction, and problems of sexual adaptation.
Three lectures; one term
Prerequisite: Credit or registration in PSYCH 3N03
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.
PSYCH 3Q03  INDIVIDUAL LIBRARY STUDY
A library project under the supervision of a faculty member that may extend over both terms. Prerequisite: Registration in Level III or IV. If PSYCH 3Q03 is taken concurrently with PSYCH 4D06, a different faculty member must supervise each course. PSYCH 3Q03 may not be taken concurrently with PSYCH 4D09. Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3Q03  INDIVIDUAL LAB STUDY
A laboratory project under the supervision of a faculty member that may extend over both terms. Prerequisite: Registration in Level III or IV. If PSYCH 3Q03 is taken concurrently with PSYCH 4D06, a different faculty member must supervise each course. PSYCH 3Q03 may not be taken concurrently with PSYCH 4D09. Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3S03  ANIMAL BEHAVIOUR LABORATORY
Laboratory and field studies involving a wide variety of species. One lab (three hours); one term
Prerequisite: One of PSYCH 2RF3, STATS 2MA3, 2MB3 or permission of the instructor; and registration in Level III or IV of an Honours program in Biology or Psychology; and one of PSYCH 2TT3, 3F03, or six units of Level I Biology. Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3T03  SOCIOBIOLOGY
Social behaviour from the perspective of evolutionary theory. Topics include aggression, altruism, kinship, parent-offspring interaction, sex and reproduction. Three lectures; one term
Prerequisite: One of BIOLOGY 2C03, 3F03, PSYCH 2TT3. This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3U03  PSYCHOLOGY OF READING
Cognitive processes involved in encoding, storing and retrieving written language will be discussed in terms of information processing models. Three lectures; one term
Prerequisite: PSYCH 2H03 and registration in Level III or IV of a Psychology program; or permission of the instructor

PSYCH 3U03  PSYCHOLOGY OF LANGUAGE
This course discusses the cognitive and neurological basis of language comprehension and production, from an experimental perspective. The emphasis is on the processing of spoken language. Three lectures; one term
Prerequisite: PSYCH 2H03; or LINGUIST 1A03, 1A13; or permission of the instructor
Offered in alternate years.
Offered in 2005-2006.
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3V03  LABORATORY IN HUMAN MEMORY AND COGNITION
Experiments illustrating important issues in human memory and cognition. Problems in the design, analysis, and reporting of experiments will be emphasized. Individual projects required. One lab (three hours); one term
Prerequisite: PSYCH 2H03; and credit or registration in PSYCH 2RF3 or STATS 2MB3; and registration in Level III or IV of an Honours Psychology program
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3V03  HUMAN MEMORY
Cognitive processes involved in encoding, storage and retrieval will be discussed in terms of current theories of memory and information processing. Three lectures; one term
Prerequisite: PSYCH 2H03; and registration in Level III or IV of a Psychology, B.Sc. Life Science or the Honours Science (Life Science) program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3V03  HORMONES, NEUROCHEMISTRY AND BEHAVIOUR
Steroids, peptides, monoamines, and interacting neural structures are considered in relation to feeding, reproductive behaviour, aggression, stress, and learning in humans and other vertebrates. Three lectures; one term
Prerequisite: Six units from PSYCH 2F03, 2T73, 3M03; and six units of Biochemistry and/or Biology; and registration in Level III or IV of an Honours program
This course may be taken as elective credit by undergraduate students registered in a non-Psychology program. However, enrolment for such students is limited.

PSYCH 3Z03  CONCEPTUAL AND ASSESSMENT ISSUES FOR PEOPLE WITH DEVELOPMENTAL DISABILITIES
Conceptual and assessment issues related to interventions for problems associated with children and adults with developmental disabilities. Three lectures; one term
Prerequisite: Credit or concurrent registration in PSYCH 3N03 and registration in a Psychology program

PSYCH 4B03  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: Registration in Level IV of an Honours Psychology program

PSYCH 4BN3  BEHAVIOURAL NEUROSCIENCE II: SPECIAL TOPICS
Seminar course on one or more selected topics in cognitive neuroscience, including biological and computational models of learning and memory, neuropsychology, and functional brain imaging. Three lectures; one term
Prerequisite: PSYCH 3BN3
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4C03  LANGUAGE DISORDERS IN CHILDHOOD
Seminar with student presentations on selected language disorders. Papers will be required. Three hours (seminar); one term
Prerequisite: PSYCH 3U03 or 3U03 and registration in Level III or IV of an Honours Psychology program. Preference will be given to students in Level IV of an Honours Psychology program
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4D06  SENIOR THESIS
Students conduct an individual research project under the supervision of a faculty member.
Prerequisite: Registration in Level IV of an Honours or Combined Honours program in Psychology for which this course is a specified option; and permission of the department. A maximum of three units of PSYCH 3Q03, 3Q03, 4D03, or 4Q03 may be taken concurrently with PSYCH 4D06, and a different faculty member must supervise each course. For information and guidelines regarding this course, refer to the Psychology web site at http://www.science.mcmaster.ca/psychology/courses.html and click on PSYCH 4D06, or contact the Course Administrator. Antirequisite: HTH SCI 3H03, 4A09, 4B06, PSYCH 4D06, 4J03
Not open to students with credit or registration in courses from the Science Capstone Course List in the Faculty of Science section of the Calendar.
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 4D09  SENIOR HONOURS THESIS
Students conduct an individual research project under the supervision or co-supervision of a Department of Psychology faculty member.
Prerequisite: Registration in Level IV of an Honours Psychology program for which this course is a specified option; and permission of the department.
RELIGIOUS STUDIES

WEB ADDRESS:  http://www.socsci.mcmaster.ca/relstud/
University Hall, Room 105
Ext: 24567

Faculty as of January 15, 2005

Chair
Eileen Schuller

Professors
P. Travis Kroeker/B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Chicago)
Alan Mendelson/A.B. (Kanyon College), M.A. (Brandeis), Ph.D. (Chicago)

Adjunct Professors
Adele Reinheits/Willlad Laurier) B.A. (Toronto), M.A., Ph.D. (McMaster)
David B. Waterhouse (Tonto), B.A., M.A. (Carlin), F.R.S.C.

Associate Professors
Geene MacQueen/B.A., M.A. (McMaster), Ph.D. (Harvard)
Dana Holland/B.A. Oberlin College, M.A., Ph.D. (Johns Hopkins)
Celia Rothenberg/B.A. (Wellesley College), M.S. (Oxford), Ph.D. (Toronto)

Adjunct Associate Professors
Kay Koppedrayer/Willard Laurier) B.A. (McGill), M.A. (McMaster)
Neil McLumlin/Tonto), B.A. (St. Francis Xavier), S.T.B. (St. Michael's,

Assistant Professors
Philippa Carter/B.A. (Toronto). M.A., Ph.D. (McMaster)
Jacob Dalton/B.A. (Marshall College), M.A., Ph.D. (Michigan)
Jonathan Green/B.Sc., M.Sc. (Toronto), M.A., Ph.D. (McMaster)
Dana Holland/B.A. (Oberlin College), M.A., Ph.D. (Johns Hopkins)
Annette Rood/B.A. (McGill University), M.T.S., (Harvard), M.A., Ph.D. (Princeton)

Adjunct Assistant Professor
Art Dhand/(Torrent) B.A., M.A. (Carling), Ph.D. (McGill)

Associate Member
Virginia Aksan/(History) B.A.(Allegheny College), M.L.S. (California-Berkeley), M.A., Ph.D. (Toronto)

Department Note:
Students are advised to consult both the Department's Handbook (avail-
able in University Hall 105) and the Undergraduate Timetable for a list of the courses offered in the current year. It is especially important that students interested in the Level IV Advanced Reading courses (RELIG ST 4AA3, 4BB8, 4CC3, and 4DD3) consult a departmental undergraduate advisor.

Fields of Study
The Department offers courses in four fields of study. Students are encour-
gaged to specialize in any one of these fields: Level II, III and IV courses are allocated to the fields as follows:

I. ASIAN RELIGIONS

REligST
2E03, 2F03, 2103, 2L03, 2P06, 3A03, 3E03, 3L03, 3P03,
3S03, 3U03, 3U03, 3V03

Sanskrit
3A06, 4B06

II. BIBLICAL STUDIES

REligST
2B03, 2DD3, 2E03, 2G03, 2H03, 2V03, 2Y03, 2ZZ3,
3D03, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03

Hebrew
2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

REligST
2C03, 2E03, 2E03, 2G03, 2L03, 2M03, 2Q03, 2U03,
2V03, 2Z03, 3A03, 3B03, 3D03, 3K03, 3L03, 3M03,
3N03, 3O03, 3P03, 3U03, 3ZZ3

Students are expected to have a C.A. of at least 8.5. PSYCH 3003, 3Q03,
3Q03, or 4Q03 may not be taken concurrently with PSYCH 4D09. For
information and guidelines regarding this course, refer to the Psychology
website at http://www.science.mcmaster.ca/psychology/courses.html and
on PSYCH 4D09, or contact the Course Administrator.

Antirequisite: HTHI 3H03, 4A09, 4D09, PSYCH 4D09, 4J03
Not open to students with credit or registration in courses from the Science
Capstone Course List in the Faculty of Science section of the Calendar.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

PSYCH 4F03
SPECIAL TOPICS IN BIOPSYCHOLOGY
An advanced seminar focusing on selected topics in biology.
Topics for discussion selected in consultation with students and instruc-
tor, with focus on animal models of neurobiological processes.
Seminar and discussions (three hours); one term
Prerequisite: PSYCH 2F03 and registration in an Honours Biology or Psy-
chology program.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

PSYCH 4J03
INQUIRY IN PSYCHOLOGY
This course will provide students with an opportunity to develop skills
required to launch investigations of selected psychological themes.
Prerequisite: Registration in Level IV of an Honours Psychology program.
Antirequisite: PSYCH 4D06, 4D09.
Not open to students with credit or registration in courses from the Science
Capstone Course List in the Faculty of Science section of the Calendar.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

PSYCH 4Q03
ADVANCED INDIVIDUAL LIBRARY STUDY
A library project under the supervision of a faculty member that may
extend over both terms.
Prerequisite: Registration in Level IV of an Honours Psychology program.
If PSYCH 4Q03 is taken concurrently with PSYCH 4D09, a different
faculty member must supervise each course. PSYCH 4Q03 may not be
taken concurrently with PSYCH 4D09.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

PSYCH 4Q03
ADVANCED INDIVIDUAL LAB STUDY
A laboratory project under the supervision of a faculty member that may
extend over both terms.
Prerequisite: Registration in Level IV of an Honours Psychology program.
If PSYCH 4Q03 is taken concurrently with PSYCH 4D09, a different
faculty member must supervise each course. PSYCH 4Q03 may not be
taken concurrently with PSYCH 4D09.
PSYCH 4Q03 may be repeated once with permission of the course
coordinator.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

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: PSYCH 2TT3; and one of PSYCH 3F03, 3S03, 3T03; and
registration in an Honours Biology or Psychology program.
Enrolment is limited. Permission is by pre-registration ballot. (See
Department Note 2 above.)

PSYCH 4Z03
TOPICS IN PSYCHOLINGUISTICS
Consult the Department of Modern Languages and Linguistics for topics
to be offered.
Prerequisite: LINGUIST 3B03 or PSYCH 3B03 or PSYCH 3U03
Cross-list: LINGUIST 4Z03
PSYCH 4Z03 may be repeated if on a different topic to a total of six units.
Offered in alternate years.
This course is administered by the Department of Modern Languages
and Linguistics.

BIOLOGY 4T03
NEUROBIOLOGY
Selected topics in neurobiology at the molecular and cellular level includ-
ing growth factors and neuronal development, ion channels, neurotrans-
mitters functions, learning and memory, and neurological disorders.
Two lectures, one tutorial (three hours); one term
Prerequisite: BIOLOGY 3P03. One or more of BIOLOGY 3H03, 3H3,
3U03, PSYCH 2F03, 3F03 is also recommended.
Offered in alternate years.

PSYCH 4P03
SPECIAL TOPICS IN PSYCHOLOGICAL SCIENCES
Topics for discussion selected in consultation with students and instruc-
tor, with focus on animal models of neurobiological processes.
Seminar and discussions (three hours); one term
Prerequisite: PSYCH 2F03, 3F03, 3P03, 3U03, 3V03
Cross-list: LINGUIST 4Z03
PSYCH 4P03 may be repeated if on a different topic to a total of six units.
Offered in alternate years.
This course is administered by the Department of Modern Languages
and Linguistics.
IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

RELIG ST 2BB3, 2MH3, 2M03, 2N03, 2Q03, 2SS3, 2W03, 2WW3

Students wishing to specialize in Asian Religions should consider beginning language training in Sanskrit or Japanese or both early in their program (see offerings listed under these headings). Students wishing to specialize in Biblical Studies should consider working in Greek (see offerings under Classics, Greek) or Hebrew or both. For further study of the Hebrew Bible, RELIG ST 2DD3, 2EE3, 3M03 are recommended.

Courses

RELIG ST 1B03

WORLD RELIGIONS
A comparative study of religions such as Hinduism, Buddhism, Islam, Christianity, and Judaism with special reference to selected texts, traditions and thought.
Two lectures, one tutorial; two terms

RELIG ST 1D06

MODERN STUDY OF THE BIBLE
An introduction to the discipline of modern biblical criticism focusing on the development of selected central themes.
Two lectures, one tutorial; two terms

RELIG ST 1EO3

LOVE IN WESTERN CIVILIZATION
A 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.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 1EO6

RELIG ST 1103

RELIGIOUS THEMES IN MODERN LITERATURE
An introduction to religious themes, imagery and issues through a study of selected modern literature.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 1EO6

RELIG ST 2B03

WOMEN IN THE BIBLICAL TRADITION
This course will focus on the portrayal of women in the Hebrew Scriptures and the New Testament. Among the texts to be dealt with are examples of biblical narrative and legal material, the gospels, the letters of Paul and extra-biblical material.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 2EO3

RELIG ST 2B83

IMAGES OF THE DIVINE FEMININE
An examination of goddesses and female religious symbols in a variety of cultures: tribal, eastern and western.
Two lectures, one tutorial; one term

RELIG ST 2C03

MORAL ISSUES
An introduction to moral philosophy accenting biomedical ethics. Issues such as abortion, human experimentation, euthanasia, and genetic screening will be investigated in cooperation with members of the Faculty of Health Sciences.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: PHILOS 2D03
Enrollment is limited to 475 students.
This course is administered by the Department of Philosophy.

RELIG ST 2D03

THE FIVE BOOKS OF MOSES
An examination of selected texts from the Pentateuch and their significance for Ancient Israelite religion and modern thought.
Two lectures, one tutorial; one term

RELIG ST 2E03

ENGAGED BUDDHISM
A study of contemporary Buddhist thinkers from Asia and the West who have advocated a renewed, socially engaged Buddhism that addresses issues of war, oppression and the destruction of the environment.
Two lectures, one tutorial; one term

RELIG ST 2E23

ISLAM AND MEDITERRANEAN SOCIETY, 600-1300
An introduction to Islamic civilization from its beginnings in Arabia to the period of the Crusaders, with an emphasis on Mediterranean culture of the period.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2B23
Antirequisite: RELIG ST 2D03
This course is administered by the Department of History.

RELIG ST 2E83

ISLAM IN THE WORLD, 1300-1800
A survey course which emphasizes the role of Islam in the global setting in the period of the great Islamic empires.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2B83
Antirequisite: RELIG ST 2D03
This course is administered by the Department of History.

RELIG ST 2E63

PROPHETS OF THE BIBLE
The role and teaching of biblical prophets in their ancient setting and their impact on modern religious life and thought.
Two lectures, one tutorial; one term

RELIG ST 2F03

STORYTELLING IN EAST ASIAN RELIGIONS
An in-depth study of selected examples of story literature in China and Japan with attention to the way religion is represented.
Two lectures, one tutorial; one term
Cross-list: JAPAN ST 2H03
Antirequisite: RELIG ST 3H03

RELIG ST 2G03

EARLIEST PORTRAITS OF JESUS
A study of the Gospels of Matthew, Mark, and Luke. Special attention will be given to the possible literary relationships among them as well as to the distinctive features of their Jesus stories.
Two lectures, one tutorial; one term

RELIG ST 2H03

THEORY AND PRACTICE OF NON-VIOLENCE
An introduction to the history, theory and practice of non-violence, with attention to the relations between religious representatives of the tradition such as Tolstoy, Gandhi and King and secular or political figures such as Gene Sharp and James Scott.
Two lectures, one tutorial; one term

RELIG ST 2I03

PAUL AND CHRISTIAN ORIGINS
Two lectures, one tutorial; one term

RELIG ST 2J03

STORYTELLING IN INDIAN RELIGION
A survey of some of the many stories that were told by Buddhists, Jains and Hindus as a form of popular religious instruction and of the various uses made of humour and wit in religious teaching.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 3J03

RELIG ST 2J13

CHRISTIANITY IN THE PATRISTIC PERIOD (100-800)
The development of Christianity in the first centuries C.E. in relation to competing alternatives such as Judaism, Graeco-Roman cults and philosophies.
Two lectures, one tutorial; one term

RELIG ST 2J23

CHRISTIANITY IN THE MEDIEVAL PERIOD (800-1500)
The development of Christianity in the Middle Ages and its relation to the political and intellectual context. Primary texts will illustrate typical aspects of medieval religion, learned and popular.
Two lectures, one tutorial; one term

RELIG ST 2K03

CHRISTIANITY IN THE REFORMATION PERIOD
The place of the Reformation in the development of Christian thought and practice - its background, context and sequels. Attention is given to such figures and movements as Martin Luther, John Calvin, the Anabaptists, the reformation in England, the Catholic Reformation.
Two lectures, one tutorial; one term

RELIG ST 2L03

LIFE, WORK AND TEACHINGS OF MAHTMA GANDHI
A study of the central religious and ethical ideas of Gandhi in the context of his life; in particular: his doctrines of Non-violent Struggle and Truth; his place in contemporary consciousness, particularly in the struggle for human harmony and preservation of the earth and its living species; and his revolutionary view of Truth itself as God.
Two lectures, one tutorial; one term

RELIG ST 2M03

DEATH AND DYING: COMPARATIVE VIEWS
A 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
Prerequisite: Registration in Level II or above

RELIG ST 2M3

WAR AND PEACE IN THE CHRISTIAN TRADITION
Christian thinking and practice on militarism, the restraint of war and its relation to the political and intellectual context. Primary texts will illustrate typical aspects of the military spirit and its relation to the idea of war.
Two lectures, one tutorial; one term

RELIG ST 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
Prerequisite: Registration in Level II or above
RELIG ST 2P06  JAPANESE CIVILIZATION
Introduction to Japanese history, society, and culture through a study of the religious traditions, literature, and art of Japan.
Two lectures, one tutorial; two terms
Cross-list: JAPAN ST 2P06

RELIG ST 2Q03  INTRODUCTION TO ISLAM
The origin and early history of Islam with an emphasis on the Koran and the early Muslim community.
Two lectures, one tutorial; one term

RELIG ST 2Q03  CULTS IN NORTH AMERICA
An examination of recent religious trends in North America. The Hare Krishna Movement, the Church of Scientology, the "Family" Branch Davidians and Satanism will be covered.
Two lectures, one tutorial; one term

RELIG ST 2S03  WOMEN AND RELIGION
A study of the status and roles of women in several religions, such as Hinduism, Buddhism, Confucianism, Christianity, Judaism, and Islam. Important women religious figures and feminist theology will also be studied.
Two lectures, one tutorial; one term

RELIG ST 2U03  RELIGION AND THE MORAL IMAGINATION
An exploration of religious and ethical themes/symbols/practices in selected ancient and modern literature (including plays, stories, poetry) and art in the western traditions.
Two lectures, one tutorial; one term
Antirequisite: RELIG ST 2U03

RELIG ST 2V03  ISLAM AND 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

RELIG ST 2V03  THE BIBLE AS LITERATURE
An examination of narratives from the Hebrew Bible, Intertestamental literature, and New Testament, from a literary perspective. Attention is paid to narrative features such as character, plot, irony and symbolism, as well as to the dynamics of the reading experience.
Two lectures, one tutorial; one term
Cross-list: COMP LIT 2G03

RELIG ST 2W03  RELIGION AND ECOLOGY
Attitudes toward nature or the environment in Native, Asian and Western Religious Traditions; the underlying assumptions of our contemporary view of the natural world.
Two lectures, one tutorial; one term

RELIG ST 2W03  HEALTH, HEALING AND RELIGION
An examination of the different ways in which religion and health are related. Ideas of sickness and techniques of healing will be studied in a variety of traditional and modern religious contexts.
Two lectures, one tutorial; one term

RELIG ST 2Y03  THE BIBLE AND FILM
An examination of the use of the Bible in film. A variety of film genres will be studied including the Disney cartoon, biblical epic, horror film, contemporary comedy and drama and the rock music video. Issues to be discussed include the transformation of biblical images in popular media and film as a vehicle for conveying religious values.
Two lectures, one tutorial; one term

RELIG ST 2Z03  GREEK AND ROMAN RELIGION
A study of the role of religion in Greek and Roman public and private life.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CLASSICS 2Z03
This course is administered by the Department of Classics.

RELIG ST 2Z03  SHAKESPEARE: RELIGIOUS AND POLITICAL THEMES
An examination of ethical, political and religious themes in several of Shakespeare's plays, including The Merchant of Venice.
Two lectures, one tutorial; one term

RELIG ST 3A03  MODERN JEWISH THOUGHT
Introduction to different conceptions of the connection between Jewish traditions and philosophical questioning. Authors may include: Maimonides, Spinoza, Mendelssohn, Cohen, Buber, Rosenzweig, Strauss, Levinas, Soloveitchik.
Three hours (lectures and discussion); one term
Cross-list: PHILOS 3J03

RELIG ST 3A03  POPULAR RELIGION IN THE INDIAN TRADITION
The music, dance and festivals associated with temples in India and its diaspora will be analyzed in terms of their social, psychological and political implications.
Two lectures, one tutorial; one term

RELIG ST 3B03  CHRIST THROUGH THE CENTURIES
A study of the varied theological and artistic conceptions of Jesus Christ in the principal periods of Christian thought: the Biblical, Patriarchal, Medieval, Reformation, and Modern.
Two lectures, one tutorial; one term

RELIG ST 3D03  GOD, REASON AND 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.
Two lectures, one tutorial; one term

RELIG ST 3D03  THE JEWISH WORLD IN NEW TESTAMENT TIMES
A 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
Cross-list: HISTORY 3D03
Antirequisite: RELIG ST 2NN3

RELIG ST 3E03  JAPANESE RELIGION
Two lectures, one tutorial; one term
Cross-list: JAPAN ST 3E03

RELIG ST 3F03  APPEARES TO THE STUDY OF RELIGION
A study of the various ways religious phenomena can be studied, e.g., psychologically, sociologically, philosophically, theologically, comparatively, etc.
Attention is also given to the history of the discipline of religious studies.
Two lectures, one tutorial; one term
Prerequisite: Six units of Religious Studies courses above Level I

RELIG ST 3J03  JEWS, CHRISTIANS, AND OTHERS IN ANTIQUITY
An examination of the contacts, conflicts, and competition among Jews, Christians, and their non-Jewish, non-Christian neighbours (Greeks, Romans, Egyptians) in the ancient world.
Two lectures, one tutorial; one term

RELIG ST 3K03  CHRISTIANITY IN THE MODERN PERIOD
Topics in Christianity (Catholic and Protestant) from the 17th to the 20th centuries. Attention is given to the interaction between secular and religious thought.
Two lectures, one tutorial; one term

RELIG ST 3K03  THE BIBLE THROUGH THE AGES
A study of the different ways in which the Bible has been read, from antiquity to the modern world, both inside and outside the communities for which it serves as sacred scripture. The course will focus on selected key figures in the history of biblical interpretation.
Two lectures, one tutorial; one term

RELIG ST 3L03  THE INDIAN RELIGIOUS TRADITION
Reading of Indian religious texts in translation will concentrate on themes such as the nature of human nature; free will and determinism; personal identity and the quest for perfection; renunciation and social action; violence and non-violence; altruism and selfishness.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level III and above
Cross-list: ARTS&SCI 3L03

RELIG ST 3L03  RELIGION AND HUMAN NATURE
What is the nature of human nature and its fulfillment? A study of recent philosophical, scientific and religious anthropology.
Two lectures, one tutorial; one term

RELIG ST 3M03  SONGS OF DAVID: POETRY IN THE HEBREW BIBLE
A study of poetry in the Hebrew Bible (in translation). The course will give primary attention to the study of the psalms. Some examples of early epic poetry and wisdom poetry will also be included.
Two lectures, one tutorial; one term
RELI G ST 3M3 SCEPTICISM, ATHEISM AND RELIGIOUS FAITH
A study of conceptions of religious belief, knowledge and God in the history of modern thought up to the 20th century, with special attention to major challenges to the role of religious faith in human existence. Authors may include: Descartes, Hume, Kant, Schleiermacher, Nietzsche, Dostoievsky, Kierkegaard, Camus, Buber, Levinas.
Two lectures, one tutorial; one term.

RELI G ST 3N3 THE ENCOUNTER OF SCIENCE AND RELIGION
A study of contemporary discussions of: (a) methods of inquiry in science and religion, (b) the human being's relation to nature and (c) God's relation to nature.
Two lectures, one tutorial; one term.

RELI G ST 3P3 BUDDHISM IN TIBET
This course takes particular religious themes in Tibetan Buddhism such as meditation, the dying process, or visionary techniques, and locates them within their historical context.
Two lectures, one tutorial; one term.

RELI G ST 3R3 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.

RELI G ST 3S3 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: Registration in Level III and above
Cross-list: ARTS & SCI 3S03, JAPAN ST 3S03

RELI G ST 3T3 THE QUEST FOR THE HISTORICAL JESUS
A look at the continuing scholarly effort to reconstruct the career and teaching of the historical Jesus.
Two lectures, one tutorial; one term

RELI G ST 3U3 THE BUDDHIST TRADITION IN INDIA
A 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

RELI G ST 3U3 BUDDHISM IN EAST ASIA
An examination of myth, history, doctrine, monastic culture, and ritual practices in East Asian Buddhism.
Two lectures, one tutorial; one term
Cross-list: JAPAN ST 3U3

RELI G ST 3V3 INDIAN PHILOSOPHY
An exploration of selected themes in Indian philosophy through a reading of primary texts in English translation. Possible topics include: an examination of Indian concepts of the soul, free will and determinism, origins of the universe and Indian debates concerning the existence and function of an omnipotent god.
Two lectures, one tutorial; one term

RELI G ST 3W3 PLATO: RELIGIOUS AND POLITICAL THEMES
An examination of ethical, political, philosophic and religious themes in selected Platonic dialogues, including the Apology of Socrates, Plaidiad, Symposium, Gorgias and Republic.
Two lectures, one tutorial; one term

RELI G ST 3X3 CHRISTIAN MYSTICAL AND SPIRITUAL WRITINGS
Close reading of selected primary texts in Eastern and Western traditions of Christian spiritual life. Possible readings include: the Desert Fathers, Augustine, the Philokalia, John of the Cross, Simone Weil, Thomas Merton.
Two lectures, one tutorial; one term

On the lures and threats of the modern world from the early eighteenth to the early twentieth century. Topics include: Jewish philosophy in the Age of Reason, new Jewish denominations, assimilation, early Zionism, Yiddish socialism, the beginnings of modern anti-semitism, movements of cultural renewal.
Two lectures, one tutorial; one term
Cross-list: HISTORY 3Y3
Antirequisite: RELIG ST 2Y3

RELI G ST 3Z3 JUDAISM AND THE JEWISH PEOPLE IN THE TWENTIETH CENTURY
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
Cross-list: HISTORY 3Z3
Antirequisite: RELIG ST 2Z3

RELI G ST 4A6 HONOURS SEMINAR
A seminar in selected topics in the study of religion, including a presentation and discussion of research conducted by students in the Honours Research Course (4A6).
Seminar (three hours); two terms.
Prerequisite: Registration in Level IV Honours Religious Studies
Corequisite: RELIG ST 4J6

RELI G ST 4AA3 ADVANCED READING: ASIAN RELIGIONS
Independent study of special topics in Asian Religions.
Prerequisite: Registration in Level IV of an honours program and written permission of the supervising instructor

RELI G ST 4AB3 ADVANCED READING: BIBLICAL STUDIES
Independent study of special topics in Biblical Studies.
Prerequisite: Registration in Level IV of an honours program and written permission of the supervising instructor

RELI G ST 4AC3 ADVANCED READING: WESTERN RELIGIOUS THOUGHT
Independent study of special topics in Western Religious Thought.
Prerequisite: Registration in Level IV of an honours program and written permission of the supervising instructor

RELI G ST 4AD3 ADVANCED READING: CONTEMPORARY AND COMPARATIVE RELIGION
Independent study of special topics in Contemporary and Comparative Religion.
Prerequisite: Registration in Level IV of an honours program and written permission of the supervising instructor

RELI G ST 4J6 HONOURS RESEARCH COURSE
Students in this course will work closely with faculty members who specialize in the fields in which they plan to write their honours essay.
Two terms.
Prerequisite: Registration in Level IV Honours Religious Studies
Corequisite: RELIG ST 4A6

RELI G ST 4W6 GUIDED READING IN RELIGIOUS STUDY
Independent study on a topic approved by the instructor.
Two terms.
Prerequisite: Registration in Level IV of an honours program in Religious Studies and permission of the instructor.

HEBREW...
HEBREW 3A03  INTERMEDIATE HEBREW I
A 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: HEBREW 2B03 or permission of the instructor
Antirequisite: HEBREW 3A06

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: HEBREW 2B03 or permission of the instructor
Antirequisite: HEBREW 3A06

SANSKRIT...

SANSKRIT 3A06  INTRODUCTION TO SANSKRIT GRAMMAR
Basic course in the elements of Sanskrit grammar. No previous knowledge of Sanskrit is required.
Three lectures; two terms

SANSKRIT 4B06  READING SANSKRIT TEXTS
Intermediate course with readings in selected texts.
Three lectures; two terms
Prerequisite: SANSKRIT 3A06

RUSSIAN

(SEE MODERN LANGUAGES AND LINGUISTICS, RUSSIAN)

SANSKRIT

(SEE RELIGIOUS STUDIES, SANSKRIT)

SCHOOL OF THE ARTS

WEB ADDRESS: http://www.humanities.mcmaster.ca/-sota/index.html
Togo Salmoin Hall, Room 414 Ext. 27671

Faculty as of January 15, 2005

Assistant Professors
Christina Baade/B. Mus. (Northwestern), M.M. (Musicology), Ph.D. (Wiscosin) (Music and Communication Studies)
John W. Ford/B.Sc. (Southeast Missouri State), M.F. A. (Southern Illinois-Evansville) (Art)
Janice Hazel BA. (York), M.A., Ph.D. (Toronto) (Theatre & Film Studies)
Andrew Maclavish/B.A. (Mount Saint Vincent), M.P. (Dalhousie), Ph.D. (Alberta) (Multimedia)
Stephen Sinclair/B.A. (British Columbia), M.A. (Victoria), Ph.D. (Queens) (Multimedia)
Joseph Sokaishi/B.E. (Alberta), M.A., Ph.D. (Toronto) (Theatre & Film)

Associate Members
Katherine M.D. Dunbarin/Classics M.A., D.Phil. (Oxford)
Michelle G. George/Classics B.A. (Toronto), M.A., Ph.D., (McMaster)
David C. Wilson/Kinesiology Cert. Ed. (St. Paul's College), B.Ed. (Bristol), M.A. (York)

Adjunct Lecturer
Rocco Piro (Multimedia)

Music Studio Instructors
Elise Bédard/B.Mus., L.Mus., M.Mus. (McGill)voice
Lisa Crossen/B.Mus. (Ottawa), M.Mus. (Vincet d'Indy Montréal) Dipl Perf. (Vienna)voice
Richard Cunningham/B.Mus., (Toronto) voice
Kevin Dempsey/percussion
Cecile Desrosiers/B.Mus., M.Mus. (Western Ontario)piano
Lance Elbeek/B.Mus. (Curtis Inst. of Music, Philadelphia)violin
Paula Elliott/B.Mus. (Oberlin), M.M. (New England Conservatory)flute
Don Engler/Jazz saxophone
Robert Fekete/Dip. (Mohawk College), B.Mus., B. Ed. (Toronto)jazz piano
Tom Forsyth/B.F.A., M.F.A. (York), B.Ed. (Toronto)jazz band
David Gery/A.R.C.T., B.Mus. (Toronto), Dip. Ped. (Japan)flute
Paul Griffin/B.Mus. (Western Ontario)harpsichord and organ
Willy Jarvis/electric bass
Zoltan Kalman/Dip. (Fianz Liszt Academy of Music, Budapest)clarinet
Leokadia Kanovich/B.Mus. (Vilnius), M.A. (MCMaster)violin
Leon Karen/B. Mus. (Music College, USSR), M.F.A. (Uralskaya Univ. of Music, USSR)piano
Jeffrey McFadden/B.Mus. (Western Ontario), M. Mus. (Toronto)classical guitar
Troy Milledge/M.M. Perf. (Indiana Univ.)double bass
William Moonen/B.A., A.R.C.T., B.Sc., M. Sc. (Chelsea School of Multimedia)saxophone
Nancy Nelson/B.Mus. (McMaster) lute
Mike Poehl/B.Mus. (Western Ontario)trumpet
Philip Sarabz/B.A.R.C.T., B. Mus. (Western Ontario)choir
Bob Shields/Dip. (Mohawk), B.Mus. (Toronto)jazz guitar
Suzanne Shulman/A.R.C.T., Dipl Perf. (Toronto)flute
Sonia Vizante/B.A. (Univ. of Brazil)piano
Timothy White/B.Ed. (Toronto), B.Mus., M.Mus. (Michigan)trumpet
Alia Zacarelli/Dipl. Perf. (Oxou, St. Petersburg)piano

School Note:
Art, Multimedia, Music and Theatre & Film Studies courses can be listed alphabetically within the Course Listings section of this Calendar.
In order to foster interdisciplinarity in the Arts, the School of the Arts offers the following SOTA courses for students who wish to combine various disciplines within the School.

Courses

SOTA 2003 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 (lectures and discussion); one term
Prerequisite: Three units of Communication Studies and registration in Level II or above
Cross-list: CMST 3F03

SOTA 3B03 PERFORMANCE ART
This course will examine historical and contemporary concerns related to performance art including the relevance of traditional categories of artistic production, the roles of the audience, the institution and market, and the body as artistic medium.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 3U03

SOTA 3C03 TOPICS IN VISUAL CULTURE
This course will examine a variety of topics in the critical study of visual culture, including gender and spectatorship, consumerism and the arts, and visual literacy in the 21st century.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 3P03

SCIENCE
With the exception of SCIENCE 1A00, 1B00, 2B03 and 2L03, the Science courses are designed primarily for students in the Humanities and Social Sciences to give an appreciation of important areas of modern science and do not assume any specific background in science. Other science courses that may be of interest to students in the Humanities and Social Sciences are listed by Department. They are:

BIOLOGY 1K03 Biology for the Humanities and Social Sciences
COMP SCI 1SA3 Computing Fundamentals
COMP SCI 1TA3 Elementary Computing and Computer Use
GEO 2GG3 Natural Disasters
GEO 2WW3 Water and the Environment
GEO 3CC3 Earth's Changing Climate
GEO 3DD3 Geochronology of the Underwater Realm
GEO 3NN3 Northern Environments
KINESIOL 1Y03 Human Anatomy and Physiology
KINESIOL 1Y1Y Human Anatomy and Physiology II
STATS 1A03 Statistical Reasoning
STATS 1L03 Probability and Linear Algebra

Courses If no prerequisite is listed, the course is open.

SCIENCE 1A00 WHMIS, 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). Evaluation: one multiple choice examination graded Pass or Fail; students who fail will be required to attend the course again during the same academic year.
One session (one hour)
Antirequisite: ENGINEER 1A00

SCIENCE 1B00 UNIVERSITY SURVIVAL
Web-based (through WebCT) introduction to university life and expectations. University services and resources available to students will be covered. Modules, consisting of quizzes and assignments, will include such topics as basic orientation, library usage, time management, academic dishonesty and career options. Online surveys (for students to give their views on the course) are to be completed in both December and April (follow-up).
One term
Prerequisite: Registration in Science I, Mathematics and Statistics I or Medical Radiation Sciences I

SCIENCE 1D03 ASTRONOMY
A survey of modern and historical concepts in astronomy. Light and the telescope; distance measurement in space; the structure and evolution of stars, galaxies, cosmology.
Three lectures; one term
Prerequisite: Open to students registered in any faculty other than Science or Engineering. OSS Grade 11 or OSIS Grade 12 Mathematics required.
Antirequisite: ASTRON 1F03, SCIENCE 2D03

SCIENCE 2B03 THE BIG QUESTIONS
Ultimate questions in modern science: origin of the universe, nature of space and time, origin and evolution of life, creation of the elements, search for other worlds, and more.
Three lectures, one tutorial; first term
Prerequisite: Registration in Level II or above
Cross-list: ORIGINS 2B03

This course is administered by the Origins Institute.

SCIENCE 2J03 PHYSICS OF MUSICAL SOUND
Sound waves, production of sound by musical instruments; properties of the ear, musical scales and intervals; auditorium acoustics.
Three lectures with demonstrations; one term
Prerequisite: Registration in Level II or above of a non-science program Antirequisite: PHYSICS 2J03
Knowledge of OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics would be helpful.

SCIENCE 2K03 HEREDITY, EVOLUTION AND THE ENVIRONMENT
Introduction to the principles of human genetics and evolutionary biology, the adaptation of organisms to their environment, biological diversity and integrated ecosystems.
Three lectures or two lectures and one tutorial; one term
Prerequisite: Registration in Level II or above
Antirequisite: BIOLOGY 1A03, 1A06, 1A03

SCIENCE 2L03 TEACHING AND LEARNING FOR TUTORS
The course provides an opportunity to explore teaching and learning using a variety of methods from the traditional lecture to more experiential methods (e.g., simulation). Self-directed learning will include experience in the classroom, reading and reflection and discussion.
Prerequisite: Registration in Level II or above of an Honours program in the Faculty of Science
Cross-list: SOC SCI 2L03
Antirequisite: BIOLOGY 3Q03, 3Q03, HTH SCI 4X03, INQUIRy 3S03, 4S03
Enrollment is limited.

SOCIAL SCIENCES

Notes:
1. All students are strongly recommended to complete SOC SCI 2EL0. Completion of SOC SCI 2EL0 is required for students who participate in an internship.
2. Students who previously completed SOC SCI 2E03 and 2F03 may substitute these units as Level II Sociology.
3. SOC SCI 2003, 2P03, 2003 and 2R03 may be substituted as units of Level II Sociology.

Courses If no prerequisite is listed, the course is open.

SOC SCI 2EL0 INTRODUCTION TO CAREER PLANNING THROUGH EXPERIENTIAL LEARNING
Provides an opportunity to engage in a variety of hands-on exploration activities to provide a strong foundation for career and education planning. Students will better understand the skills acquired in academic studies, extracurricular activities, work experience and how these relate to making occupational choices and job searching.
Six, two hour lectures/workshop; one term
Prerequisite: Registration in a Kinesthesiology or Social Sciences program Antirequisite: SOC SCI 3E0L0
(See Note 1 above.)

SOC SCI 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: Registration in Level II and above
Not open to students with credit or registration in: COMMERCCE 2A03, ECON 2M03, 2O06, 3O03, GEO 2S03, GEOG 2L03, 2N03, HTH SCI 1F03, 2A03, KINESIOL 1B03, 1B06, 3C03, POL SCI 2F06, 3N06, PSYCH 2G03, 2R03, 2F03, SOCIOLOGY 2Y03, 3H06, STATS 1A03, 1CC3 or any Level II, III or IV statistics course.

SOC SCI 2L03 TEACHING AND LEARNING FOR TUTORS
Provides an opportunity to explore teaching and learning using a variety of methods from the traditional lecture to more experiential methods (e.g., simulation).Self-directed learning will include experience in the classroom, reading and reflection, and discussion.
Three hours; one term
Prerequisite: Registration in Level II or above of an Honours Social Sciences, Kinesthesiology or a B.A./B.S.W. program
Cross-list: SCIENCE 2L03
Antirequisite: BIOLOGY 3Q03, 3Q03, HTH SCI 4X03, INQUIRy 3S03, 4S03
Enrollment is limited.
SOC SCI 2003  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
Not open to students with credit in SOC SCI 2E03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES 1 if the topic was Canadian Children.
(See Note 3 above.)

SOCI SCI 2F03  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
Not open to students with credit in SOC SCI 2F03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES if the topic was Canadian Adolescents.
(See Note 3 above.)

SOCI SCI 2G03  WOMEN AND FAMILY IN CANADA
A discussion of contrasting approaches to the study of the family from a Symbolic Interactionist perspective. Topics include mother-daughter, father-daughter, mother-son relationships and motherless daughters.
Three hours (lectures and discussion); one term
Not open to students with credit in SOC SCI 2E03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES if the topic was The Structure of the Family and the Role of Women in Historical and Contemporary Society.
(See Note 3 above.)

SOCI SCI 2H03  WOMEN AND WORK IN CANADA
The life cycle of contemporary women, the increased integration into the labour force and the impact this has had upon their traditional roles as wife and mother will be discussed. The experiences of women will be interfaced with those of men.
Three hours (lectures and discussion); one term
Not open to students with credit in SOC SCI 2F03 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES II if the topic was Women and Work in Canada.
(See Note 3 above.)

SOCIAL WORK
WEB ADDRESS:  http://www.sosoci.mcmaster.ca/socwork/
Kenneth Taylor Hall, Room 319
Ext. 23795

Faculty as of January 15, 2005

Director
Jane Aronson

Professors
Jane Aronson/B.Sc. (New University of Ulster), B.S.W., M.S.W. (McGill), Ph.D. (Toronto)
Ralph A. Brown/B.A., M.S.W. (Waterloo Lutheran), D.S.W. (UCLA)
Roy Cahn/B.S.W., M.S.W., Ph.D. (McGill)
James J. Rice/B.A. (Sir George Williams), B.S.W., M.S.W. (Calgary), Ph.D. (Exeter)

Associate Professors
Patricia M. Daenzer/B.A., B.S.W., M.S.W., Ph.D. (Toronto)
James W. Giadstono/B.A. (McGill), M.S.W. (British Columbia), Ph.D. (Toronto)
L. William Lee/B.A. (St. Thomas, Texas), M.S.W., Adv. Dip. S.W., Ed.D. (Toronto)
Shelia Sammon/B.A. (Nazareth College, New York), M.S.W. (Toronto)

Assistant Professors
Donna Balnes/Labour Studies) B.S.W. (Calgary), M.S.W. (Ottawa), Ph.D. (Toronto)
Gary C. Dumbrill/B.Sc. (South Bank, London), M.S.W. (York), Ph.D. (Toronto)
Christina Sinding/Health Studies) B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)

Associate Members
N.G. Agarwal/Business) B.A., M.A. (Delhi), Ph.D. (Minnesota)
M. Cooley/ Economics) B.A. (Indiana), M.S., Ph.D. (Wisconsin-Madison)

Practice Instructors
Michael Baikwill/B.A., B.S.W., M.A. (McMaster)
Suzanne Brown/B.A. (Wilfrid Laurier), B.S.W., M.S.W. (McMaster)
Donna Burris/B.A. (Sueph), M.S.W. (Toronto)
Chris Cardy/B.A., B.S.W. (McMaster), M.S.W. (Toronto)
Janice Chaplin/B.A. (Mount Allison), B.S.W., M.S.W. (McMaster)
Andrew Debicki/B.A., B.S.W., M.S.W. (McMaster)
Margaret Doma/B.A., M.S.W. (Wilfrid Laurier)
Mark Fraser/B.A. (Acadia), B.S.W., M.S.W. (McMaster)
M. Heather Gardner/B.A., B.S.W., M.S.W. (Toronto)
Rocco Gizzarelli/B.A., B.S.W. (McMaster), M.S.W. (York)
Nili Gomez-Perales/B.A. (Winnipeg), B.S.W. (McMaster), M.S.W. (Toronto)
Patricia Grunauer-Spinner/B.S.W. (Santiago), M.S.W. (McMaster)
Gordon Greenway/B.A., M.S.W. (Carleton)
Rosemary Hibbott/B.A., B.S.W. (McMaster), M.S.W. (York)
Barbara Hill/B.S.W. (Western Ontario), M.S.W. (Wilfrid Laurier)
Liz Lamb/B.A., B.S.W. (McMaster), M.S.W. (Carleton)
Maxine Lane/B.A., B.S.W. (McMaster), M.Ed. (Brock)
Kelly Lazure-Vaioniti/B.A., B.S.W. (McMaster), M.S.W. (York)
Carol McKenna/B.S.W. (Western Ontario), M.S.W. (Toronto)
John Medeiros/B.A. (Ottawa), M.S.W. (Toronto)
Jennifer Punton/B.S.W. (Memorial), M.S.W. (Carleton)
Anna Marie Pietrantonio/B.A. (McMaster), M.S.W. (Toronto)
Tony Quick/B.A. (St. Mary's), M.S.W. (Dalsihouse)
Shelley M. Rempel/B.A. (Toronto), M.A. (McMaster)
Sandy Rowan/B.A. (Concordia), B.S.W., M.S.W. (McGill)
Brenda Symons-Moulton/B.A., B.S.W., M.S.W. (Wilfrid Laurier)
Helen Tobias/B.A., B.S.W., M.S.W. (McMaster), M.S.W. (Wilfrid Laurier)
Karen Van Dyke/B.A. (Dorat College), M.S.W. (SUNY-Buffalo)

School Notes:
1. SOC WORK 1A06 is available to all students.
2. With the exception of SOC WORK 4G03, the following courses are available for elective credit for students enrolled in Level III or above of a non-Social Work program. SOC WORK 1A06 is a prerequisite. Enrolment for such students is limited and places are assigned on a first come basis.
SOC WORK 3C03  Social Aspects of Health and Illness
SOC WORK 3H03  Justice and Social Welfare
SOC WORK 9C03  Human Sexuality in Social Context
SOC WORK 4B03  Adult Family Violence
SOC WORK 4C03  Racism and Social Marginalization in Canadian Society
SOC WORK 4F03  Child Abuse
SOC WORK 4G03  Selected Topics
SOC WORK 4I03  Social Work and Indigenous Peoples
SOC WORK 4J03  Social Change: Social Movements and Advocacy
SOC WORK 4L03  Social Work with an Aging Population
SOC WORK 4Q03  Inquiry into Anti-Oppression: Facilitating the Dialogue
SOC WORK 4R03  Social Work with Women
SOC WORK 4W03  Child Welfare

Courses
All courses are open only to Social Work students unless otherwise specified. (See Notes 1 and 2 above.)
SOC WORK 1A06  INTRODUCTION TO SOCIAL WORK
General Introduction to the values, perspectives, ideologies, settings and methods of social work within the broad field of social welfare. This course combines a practical and theoretical orientation to the field. Lectures and discussions; two terms
(See Note 1 above.)
SOC WORK 2A06  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, exercises; two terms
Antirequisite: SOC WORK 2C03, 2D06, 2D03
Enrolment is limited.
SOC WORK 2B03 SOCIAL WELFARE: GENERAL INTRODUCTION
Purpose, values underlying development of social welfare programs;
Canada's social security system in historical perspective.
Lectures, discussion; one term
Cross-list: LABR ST 2B03
Prerequisite: SOC WORK 2B06
Students in a Social Work program must register for this course as
SOC WORK 2B03.

SOC WORK 2B03 SOCIAL WELFARE: ANTI-OPPRESSIVE
POLICIES AND PRACTICES IN SOCIAL WORK
Exploration and analysis of systematic patterns of oppression, their
relationships to social policies and practices and the implications for social
work through a variety of instruction including experiential exercises.
Topics could include: race, gender, disability, sexual orientation.
Exercises, lectures, discussion; one term
Cross-list: LABR ST 2B03
Prerequisite: SOC WORK 2B06
Students in a Social Work program must register for this course as
SOC WORK 2B03.

SOC WORK 2E03 HUMAN GROWTH AND DEVELOPMENT
IN THE SOCIAL ENVIRONMENT
Human development throughout the life span with emphasis on the inter-
action between the personal and social contexts and social work con-
cerns at each developmental stage.
Lectures, discussion; one term

SOC WORK 3A03 SOCIAL WORK WITH
INDIVIDUALS AND GROUPS
Examination of theories of social work intervention and current practice
models of intervention with individuals and groups.
Seminar; one term
Prerequisite: SOC WORK 3N03, 3R03, 4N03

SOC WORK 3C03 SOCIAL ASPECTS OF
HEALTH AND ILLNESS
Exploration of the meaning of health and sickness in our society. Organi-
dation and delivery of health care. Consideration of ethical and other
issues.
Lectures, discussion and selective use of community resources; one term
Prerequisite: Registration In a Social Work program; or SOC WORK 1A06
and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level
III or above of a non-Social Work program who have completed SOC
WORK 1A06.
Enrolment is limited.

SOC WORK 3D03 GENERAL SOCIAL WORK I
Social work intervention processes; interviewing; development of basic
skills in formation of relationships with individuals, families, groups and
communities.
Seminar, workshops; two terms
Option of equivalent summer block in combination with SOC WORK 3D06
(summer). Priority for summer block given to B.S.W. students.
Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2BB3; and
SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03
or SOC WORK 2E03
Corequisite: SOC WORK 3D06
Antirequisite: SOC WORK 3D09
Credit in this course is dependent on achieving a minimum grade of C+ and
a Pass in SOC WORK 3D06.
Enrolment is limited.

SOC WORK 3D05 FIELD PRACTICUM I
Field practicum to develop basic intervention and interviewing skills, par-
ticularly in the formation of relationships with individuals, families, groups
and communities. Students participate in defining learning goals and
experiences.
Field experience equivalent to 15 hours per week; two terms
Option of equivalent summer block placement in combination with SOC
WORK 3D06 taken in the summer. Priority for summer block given to
B.S.W. students.
Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2BB3; and
SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03
or SOC WORK 2E03
Corequisite: SOC WORK 3D06
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 SOC WORK 3D06.
Enrolment is limited.

SOC WORK 3H03 JUSTICE AND SOCIAL WELFARE
Human rights and the role of law in enhancing civil liberties in Canada.
Social work, law and social change. Study of selected issues and review of
administrative discretion.
Seminar; one term
Prerequisite: Registration in a Social Work program; or SOC WORK
1A06 and registration in Level III or above of any program
This course may be taken as elective credit by undergraduates in Level
III or above of a non-Social Work program who have completed SOC
WORK 1A06.
Enrolment is limited.

SOC WORK 3003 HUMAN SEXUALITY IN SOCIAL CONTEXT
Basic information on anatomy, physiology, psychology and sociology of
sexuality and fertility. Attitudinal self-awareness, communication skills,
values regarding sexual identity and roles; analysis of policy issues.
Seminar; one term
Prerequisite: Registration in a Social Work program; or SOC WORK
1A06 and registration in Level III or above of any program

This course may be taken as elective credit by undergraduates in Level
III or above of a non-Social Work program who have completed SOC
WORK 1A06.
Enrolment is limited.

SOC WORK 4B03 ADULT FAMILY VIOLENCE
To assist students in acquiring knowledge and perspectives concerning
social policy issues pertaining to adult violence with emphasis on violence
against women.
Seminar; one term
Prerequisite: Registration in a Social Work program; or SOC WORK
1A06 and registration in Level III or above of any program
Not open to students with credit or registration in SOC WORK 4Z03
SELECTED ISSUES IN SOCIAL WELFARE POLICY, if the issue was
Family Violence.
This course may be taken as elective credit by undergraduates in Level
III or above of a non-Social Work program who have completed SOC
WORK 1A06.
Enrolment is limited.

SOC WORK 4C03 RACISM AND SOCIAL MARGINALIZATION
IN CANADIAN SOCIETY
This course involves critical analysis of the construction of social rela-
tions in Canadian society. Students will have the opportunity to examine
variables such as race, ethnicity and cultural specificity in the social
ascription and adaptation process.
Seminar; one term
Prerequisite: Registration in a Social Work program; or SOC WORK
1A06 and registration in Level III or above of any program
Not open to students with credit or registration in SOC WORK 4Z03
SELECTED ISSUES IN SOCIAL WELFARE POLICY, if the issue was
Racial and Cultural issues in Canadian Welfare.
This course may be taken as elective credit by undergraduates in Level
III or above of a non-Social Work program who have completed SOC
WORK 1A06.
Enrolment is limited.

SOC WORK 4D06 GENERAL SOCIAL WORK II
Seminar to deepen understanding and further develop practice skills.
Two terms
Option of equivalent block placement in combination with SOC WORK 4D06
Corequisite: SOC WORK 3D06, 3D09
Antirequisite: SOC WORK 4D12
Credit in this course is dependent on receiving a minimum grade of C+ and
a Pass in SOC WORK 4D06.
Enrolment is limited.

SOC WORK 4D06 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.
Option of equivalent block placement in conjunction with SOC WORK 4D06
Corequisite: SOC WORK 3D06, 3D09
Antirequisite: SOC WORK 4D12
Credit in this course is dependent on receiving a Pass and a minimum
grade of C+ in SOC WORK 4D06.
Enrolment is limited.
SOC WORK 4R03: SOCIAL WORK WITH WOMEN
Critical examination of the potential of social policies and programs, community organizations and service practices to challenge women's systemic disadvantage and enhance women's welfare.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Antirequisite: SOC WORK 4E03, 4T03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 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: Credit or registration in SOC WORK 3D06 and 3D06; or permission of the instructor
Antirequisite: SOC WORK 3M03

SOCIETY

WEB ADDRESS: http://socserv.socsci.mcmaster.ca/sociology/
Kenneth Taylor Hall, Room 627
Ext. 24481

Faculty of as of January 15, 2005

Chair
Carl Cunego

Professors
W. Peter Archibald/B.A. (Mt. Allison), M.A. (British Columbia), Ph.D. (Michigan)
Carl J. Cunego/B.A., M.A., Ph.D. (Waterloo)
Margaret Denton/ (Gerontological Studies) B.A., M.A., Ph.D. (McMaster)
John Fox/B.A., M.A., Ph.D. (Michigan)
Cyni H. Levitt/B.A., M.A. (Waterloo), Ph.D. (Freie Universitat, Berlin)
Charlene Mill/B.A. (Ottawa), M.A. (McMaster), Ph.D. (Toronto)
Victor Satzewich/B.A., M.A. (Saskatchewan), Ph. D. (Glasgow)
William B. Shaffer/B.A., M.A., Ph. D. (McGill)
Philip G. White/Kinesiology) B.Sc. (London), M.Sc., Ph.D. (Waterloo)

Associate Professors
Art Budos/B.A. (San Jose State), M.A., Ph.D. (California-Los Angeles)
Ivy Bourgeault (Health Studies) B.Sc. (Alberta) M.Sc., Ph. D. (Toronto)
Scott Davies/B.A. (Toronto), M.A. (McMaster), Ph.D. (Toronto)
Graham K. Knight/B.A. (Kwantlen) M.A., Ph.D. (McMaster)
Neil McLaughlin/B.A., M.A. (Cleveland State), Ph.D. (City University of New York)
Dorothy Pawluch/B.A. (Laurentian), M.A., Ph.D. (McGill)
Robert H. Storey/(Labour Studies) B.A. (Toronto), M.A. (Dalhousie), Ph.D. (Toronto)
Pamela Sugiman/B.A., M.A., Ph.D. (Toronto)

Assistant Professors
Robert Andersen/B.A., M.A. (Western Ontario), Ph.D. (McMaster)
Michael Atkinson/B.A. (Waterloo), M.A. (McMaster), Ph.D. (Calgary)
Lori Campbell/Gerontology) B.A., M.A. (Western Ontario), Ph.D. (Guelph)
Tina Petri/B.A. (California, Santa Cruz), M.A., Ph.D. (New York)
James Gillett/Health Studies) B.A. (California), M.A., Ph.D. (McMaster)
Jeremy Stolow (Communication Studies) B.A. (Toronto), M.A., Ph.D. (York)

SOCIWORK 4F03: CHILD ABUSE
Societal and familial context; types of child abuse; child welfare policies; prevention, protection and treatment.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Not open to students with credit in SOC WORK 4G03 if the topic was Child Abuse.
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 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.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
SOC WORK 4G03 may be repeated, if on a different topic.
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4H03: 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.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Not open to students with credit in SOC WORK 4G03 if the topic was Social Work and Indigenous Peoples.
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4J03: SOCIAL CHANGE: SOCIAL MOVEMENTS AND ADVOCACY
Critical examination of the meaning of social change as a concept and event. Review of strategies of social change and of attempts to effect social change.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4L03: SOCIAL WORK WITH AN AGING POPULATION
Analysis of the context of aging within Canadian society; examination of selected topics related to social welfare policies and models of social work practice with the elderly.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Antirequisite: SOC WORK 4A03, 4V03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.

SOC WORK 4M03: SOCIAL WORK WITH COMMUNITIES
Analysis of major community work strategies, historical antecedents, current developments and future potential in Canada. Student participation in the analysis of a community project is expected.
Seminars; one term
Prerequisite: Credit or registration in SOC WORK 3D06 and 3D06; or permission of the instructor

SOC WORK 4N03: INQUIRY INTO ANTI-OPPRESSION: FACILITATING THE DIALOGUE
The study of anti-oppression policies and practice combined with practical application in the form of facilitating small group discussions that focus on issues of social justice.
Seminars, discussion, exercises; one term
Prerequisite: SOC WORK 3D06, 3D06 and permission of the instructor

SOCIWORK 4P03: SOCIAL WORK WITH WOMEN
Critical examination of the potential of social policies and programs, community organizations and service practices to challenge women's systemic disadvantage and enhance women's welfare.
Seminars; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Antirequisite: SOC WORK 4E03, 4T03
This course may be taken as elective credit by undergraduates in Level III or above of a non-Social Work program who have completed SOC WORK 1A06.
Enrolment is limited.
Department Notes:

1. Students should consult the Department's Handbook for Undergraduates, 2005-2006, which will be available prior to registration, for fuller course descriptions and any changes in the list of courses offered in 2005-2006. Students should check the Handbook in order to find the term in which 'one term' courses are offered. Please note that some courses in Sociology may require familiarity with the computer, including the Internet.

2. SOCIO 1A06 and several other courses are divided into independent sections. For more information, see the Sociology Department's Handbook for Undergraduates, 2005-2006. This booklet gives course descriptions for the various SOCIO 1A06 sections.

3. Prerequisite: Academically exceptional students wishing to take a course for which they do not have the prerequisite may seek permission of the instructor to register. However, priority is given in all Level III limited-enrolment courses to Sociology students, and in all Level IV courses to Honours Sociology students.

4. Limited enrolment courses: Level III courses identified as Enrolment is limited have a limit of 65 students with the exception of the Methods courses, SOCIO 3I03, 3I03, and 3W03 which have smaller enrolments. Priority will be given to Sociology students.

Limited enrolment courses: Enrolment in all Level IV courses is limited with the exception of SOCIO 4M03, 4M04 and 4N03. Admission to Level IV courses is by pre-registration ballot. All Level IV courses are normally only open to students registered in Level IV of an Honours Sociology program.

All students requiring registration in Level IV courses for the 2005-2006 Fall/Winter Session including part-time degree students, must obtain a ballot sheet from the Department Office (Kenneth Taylor Hall, Room 627) no later than April 29, 2005. Students must return their ballot no later than May 9, 2005. Permission from the Department will be required to complete registration in Level IV limited enrolment courses.

Courses

If no prerequisite is listed, the course is open.

SOCIO 1A06  AN INTRODUCTION TO SOCIOLOGY
A survey of the areas of research which interest the sociologist. Interpretation of human action from the standpoint of the group.
Two lectures, one tutorial, two terms

SOCIO 2C06  DEVIANT BEHAVIOUR
An analysis of deviant behaviour and conformity in relation to social structure and processes, and a discussion of problems of control within the social system.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIO 2D08  THE HUMAN GROUP
An examination of the individual in social interaction, with emphasis upon the relationships among individuals, social interaction and social structure.
Three hours (lectures and discussion); two terms
Prerequisites: SOCIO 1A06
Enrolment is limited.

SOCIO 2E08  RACIAL AND ETHNIC GROUP RELATIONS
The course deals with the study of racial and ethnic group relations in Canada and the United States.
Three hours (lectures and discussion); two terms
Prerequisites: SOCIO 1A06

SOCIO 2I03  SOCIOLOGY OF ORGANIZATIONS
A theoretical and empirical analysis of formal and informal organizational structures and processes in the major sectors of modern industrial society.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06
Antirequisite: LABR 2103, 2106, 3I03, SOCIO 2I06

SOCIO 2L03  MEDIA INSTITUTIONS
An examination of the institutional structure and production processes of the press, television, and radio. Topics include news gathering, television and radio program production and the relationship between media production and management.
Three hours (lectures); one term
Prerequisite: CMST 1A03 and 1B03; or SOCIO 1A06
Cross-list: CMST 2L03
Enrolment is limited.

SOCIO 2P06  SOCIOLOGY OF EDUCATION
A comprehensive analysis of educational institutions in modern society.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIO 2Q06  SOCIOLOGY OF GENDER
A theoretical and empirical examination of gender differences and gender inequalities with a focus on women's experiences.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIO 2R03  PERSPECTIVES ON SOCIAL INEQUALITY
This course will introduce the student to major theories of social inequality, such as the Marxist, Weberian and structural-functionalist perspectives.
Three hours (lectures and discussion); one term
Prerequisite: SOCIO 1A06
Antirequisite: SOCIO 2006

SOCIO 2R03  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: SOCIO 1A06
Antirequisite: SOCIO 2006

SOCIO 2S06  INTRODUCTION TO SOCIOLOGICAL THEORY
An introduction to the foundations, rise and development of sociological theory.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIO 2U06  SOCIOLOGY OF THE FAMILY
An analysis of kinship and family units in comparative, historical, and contemporary perspective.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06

SOCIO 2V06  OCCUPATIONS AND PROFESSIONS
An examination of the occupational structure of industrial society, the changing nature of work, and problems associated with such change.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIO 1A06

SOCIO 2W03  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: Registration in a Sociology or Social Work program
Cross-list: ANTHROP 2203
Antirequisites: CMST 2A03, GEO 2HR3, GERONTOL 2C03, HEALTHST 2803

SOCIO 3A03  EUROPEAN SOCIOLOGICAL THEORY
An advanced examination of classical and contemporary European sociological theory.
Three hours (lectures and discussion); one term
Prerequisite: SOCIO 2S06 and registration in Level III or IV of an Honours Sociology program
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIO 3P03 or 3P33.

SOCIO 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: At least 18 units of Sociology
Enrolment is limited.

SOCIO 3C03  MEDIA AND SOCIAL ISSUES
Media representations of social problems such as homelessness and violence are examined comparatively in light of journalistic ethics and ideology, the relations between media and sources, and the constraints on objectivity.
Three hours (lectures); one term
Prerequisite: Registration in a Communication Studies or Sociology program
Cross-list: CMST 3C03
Enrolment is limited.

SOCIOLOGY 299
SOCIOL 3CC3

SOCIETY OF THE FAMILY
AND THE LIFE CYCLE

An advanced course allowing detailed study of the family and the life cycle. Special attention will be paid to the mid and later years.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2U06 or registration in a Combined Honours in Sociology and Gerontology program
Antirequisite: GERONTOL 3M03
Enrolment is limited.

SOCIOLOGY

SOCIOLOGY 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: SOCIOL 2U06
Enrolment is limited.

SOCIOLOGY 3G03

SOCIOLOGY OF HEALTH CARE

Selected issues concerning forms of providing health care.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOLOGY 3G33

SOCIAL STUDIES

An advanced course allowing detailed study of selected topics in the Sociology of Deviance.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2C06
SOCIOL 3G33 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOLOGY 3H03

RESEARCH TECHNIQUES
AND DATA ANALYSIS

A comprehensive introduction to statistical principles of research design and data analysis in the social sciences.

Three hours (lectures and labs); two terms
Prerequisite: Registration in any program in Sociology. Students in Honours Anthropology, Gerontology and Labour Studies will have second priority.
Not open to students with credit or registration in any six units of Research Methods as prescribed by all other Social Sciences programs; SOCIOL 2Y03; all Statistics courses except STATS 1A03, 1L03, 2D03, 3S03, 3U03, 4H03.
Enrolment is limited.

SOCIOLOGY 3H33

SOCIOLOGY OF HEALTH

Sociological approaches to the study of health and Illness.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A05
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOLOGY 3I03

SURVEY METHODS

An introduction to survey research methods in the social sciences, including issues of research design, data collection, and data analysis.

Three hours (seminar and discussion); one term
Prerequisite: SOCIOL 2203; and registration in or completion of SOCIOL 3H06 (or the equivalent for students enrolled in a Combined Honours Program); and registration in Honours Sociology
Antirequisite: GERONTOL 3R03
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3I03 or 3W03.

SOCIOLOGY 3J03

SPECIAL TOPICS IN
SOCIOLOGICAL ANALYSIS I

An examination of selected topics of contemporary interest to sociologists. Students should consult the Department concerning the topics to be examined.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
SOCIOL 3J03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

SOCIOLOGY 3K03

SPECIAL TOPICS IN
SOCIOLOGICAL ANALYSIS II

Same as SOCIOL 3J03.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 3K03
SOCIOL 3K03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

SOCIOLOGY 3K03

GENOCIDE:
SOCIOLOGICAL AND POLITICAL PERSPECTIVES

An examination of genocides and other extreme crimes against humanity.

Three hours (lectures and discussion); one term
Cross-list: POL SCI 3K03
Prerequisite: Registration in Level III or above
Antirequisite: SOC SCI 2C03
Enrolment is limited. Priority will be given to students registered in a Political Science or Sociology program.
This course is administered by the Department of Political Science.

SOCIOLOGY 3L03

SOCIOLOGY OF WORK
AND LABOUR MARKETS

A consideration of the manner in which labour markets are structured and how they influence the access that people have to employment.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited.

SOCIOLOGY 3M03

QUALITATIVE RESEARCH METHODS

This course will provide a detailed study of selected qualitative methods in Sociology.

Three hours (lectures and discussion); one term
Prerequisite: Registration in Honours Sociology
Antirequisite: GERONTOL 3R03
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and Level IV Honours Sociology students will have access to either this course, SOCIOL 3M03 or 3W03.

SOCIOLOGY 3P03

AMERICAN SOCIOLOGICAL THEORY

An advanced examination of classical and contemporary American sociological theory.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2S06 and registration in Level III or IV of an Honours Sociology program
Antirequisite: SOCIOL 3A06
Alternates with SOCIOL 3P3.
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3A03 or 3P3.

SOCIOLOGY 3P3

CANADIAN SOCIOLOGICAL THEORY

An examination of the more or less unique contributions of English Canadians to sociological theory. Emphasis is on the Toronto school, and its anti-nationalist preoccupations and critics.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2S06 and registration in Level III or IV of an Honours Sociology program
Alternates with SOCIOL 3P03.
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3A03 or 3P3.

SOCIOLOGY 3W03

HISTORICAL METHODS IN SOCIOLOGY

An examination of methods for incorporating historical data and archival sources into sociological argument.

Three hours (seminar and discussion); one term
Prerequisite: Registration in Honours Sociology
Enrolment is limited. However, the Department of Sociology guarantees that all Level III and IV Honours Sociology students will have access to either this course, SOCIOL 3W03 or 3M03.

SOCIOLOGY 3X03

SOCIOLOGY OF AGING

This course deals with changing population structure, economic support of the aged, family of later life, the sociology of retirement, widowhood, death, bereavement, and institutionalization.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Not open to students registered in a Gerontology program as of September 1998.
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOLOGY 3Z03

ETHNIC RELATIONS

An analysis of political, social and economic change in selected locales.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.
SOCIO 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 4A3 SELECTED TOPICS IN THE SOCIOLOGY OF THE FAMILY
An intensive examination of selected problems in the sociology of the family. Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Not open to students with credit in SOCIOL 4G3 if on a similar topic. SOCIOL 4A3 may be repeated, on a different topic, to a total of six units. Enrolment is limited.

SOCIO 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Not open to students with credit in SOCIOL 4J03 or 4K03 if on a similar topic. Enrolment is limited.

SOCIO 4D03 PERSPECTIVES ON SOCIOLOGICAL THEORY
A discussion of various sociological and non-sociological critiques of sociological theory. Three hours (seminar); one term
Prerequisite: SOCIOL 2S06 and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 4G03 THE SOCIAL PRODUCTION OF 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 4G3 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: SOCIOL 2C06 and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. SOCIOL 4G3 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

SOCIO 4H03 SELECTED TOPICS IN THE SOCIOLOGY OF ORGANIZATIONS
An advanced course allowing detailed study of aspects of organizational analysis of special interest. Three hours (seminar); one term
Prerequisite: SOCIOL 2I03 or 2I06; and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. SOCIOL 4J03 may be repeated, if on a different topic. Enrolment is limited.

SOCIO 4J3 SOCIOLGY OF CYBERSPACE/INTERNET
The purpose of this course is to examine the economic, political, and social organization of the Internet, and its social effects, in such areas as education, work, and leisure. Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 4K03 SELECTED TOPICS IN SOCIOLOGY II
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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. SOCIOL 4K03 may be repeated, if on a different topic. Enrolment is limited.

SOCIO 4M03 DIRECTED RESEARCH I 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. One term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOCIO 4M6 DIRECTED RESEARCH II 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOCIO 4N03 DIRECTED RESEARCH III FOR HONOURS STUDENTS
Same as SOCIOL 4M03. One term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOCIO 4P03 ISSUES IN THE SOCIOLOGY OF AGING
A study of selected issues in the sociology of aging such as sociodemographic changes, changes in the family, social and health services, retirement, political economy, and theoretical approaches in aging. Three hours (seminar); one term
Prerequisite: GERONTOL 1A03 or SOCIOL 3X03; and registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Antirequisite: GERONTOL 4K03, SOCIOL 4P03 Enrolment is limited.

SOCIO 4R03 INDIVIDUAL AND SOCIETY
An intensive examination of selected problems involving the relationship of individuals to social structures. Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. Enrolment is limited.

SOCIO 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: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department. SOCIOL 4U03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.
Enrolment is limited to 24 students. Priority will be given first to students registered in the Theatre and Film Studies program, and then to students registered in the Performance Studies Stream of the Communication Studies program. Departmental permission required.

**THTR&FLM 2BB3 CREATING PERFORMANCE ENVIRONMENTS**

An introduction to different techniques used to create an environment in which a specific performance can become meaningful for a particular audience. Students will participate in directed work with theatre artists, who may include designers, technicians and public relations specialists, on program productions.

One studio; one term. (60 practicum hours including evenings and weekends.) Prerequisite: Registration in a program in Theatre & Film Studies, Multimedia, Art or Communication Studies (Performance Studies Stream). Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: DRAMA 3D03, THTR & FLM 2B03

Enrolment is limited to 30 students. Priority will be given first to students registered in the Theatre & Film Studies program, and then to students registered in the Multimedia, Art, and Communication Studies (Performance Studies Stream) programs. Departmental permission required.

**THTR&FLM 2C03 DRAMATIC FORMS**

Formerly: DRAMA 2C03

Different performance techniques and conventions demand particular forms of dramatic narrative. By comparing the ways similar stories are told in different media and genres, students identify the structuring elements of dramatic texts written for live performance, film television and music theatre.

Three hours (lectures and group presentations); one term

Prerequisite: Registration in a program in Theatre & Film Studies, Multimedia, Art, or Communication Studies (Performance Studies Stream).

Cross-list: CMST 2F03, COMP Lit 2D03

Antirequisite: DRAMA 2C03, 2D06

**THTR&FLM 2D03 HISTORY OF WESTERN THEATRE PERFORMANCE TO THE EIGHTEENTH CENTURY**

Formerly: DRAMA 2D03

A survey of the traditions of Western theatre production from Classical Greece to the Eighteenth Century including architecture, design, stage machinery, the organization of production, the training and preparation of the actor, and audience reception.

Three lectures; one term

Prerequisite: Registration in a program in Theatre and Film Studies or Communication Studies (Cultural Studies or Performance Studies Stream).

Antirequisite: DRAMA 2D03, 2M03, 3G03

**THTR&FLM 2E03 NEW MEDIA AND PERFORMANCE**

Formerly: DRAMA 2E03

This course will explore critical issues in new media and examine the ways in which new media shape the creation, reception and interpretation of forms of performance.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Theatre and Film Studies or Communication Studies (Cultural Studies or Performance Studies Stream).

Antirequisite: DRAMA 2B03, 2D03

Cross-list: CMST 2S03

Enrolment is limited to 50 students.

**THTR&FLM 2F03 FILM HISTORY TO THE SECOND WORLD WAR**

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, one tutorial; one term

Prerequisite: Registration in Level II or above

Cross-list: ART HIS 2G03, CMST 2X03 (formerly CMST 2X06)

Antirequisite: DRAMA 2K06

Enrolment is limited to 150 students.

**THTR&FLM 2G03 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).

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2E03, CMST 2X03

This course is administered by the Department of Classics.

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**SOFTWARE ENGINEERING**

(SEE COMPUTING AND SOFTWARE)

**SPANISH**

(SEE MODERN LANGUAGES AND LINGUISTICS, HISPANIC STUDIES)

**STATISTICS**

(SEE MATHEMATICS AND STATISTICS)

**TECHNOLOGY**

(SEE MANUFACTURING TECHNOLOGY AND ENGINEERING TECHNOLOGY)

**THEATRE & FILM**

WEB ADDRESS: http://www.humanities.mcmaster.ca/~sota/index.html

Togo Salmon Hall, Room 414

Ext. 27671

Courses and programs in Theatre & Film are administered within the School of the Arts of the Faculty of Humanities.

Note:

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.

**THTR&FLM 1A03 INTRODUCTION TO THEATRICAL PERFORMANCE**

An exploration of the ways theatre artists bring different production elements and performance techniques together to get audiences thinking about important social issues.

Two lectures, one tutorial; one term

Antirequisite: DRAMA 1A03, 1A06, 1A3

**THTR&FLM 1B03 INTRODUCTION TO 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, one tutorial, plus one weekly film screening; one term

Antirequisite: DRAMA 2K06

**THTR&FLM 2A03 PERFORMANCE IDENTITY IN ACTION**

Students are introduced to practices used by performers to create alternate social identities in ways that allow us to reflect on the actions that create contemporary social relationships.

Two studios; one term

Prerequisite: Registration in a program in Theatre and Film Studies or Communication Studies (Performance Studies Stream). Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: DRAMA 2A06, THTR & FLM 2A06

Enrolment is limited to 24 students. Priority will be given first to students registered in the Theatre and Film Studies program, and then to students registered in the Performance Studies Stream of the Communication Studies program. Departmental permission required.

**THTR&FLM 2B03 CREATING PERFORMANCE ENVIRONMENTS**

An introduction to different techniques used to create an environment in which a specific performance can become meaningful for a particular audience. Students will participate in directed work with theatre artists, who may include designers, technicians and public relations specialists, on program productions.

One studio; one term. (60 practicum hours including evenings and weekends.) Prerequisite: Registration in a program in Theatre & Film Studies, Multimedia, Art or Communication Studies (Performance Studies Stream). Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

Antirequisite: DRAMA 3D03, THTR & FLM 2B03

Enrolment is limited to 30 students. Priority will be given first to students registered in the Theatre & Film Studies program, and then to students registered in the Multimedia, Art, and Communication Studies (Performance Studies Stream) programs. Departmental permission required.

**THTR&FLM 2C03 DRAMATIC FORMS**

Formerly: DRAMA 2C03

Different performance techniques and conventions demand particular forms of dramatic narrative. By comparing the ways similar stories are told in different media and genres, students identify the structuring elements of dramatic texts written for live performance, film television and music theatre.

Three hours (lectures and group presentations); one term

Prerequisite: Registration in a program in Theatre & Film Studies, Multimedia, Art, or Communication Studies (Performance Studies Stream).

Cross-list: CMST 2F03, COMP Lit 2D03

Antirequisite: DRAMA 2C03, 2D06

**THTR&FLM 2D03 HISTORY OF WESTERN THEATRE PERFORMANCE TO THE EIGHTEENTH CENTURY**

Formerly: DRAMA 2D03

A survey of the traditions of Western theatre production from Classical Greece to the Eighteenth Century including architecture, design, stage machinery, the organization of production, the training and preparation of the actor, and audience reception.

Three lectures; one term

Prerequisite: Registration in a program in Theatre and Film Studies or Communication Studies (Cultural Studies or Performance Studies Stream).

Antirequisite: DRAMA 2D03, 2M03, 3G03

**THTR&FLM 2E03 NEW MEDIA AND PERFORMANCE**

Formerly: DRAMA 2E03

This course will explore critical issues in new media and examine the ways in which new media shape the creation, reception and interpretation of forms of performance.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above of a program in Theatre and Film Studies or Communication Studies (Cultural Studies or Performance Studies Stream).

Antirequisite: DRAMA 2B03, 2D03

Cross-list: CMST 2S03

Enrolment is limited to 50 students.

**THTR&FLM 2F03 FILM HISTORY TO THE SECOND WORLD WAR**

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, one weekly film screening; one term

Prerequisite: Registration in Level II or above

Cross-list: ART HIS 2G03, CMST 2X03 (formerly CMST 2X06)

Antirequisite: DRAMA 2K06

Enrolment is limited to 150 students.

**THTR&FLM 2G03 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).

Three lectures; one term

Prerequisite: Registration in Level II or above

Cross-list: CLASSICS 2E03, CMST 2X03

This course is administered by the Department of Classics.
THTR&FLM 2H03 THE CONTEMPORARY JAPANESE FILM
This course examines the development of Japanese films since the Second World War, including contemporary feature films and animation, exploring the rich legacy of directors such as Akira Kurosawa, Kon Ichikawa, Juzo Itami and Masayuki Suo, and animation directors such as Hayao Miyazaki and Isao Takahata.
Two lectures, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above
Cross-list: JAPAN ST 2F03
Offered in alternate years.

THTR&FLM 2I03 ITALY THROUGH THE CAMERA LENS
This course takes the student on a journey through fifty years of Italian cinematic history using nine movies (in Italian, with subtitles) that represent some of the most critical moments related to Italian culture in post WWII period. Taught in English.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: ITALIAN 2B03

THTR&FLM 2T03 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: Registration in Level II or above
Cross-list: CMST 2T03, MUSIC 2F03
Antirequisite: SADM 3A03

THTR&FLM 3C03 MANAGING PERFORMANCE ENVIRONMENTS
A survey of the skills and practices involved in managing performance environments with special attention to issues in production management and stage/studio management. Students will undertake management of different aspects of Theatre & Film Studies productions as part of their course of study.
Term one: two hours; Term two: one hour (Workshop and practical exercises; 40 hours including evenings and weekends)
Prerequisite: Registration in a program in Theatre & Film Studies and a grade of at least B- in DRAMA 3D03, THTR & FLM 2B03 or 2B03. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.
Antirequisite: THTR & FILM 3C03
Enrolment is limited to 18 students. Departmental permission required.

THTR&FLM 3D03 WESTERN THEATRE HISTORY: 1700-1885
A study of the major movements shaping Western theatre from the Restoration to the rise of Naturalism.
Two hours, plus play readings; one term
Prerequisite: Six units of Level II Drama or Theatre & Film
Offered in alternate years.

THTR&FLM 3E03 TWENTIETH-CENTURY THEATRE
An exploration of important formal and social experiments that marked twentieth-century theatre and paved the way for contemporary theatre forms.
Three hour lecture and discussion; one term
Prerequisite: Six units of Level II Drama or Theatre & Film; or registration in Level III or IV of a Comparative Literature program and three units of Drama or Theatre & Film.
Cross-list: COMP LIT 3D03
Offered in alternate years.

THTR&FLM 3F03 DEVELOPMENT OF CANADIAN THEATRE
Formerly: DRAMA 3F03
A study of the development of theatrical performance in English Canadian, Québécois, First Nations and culturally diverse communities with an emphasis on the period since 1967.
Three hours (lecture and discussion); one term
Prerequisite: Six units of Level II Drama or Theatre & Film
Antirequisite: DRAMA 3E03
Offered in alternate years.

THTR&FLM 3G03 THEATRE AND COMMUNITY DEVELOPMENT
Formerly: DRAMA 3G03
Students will explore the different approaches to community-based theatre generated in a range of social and cultural milieu and will analyze the sense of community in popular and community-based theatre projects.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: CMST 3G03
Antirequisite: DRAMA 3M03
Offered in alternate years.

THTR&FLM 3H03 COMPARATIVE THEATRE
Formerly: DRAMA 3G33
A comparison of two or more theatrical traditions.
Three lectures; one term
Prerequisite: Six units of Level II Drama or Theatre & Film; or registration in Level III or IV of a Comparative Literature program and three units of Drama or Theatre & Film
Cross-list: COMP LIT 3G03
Antirequisite: DRAMA 3G33
Offered in alternate years.

THTR&FLM 3I03 THEORIZING CULTURE THROUGH PERFORMANCE
Students will explore artistic practises in making performances and will analyse how artists work with theories, texts, spaces, bodies, audiences and produce challenges to artistic, social and political norms.
Three hours; one term
Prerequisite: One of ART HIST 2E03, 3A03, CMST 2G03, 2F03, 2S03, THTR&FLM 2C03, 2D03, 2E03
Cross-list: ART HIST 3L03, CMST 3L03
Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE, if taken in 2001-2002, or credit in THTR&FLM 2E03 if taken in 2002-2003.
Offered in alternate years.

THTR&FLM 3J03 CRITICAL STUDY OF PLAYS IN PERFORMANCE
An exploration of the critical study of theatre performances. Students will be required to direct a final performance of a professional theatre companies (i.e., Stratford Festival, Shaw Festival, Hamilton or Toronto theatres).
Three hours, plus weekly film screening; one term
Prerequisite: One of DRAMA 2D03, L03, THTR&FLM 2C03 or 2D03
Antirequisite: DRAMA 3P06
THTR&FLM 3J03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

THTR&FLM 3L03 FILM HISTORY: 1941 TO THE PRESENT
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.
Three hours lecture and discussion; one term
Prerequisite: One of DRAMA 2D03, L03, THTR&FLM 2C03 or 2D03
Antirequisite: DRAMA 3D03
Offered on an irregular rotation basis.

THTR&FLM 3M03 TOPICS IN DRAMATIC PERFORMANCE I
An exploration of contemporary dramatic performance trends since 1960. Topics will cover dramatic performance in theatre and film.
Three hours lecture and discussion; one term
Prerequisite: One of DRAMA 2D03, L03, THTR&FLM 2C03 or 2D03
Antirequisite: DRAMA 3P06
THTR&FLM 3M03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.

THTR&FLM 3N03 INDEPENDENT FILM AND VIDEO
An exploration of artists’ film and video produced outside of dominant institutions, including such practices as documentary, autobiography, community projects, experimental film, short film, and video art.
Two hours lecture and discussion, plus one weekly film screening; one term
Prerequisite: DRAMA 2X06 or THTR&FLM 2F03
Cross-list: CMST 3X03
Not open to students with credit in DRAMA 3T03, Topics in National Cinemas II, if taken in 2001-02.
Offered in alternate years.
THTR&FLM 3P03 WOMEN AND VISUAL CULTURE
Students will explore ideas about representation, spectacle and produc-
tion in relation to issues of social difference, such as gender, race and class. Emphasis is on visual modalities such as film, video, television, advertising, etc. culture.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: Registration on Level III or above and one of ART HIST 2A03, CMST 2F03, 2G03; DRAMA 2X06, THTR&FLM 1B03 or WOMEN ST 1A06
Cross-list: CMST 3B83, WOMEN ST 3B83
Not open to students with credit or registration in WOMEN ST 3B03 if taken in 2001-2002.
This course is administered by Women's Studies.

THTR&FLM 3Q03 TOPICS IN NATIONAL CINEMAS I
Formerly: DRAMA 3T73
This course examines film in relation to nations and national contexts. Areas of investigation may include filmic production of a particular country, national belonging and transnational identities.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03
Cross-list: CMST 3T03, COMP LIT 3V03
Antirequisite: DRAMA 3A03
Offered on an irregular rotation basis.

THTR&FLM 3Q03 TOPICS IN NATIONAL CINEMAS II
Formerly: Drama 3T73
This course examines film in relation to nations and national contexts. Areas of investigation include filmic production of global/local characteristics.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: One of DRAMA 2B03, 2X06, THTR&FLM 1B03, 2E03, 2F03
Cross-list: CMST 3T03, COMP LIT 3V03
Antirequisite: DRAMA 3T73
Offered on an irregular rotation basis.

THTR&FLM 3R03 READING FILM
Formerly: DRAMA 3H03
A critical examination of selected films and film genres as cultural texts, using methods drawn from film theory and cultural studies.
Three lectures, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies, Comparative Literature, Cultural Studies and Critical Theory, English or Theatre & Film Studies. It is recommended that students should already have taken DRAMA 2X06 or THTR&FLM 2F03.
Cross-list: CMST 3C33, COMP LIT 3L03, CSCT 3C33, ENGLISH 3C33
Antirequisite: DRAMA 3H03
Offered in alternate years.
This course is administered by the Department of English and Cultural Studies.

THTR&FLM 3S03 INDEPENDENT STUDY IN PRACTICAL THEATRE
Formerly: DRAMA 3Z03
This course is reserved for students with a strong academic record and the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies to administer the first day of classes.
Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 8.0 and permission of the School of the Arts
Antirequisite: DRAMA 3Z03

THTR&FLM 3T03 INDEPENDENT STUDY IN THEATRE & FILM I
Formerly: DRAMA 3R03
This course is reserved for students with a strong academic record and the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.
Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts
Antirequisite: DRAMA 3R03

THTR&FLM 3X03 MODERN PERFORMANCE IN ACTION
An exploration in action of modern practices of dramatic representation and the forms of knowledge-building they promote.
Two studios; one term
Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in one of DRAMA 2A06, THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

THTR&FLM 3XX3 POST-MODERN PERFORMANCE IN ACTION
An exploration in action of post-modern practices of dramatic representation and the forms of knowledge-building they promote.
Two studios; one term
Prerequisite: Registration in a program in Theatre & Film Studies; and a grade of at least B- in one of DRAMA 2A06, THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

THTR&FLM 3Y03 NON-WESTERN PERFORMANCE IN ACTION
An exploration in action of non-western practices of dramatic representation and the forms of knowledge-building they promote.
Two studios; one term
Prerequisite: Registration in a program in Theatre & Film Studies; and a grade of at least B- in one of DRAMA 2A06, THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

THTR&FLM 3Z03 WESTERN CLASSICAL PERFORMANCE IN ACTION
An exploration in action of classical practices of dramatic representation and the forms of knowledge building they promote.
Two studio; one term
Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in one of DRAMA 2A06, THTR & FLM 2A06 or 2AA3. Students wishing to register in this course must submit an application form to the School of the Arts by the end of April to guarantee consideration for the following year.

THTR&FLM 4A06 PRINCIPLES OF STAGE DIRECTING
Formerly: DRAMA 4A06
Theatre of directing a play; play analysis; rehearsal techniques; technical stagecraft. Direction of a play under the supervision of an instructor.
Two lectures and practical exercises, plus rehearsals; two terms
Prerequisite: Registration in Level IV of an Honours program in Theatre & Film Studies; and one of DRAMA 2A06, 2D03, 2L03, THTR & FLM 2A06, 2AA3, 2G03 or 2D03; and one of DRAMA 3A03, 3AA3, 3D03, THTR & FLM 2B03, 2BB3, 3A03 or 3B03, 3C03, 3YY3, 3X03, 3XX3, 3Z03; and permission of the School of the Arts
Antirequisite: DRAMA 4A06
Enrolment is limited. Admission to THTR&FLM 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.

THTR&FLM 4B03 STUDIES IN THE THEORY AND PRACTICE OF DRAMA
Formerly: DRAMA 4C03
Students will explore the relationship between theory and practice in creating dramatic works by using a combination of practical exercises and theoretical reflections to create short performance pieces.
Seminar (two hours), one hour lab; one term
Prerequisite: One of DRAMA 2A06, 2D03, THTR&FLM 2C03 or 2E03; and registration in Level III or IV of an Honours program in Theatre & Film Studies
Antirequisite: DRAMA 4C03
Offered in alternate years.
Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies program.

THTR&FLM 4C03 STUDIES IN THE THEORY OF DRAMATIC PERFORMANCE
Formerly: DRAMA 4E03
An examination of theoretical documents, with an emphasis on contemporary theories of the nature of dramatic performance.
Seminar (two hours); one term
Prerequisite: One of DRAMA 2B03, 2D03, THTR&FLM 2C03 or 2E03; and registration in Level III or IV of an Honours program in Theatre & Film Studies
WOMEN'S STUDIES

Antirequisite: DRAMA 4E03
Offered in alternate years.
Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies program.

THTR&FLM 4D03 STUDIES IN THEATRE AND FILM
Formerly: DRAMA 4C03
This senior seminar introduces students to the study of the relationships between theatre and film. It is organized by topics that have been the focus of recent scholarship:
Seminar (two hours), plus weekly film screening; one term
Prerequisite: DRAMA 2X06 or THTR&FLM 2F03 and registration in Level III or IV of an Honours program in Theatre & Film Studies
Antirequisite: DRAMA 4C03
Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies program.

THTR&FLM 4E03 STUDIES IN FILM
Formerly: DRAMA 4F03
Senior seminar: An examination of selected films.
Seminar (two hours); one term
Prerequisite: DRAMA 2B03 or THTR&FLM 2E03, and registration in Level III or IV of an Honours program in Theatre & Film Studies; or registration in Level IV of an Honours program in Communication Studies. THTR&FLM 2F03 is recommended.
Cross-list: CMST 4FF3
Antirequisite: DRAMA 4F03
Enrolment is limited. Priority will be given first to students registered in Level IV of any Theatre & Film Studies program, and then to students registered in Level IV of the Communication Studies program.

THTR&FLM 4F03 INDEPENDENT STUDY IN THEATRE & FILM STUDIES II
Formerly: DRAMA 4B03
This course is reserved for Honours Theatre & Film Studies students with the demonstrated ability to work independently. Students must submit a written proposal to the Academic Counsellor for Theatre & Film Studies no later than the first day of classes.
Prerequisite: Registration in an Honours program in Theatre & Film Studies with a Cumulative Average of at least 9.0 and permission of the School of the Arts
Antirequisite: DRAMA 4B03

THTR&FLM 4J03 THE SPLIT SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA
This course examines German film texts of the post-war period and their representation of West and East German identities. Films will be discussed within the context of important political, social and cultural developments at the time of the films' production.
Two hours plus one film screening per week; one term
Prerequisite: Registration in Level III or IV
Cross-list: COMP LIT 4J03, GERMAN 4J03
Offered on an irregular rotation basis.
This course is administered by the Department of Modern Languages and Linguistics.

Note:
The following courses, offered by other departments, directly pertain to Theatre & Film Studies. These are recommended as electives. Up to nine units of courses from this list may be available as substitutes for Theatre & Film courses, and counted toward the fulfillment of a program in Theatre & Film Studies. Students are advised that there may be restrictions on enrolment in these courses.

CLASSICS 2H03 Greek and Roman Drama
CLASSICS 3T03 Ancient Theatre in Context
COMP LIT 3G03 European Drama
ENGLISH 2B06 The Development of English Drama
ENGLISH 2L03 Shakespeare: Selected Plays
ENGLISH 3DD3 Contemporary Canadian Drama
ENGLISH 3K06 Shakespeare
FRENCH 3Q03 17th-Century French Literature I
KINESIOL 3JJ3 History of Modern Dance
KINESIOL 3T03 Dance Performance
KINESIOL 4J33 Dance in Contemporary Society
MUSIC 2F03 Music for Film and Television
RELG ST 2YY3 The Bible and Film
WOMEN ST 3B03 Topics on Women and the Arts
WOMEN ST 2FF3  HISTORY OF WOMEN IN EUROPE FROM 1650
An exploration of the history of European women and gender in the modern era, focusing on women's changing roles in the economic and political spheres and the development of new visions of the family and sexuality.
Three hours, one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 2FF3
Antirequisite: HISTORY 2BB6, WOMEN ST 2B06
This course is administered by the Department of History.

WOMEN ST 2H03  SOCIAL ASPECTS OF REPRODUCTION
An interdisciplinary course exploring birth and reproduction. Topics may include: social determinants of reproductive health, fertility and birthing rituals, reproductive ethics, policy and technologies.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 2H03, HTH SCI 2H03

WOMEN ST 2H03  WOMEN'S HEALTH: A SOCIO-CULTURAL PERSPECTIVE
Topics may include biomedicine and social construction of gender, women as paid and unpaid health workers, consequences of discrimination for women's health and historical analysis of female healers.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Antirequisite: SOCIOL 4U03

WOMEN ST 2J06  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 (lectures and discussion); one term
Prerequisite: Registration in Level II or above of a program in Communication Studies or Women's Studies
Cross-list: CMST 2H03
This course is administered by Communication Studies.

WOMEN ST 2K06  STUDIES IN WOMEN WRITERS
A 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 is a component of the course.
Three hours; two terms
Prerequisite: WOMEN ST 1A06 or permission of the Director of Women's Studies
Cross-list: CSCT 2K06, ENGLISH 2K06
This course is administered by the Department of English and Cultural Studies.

WOMEN ST 2L03  FEMINIST UTOPIAS
An examination of literary texts offering women's visions of social change.
Three hours (seminar and discussion); one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: ENGLISH 2N03
Antirequisite: WOMEN ST 2A06

WOMEN ST 3A03  FEMINIST METHODOLOGIES
This course critically examines a range of feminist methodologies, focusing on issues of power/knowledge/research.
Three hours; one term
Prerequisite: WOMEN ST 2A03 or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 3A06

WOMEN ST 3A03  STUDIES IN FEMINIST THEORY
An advanced inquiry into selected topics or schools in feminist theory with attention to how they shape feminist understanding and practice.
Three hours; one term
Prerequisite: WOMEN ST 2A03 or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 3A06

WOMEN ST 3B03  TOPICS ON WOMEN AND THE ARTS
This course explores the roles of women in any one of the following fields: music, visual arts, film or theatre, whether as subjects or creators. Approaches may be practical, historical and/or theoretical, and interrelationships between the fields will be examined where appropriate.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
WOMEN ST 3B03 may be repeated, if on a different topic, to a total of six units.

WOMEN ST 3BB3  WOMEN 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 visual forms such as film, video, television, advertising, etc. cetera.
Two hours lecture and discussion, plus one weekly film screening; one term
Prerequisite: Registration in Level III or above and one of ART HIST 2A03, CMST 2F03, 2B03, DRAMA 2X06, THTR&FLM 1503 or WOMEN ST 1A06
Cross-list: CMST 3BB3, THTR&FLM 5P03
Not open to students with credit or registration in WOMEN ST 3803, if the topic was Images of Women: Reading Art, Media and Popular Culture.

WOMEN ST 3C03  WOMEN AND ECOLOGY
An exploration of women's roles in the ecology movement, examining the various meanings of ecofeminism. Possible areas of enquiry: environmental ethics, anti-militarism, earth goddess religions and the nature/culture debate.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.

WOMEN ST 3D03  WOMEN IN A MULTICULTURAL SOCIETY
An interdisciplinary exploration of women's experiences in sub-cultures within a multicultural society, examining social and historical conditions, policies, and personal narratives. Topics may include immigration, voice, mobility, identity, hybridity.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
Cross-list: CMST 3WW3
Antirequisite: WOMEN ST 3DO6

WOMEN ST 3E03  SPECIAL TOPICS IN WOMEN'S ISSUES
Recent topics have included: Ethical Issues in Women's Health, Feminist Issues in Reproduction and Motherhood, Women and Spirituality, Women in Islam. Consult the Office of Interdisciplinary Studies concerning topic to be offered.
Three hours; one term
Prerequisite: Registration in Level II or above. WOMEN ST 1A06 is recommended.
WOMEN ST 3E03 may be repeated, if on a different topic, to a total of six units.

WOMEN ST 3G03  HISTORY OF WOMEN IN CANADA AND THE U.S. TO 1920
This course examines key areas of women's history, such as indigenous cultures, slavery, immigration, religion, "witchcraft", the family, sexuality, paid and unpaid labour, and the first wave of the women's movement.
Three hours; one term
Prerequisite: Registration in Level II or above.
Cross-list: HISTORY 3W03
Antirequisite: WOMEN ST 3X03
This course is administered by the Department of History.

WOMEN ST 3G03  HISTORY OF 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: Registration in Level II or above.
Cross-list: HISTORY 3W03
Antirequisite: WOMEN ST 3X03
This course is administered by the Department of History.

WOMEN ST 3H03  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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Peace Studies, Women's Studies or permission of the Departmental Counselor for English and Cultural Studies
Cross-list: COMPL LIT 3HP3, CSCT 3A03, ENGLISH 3A03, PEACE ST 3A03
This course is administered by the Department of English and Cultural Studies.
WOMEN ST 3HH3  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: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory, English, Women's Studies or permission of the Departmental Counsellor for English and Cultural Studies
Cross-list: COMP LIT 3AA3, CSCT 3AA3, ENGLISH 3AA3
This course is administered by the Department of English and Cultural Studies.

WOMEN ST 3I03  PHILOSOPHY AND FEMINISM
A study of philosophical issues in feminist thought. Three hours; one term
Prerequisite: Registration in Level III or IV of any program or six units of Philosophy. WOMEN ST 1A06 is recommended.
Cross-list: PHILCS 3I03
Offered in alternate years.
This course is administered by the Department of Philosophy.

WOMEN ST 3J03  WOMEN IN GERMAN LITERATURE AND CULTURE
This course explores the rich literary and cultural history of women writers, filmmakers and artists from the early Middle Ages to the present in German-speaking Europe. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3NN3, GERMAN 3NN3
Offered in alternate years.
This course is administered by the Department of Modern Languages and Linguistics.

WOMEN ST 3K03  WOMEN AND MEN IN WAR AND PEACE
This course focuses on how gender and other differences shape our experiences of war and struggles for a more peaceful world. Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies program or Peace Studies program or permission of the Director of either program
Cross-list: PEACE ST 3K03
This course is administered by Peace Studies.

WOMEN ST 4A06  INDEPENDENT RESEARCH
Students develop their own research projects, in regular consultation with a faculty supervisor. Upon completion, students present their results at a one-day open forum, and submit a written report.
Prerequisite: Registration in Level IV of the Women's Studies Program
Enrolment is limited.

WOMEN ST 4B03  TOPICS IN WOMEN AND THE ECONOMY
An analysis of economic policies and realities as they impact on women's lives. Topics may include women's access to capital, the distribution of goods, access to health care, poverty and aging, and employment. Three hours (seminar and discussion); one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4B06
Enrolment is limited.

WOMEN ST 4BB3  TOPICS IN WOMEN AND THE STATE
An analysis of the role of the State in Canadian social policies, including the responses of law, labour, education, immigration or health to women in Canada. Three hours (seminar and discussion); one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4B06
Enrolment is limited.

WOMEN ST 4C03  TOPICS IN FEMINIST SCHOLARSHIP: WOMEN IN CANADA
An intensive seminar in a field reflecting the instructor's research interests. Students benefit from current scholarship, and learn research methods complementary to those used in WOMEN ST 4A06. Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4C06
Enrolment is limited.

WOMEN ST 4C03  TOPICS IN FEMINIST SCHOLARSHIP: WOMEN IN AN INTERNATIONAL CONTEXT
An intensive seminar in a field reflecting the instructor's research interests. Students benefit from current scholarship, and learn research methods complementary to those used in WOMEN ST 4A06. Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies Program or permission of the Director of Women's Studies
Antirequisite: WOMEN ST 4C06
Enrolment is limited.

WOMEN ST 4D03  INDEPENDENT STUDY
In consultation with a faculty member, students will research an approved topic, on the basis of materials outside normally available course offerings. A major paper will be required.
Prerequisite: Registration in Level IV of the Combined Honours in Women's Studies program and permission of the Director

WOMEN ST 4J03  CROSSING BORDERS: GLOBAL FEMINISMS
Examines how diverse women's lives are being transformed in a rapidly changing global society and the implication of women's changing places in society and space for feminist theory and practice.
Seminar (two hours); one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Women's Studies program
Cross-list: CSCT 4J03, ENGLISH 4J03
Enrolment is limited to 18 students.

Note:
The following courses, offered by other departments, may be used to help fulfill Women's Studies program requirements, provided that the prerequisite requirements of the home department are fulfilled.

COMP LIT 4E03  Topics in Comparative Literature (when the topic is Twentieth-Century Women Writers)
HISTORY 4I06  Women and Social Movements in the Nineteenth and Twentieth-Century United States
KINESIO 4T03  Gender, Sport and Leisure
LABR ST 4E03  Different Labours, Different Voices
LABR ST 3E03  Women, Work and Unionism
RELIG ST 2S03  Women and Religion
SOC WORK 4P03  Social Work with Women
SOCIOL 2Q06  Sociology of Gender
ACADEMIC FACILITIES, STUDENT SERVICES AND ORGANIZATIONS

ACADEMIC FACILITIES

THE UNIVERSITY LIBRARY

Web Address
http://library.mcmaster.ca/

Email Address
libinfo@mcmaster.ca (Business, Humanities, Social Sciences, Science and Engineering)
hslib@mcmaster.ca (Health Sciences)

University Librarian
Graham R. Hill, B.A., M.A., M.L.S.

Health Sciences Library
Dorothy Fitzgerald, B.A., M.L.S./Director

Associate University Librarian (Services)
Vivian Lewis, B.A., M.A., M.L.S./Librarian

Associate University Librarian (Collection Resources)
Charlotte Stewart, B.A., M.A., M.L.S.

Associate University Librarian (Information Technology)

Thode Library of Science and Engineering
Kathryn Ball, B.A., M.L.S./Librarian

Innis Library
Jeannie An, B.A., M.L.S./Business Librarian

Administrative Services
Mary Ruth Linkert/Administrator

The University Library System consists of Mills Memorial Library (Humanities and Social Sciences), the Innis Library in Kenneth Taylor Hall, containing a collection of business materials, the H.G. Thode Library of Science and Engineering, and the Health Sciences Library in the Health Sciences Centre. An online catalogue covering the holdings of all libraries is available and stacks are open to all library users.

The collection in 2004 contained more than 1,960,254 volumes, and 12,238 linear feet of archival material.

The McMaster University Libraries Gateway (http://library.mcmaster.ca) contains information on collections, hours and services in all the campus libraries; and is the access point to thousands of electronic resources provided by the libraries. An on-line tutorial, http://dot@mac is also available through the Gateway. Service is maintained at key Reference points in the various libraries and in-library instructional sessions are available.

Mills Library has several collections - Reference, Periodicals, Government Publications, Music, Maps, and Reserve, which is used mainly by Undergraduates.

The William Ready Division of Archives and Research Collections in Mills Library contains rare books, manuscripts and special book and archival collections, which afford many opportunities for original research. Of outstanding interest are the Bertrand Russell Archives, a massive collection of correspondence and manuscripts supported by books, journal articles, secondary literature, tapes, films and personal memorabilia.

The Eighteenth-Century Collection of British material numbers over 35,000 volumes and is the major Canadian collection in the field. Library fellowships in Eighteenth-Century Studies are offered annually. Among more modern materials are the papers of Vera Brittain, Anthony Burgess, Marian Engel, Margaret Laurence, Robert Fulford, Farley Mowat, Susan Musgrave, Matt Cohen and many others.

Business interests are reflected in such files as the General Steel Wares Archives, the J.M. Pigott Archives, the Macmillan of Canada Archives, the Clarke Irwin Archives, and the McClelland and Stewart Archives. Canadian social and political interests are documented in papers from the Canadian Union of Students, the Canadian Youth Congress, the SUDA/CUCNND papers and other related collections. There are holdings of the records of a number of labour unions, including USWA Local 1005, USWA District 6, United Glass and Ceramic Workers (Canada), and the Hamilton and District Labour Council.

Publications

McMaster Library News

UNIVERSITY TECHNOLOGY SERVICES (UTS)

(FORMERLY COMPUTING AND INFORMATION SERVICES (CIS))

Web Address
http://www.mcmaster.ca/cis

Email Address
helpline@mcmaster.ca

Chief Information Officer (CIO)
Debbie Barrett, B.A.

Director, Service Development and Delivery
Heather Grigg

Director, Project Management
John Alley, B.A., M.E.Des., M.B.A.

Associate Director, Enterprise Networks
Robin Griffin, B.Sc., Ph.D.

Associate Director, Enterprise Systems
Brian McIntegart, B.Sc.

UTS provides computing services in support of both administrative and networking activities. UTS manages a campus-wide network which is linked to the Internet. MUGSI (McMaster Undergraduate Student Information) provides students access to their academic and personal data via the web. Students can register and change courses on the web using SOLAR (Student Online Academic Registration).

Student computing labs for academic use, equipped with a minimum of Pentium III 600s, are located in Linker and Engineering Building, Room 234, and the Engineering Building, Room 211, B120 and B123. The Health Sciences Library, 50 East 25th Street, with its own computer lab, is available to students. The Health Sciences Library, 50 East 25th Street, with its own computer lab, is available to students.

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Student computing labs for academic use, equipped with a minimum of Pentium III 600s, are located in Burke Sciences Building, Rooms 294-345, John Hodgins Engineering Building, Room 234, Arthur Boums Building, Room 166, Kenneth Taylor Hall, Rooms B111, B120 and B123 and the Health Sciences Library. All labs provide access to the Internet, poplar programming and spreadsheet packages as well as various computing languages, statistical applications and specialized course software provided by instructors. Student consultants are available to assist customers in most of these computer labs. Assistance is also available in the main UTS office located in T-13, Room 127.

Every undergraduate and graduate student can register for a MAC ID account that includes an email account, web proxy server account, Web CT account, MacConnect, fee for service modem pool account ($0.50 per hour for 56k) and a printing account ($0.10 per page for laser printing). All of the McMaster residencies have network wiring allowing students to access the Internet from the convenience of their room. This service is included in the residence fee.

In addition to the facilities operated by UTS, there is computer equipment located in various departments to support specific academic programs.

CENTRE FOR LEADERSHIP IN LEARNING

Web Address
http://www.mcmaster.ca/cli

Email Address
rlseilays@mcmaster.ca

Academic Director
Del Harman, B.Sc., M.Sc., Ph.D.
Workshops, Seminars and Conferences: A wide variety of events are offered, conducted by McMaster faculty, visiting resource people and CLL staff. Generally, the topics are ones requested by instructors or departments and typically include subjects such as teaching large classes, self-directed learning, research on learning and teaching methods, lecturing, and small group discussions. Some of these workshops include the use of technology in education.

Peer Consultation: The University has a group of faculty members who are trained to help other instructors collect information on how a course is going. The process is designed to give instructors feedback on a course, not to give advice on how to teach it. The ultimate goal is to improve the quality of student learning. All communications are confidential, and every peer consultant has experience, usually as a client as well as a consultant.

Refining a Course: This model of course consultation takes approximately 2.5 hours. The course instructor, the students in a particular course, and a third party come together early in the term with the intention of modifying one particular course. Since the instructor has final responsibility, he or she initiates the process and sets the boundaries for what can be modified.

Library Resources: The CLL Library is a collection of over 6,000 books, articles, and journals on university teaching and learning. It is an excellent way to find ideas for improving and promoting active learning. You can visit the library in the General Sciences Building, Room 217 between the hours of 9:00 a.m. and 5:00 p.m. Alternatively, you can use keywords to search among the library's online holdings.

CLL Home Page: A selection of teaching tips and other information about the CLL are available at the following web site: http://www.mcmaster.ca/cll.

McMASTER MEDIA PRODUCTION SERVICES

Web Address
http://www.media.mcmaster.ca

Email Address
moocr@mcmaster.ca

Media Production Services (MPS) provides complete media service to faculty, staff, and students whether the project is for education, research, or personal use.

PRINTING SERVICES DIVISION

Michael G. DeGroote School of Business, Room B111, ext. 24447 or Health Sciences Centre, Room 117, ext. 22348

Printing Services is equipped to provide all printing needs. The state-of-the-art facility allows for submission of both electronic files and traditional hard copy. The services include pre-press and file manipulation services, electronic printing in black and white and full colour plus traditional offset and full bindery services.

CREATIVE DESIGN AND IMAGING DIVISION

Health Sciences Centre, Room 1G1, ext. 22301

MPS Creative Design team provides a full range of communication pieces from concept to completion. Custom brochures, logos, newsletters, annual reports, poster presentations can be enhanced with digital images and traditional prints photographed by our team of photographers. We also provide lab services in-house for negatives, slides and custom black and white photography. Digital enhancement and photo editing can be achieved from slides, prints, negatives and electronic files. Output can be provided in either high or low resolution to produce large format posters, high quality prints as well as archival and web page content.

VIDEOCONFERENCEING

Health Sciences Centre, Room 1G1, ext. 22301

Videoconferencing is available in our in-house facility. Our completely interactive system is available for both internal and external use. We provide archiving and streaming of conferences upon request.

GERONTOLOGICAL STUDIES

There are two Gerontology components at McMaster: the Centre for Gerontological Studies and Undergraduate Degree Studies in Gerontology. (Further information can be obtained by contacting Margaret Denton in Kenneth Taylor Hall, Room 226, ext. 24449.)
**McMASTER CENTRE FOR GERONTOLOGICAL STUDIES**

- Kenneth Taylor Hall, Room 228, ext. 24449

**Director**
Margaret A. Denton, B.A., M.A., Ph.D.

The McMaster Centre for Gerontological Studies is involved in the promotion and development of multidisciplinary research and educational programs within the University and the local community. The Centre also provides a forum for collaboration on education, research, and service projects with other community organizations.

The mandate of the Centre is to foster research and education in aging. The Centre's activities are supported by University funding, while specific projects are funded by public agencies, private foundations, or user fees. The Undergraduate Degree Studies in Gerontology program is administered by this Centre. The Centre's objectives are as follows:

1. to serve as an information and referral centre regarding gerontological education and research activities at McMaster University. Regular information about gerontological activities is provided through the newsletter Aging, Health and Society: News and Views and the Directory of Research on Aging at McMaster University;
2. to coordinate and plan multidisciplinary initiatives in gerontology across all faculties and administrative units of the University. (Social Sciences, Health Sciences, Humanities, Science, Business, Engineering, Continuing Education);
3. to organize multidisciplinary educational events in gerontology for the university community, professionals and the general public, e.g. the McMaster Summer Institute On Gerontology;
4. to advance gerontology at McMaster and in Canada by actively participating in provincial and national gerontological organizations and initiatives;
5. to initiate and support the development of new gerontological projects with older adults, community agencies, students, staff and faculty.
6. to actively support research, education policy and practice for the benefit of older persons.

**OFFICE OF INTERNATIONAL AFFAIRS**

- Alumni Memorial Hall, Room 203, ext. 24700, 24211; 22916

**Web Address**
http://www.mcmaster.ca/oia

**International Admissions Inquiries Email Address**
inadin@mcmaster.ca

**Associate Vice-President, International Affairs**
Luke Chan

**Senior Project Manager/International Liaison Officer**
Ni Jadon

**Project Officer**
May Zhai
Theresa Bae
Tania Hakim

**Administrative Coordinator**
Laurine Mollinga

The Centre's objectives are as follows:

3. to organize multidisciplinary educational events in gerontology for the university community, professionals and the general public, e.g. the McMaster Summer Institute On Gerontology;
4. to advance gerontology at McMaster and in Canada by actively participating in provincial and national gerontological organizations and initiatives;
5. to initiate and support the development of new gerontological projects with older adults, community agencies, students, staff and faculty.
6. to actively support research, education policy and practice for the benefit of older persons.

**McMASTER MUSEUM OF ART**

- University Avenue, ext. 23081

**Director and Curator (Acting)**
A. Pierce, B.A., M.A., Ph.D.
Email: pierce@mcmaster.ca

**Collections and Operations Manager**
G. Lovesey, B.A.
Email: lovesey@mcmaster.ca

**Installation/Preservation Officer**
R.A. Prevec, B.A.
Email: prevec@mcmaster.ca

Located across the plaza from the University Student Centre, on the corner of Sterling and University Avenues, the Museum contains five Exhibition Galleries, a Paper Centre and an Educational Access Gallery. The Museum offers a year-round program of exhibitions ranging from the historical past to present-day artistic investigations either organized by the McMaster Museum or loaned by such institutions as the National Gallery of Canada. A regular program of public events including lunchtime talks, Visiting Artist talks, seminars and concerts is offered.

**STUDENT SERVICES**

**Student Affairs Web Address**
http://access.mcmaster.ca/

**ASSOCIATE VICE-PRESIDENT (STUDENT AFFAIRS) AND DEAN OF STUDENTS**

- Gilmour Hall, Room 207, ext. 27455


The Associate Vice-President (Student Affairs) and Dean of Students leads a variety of specialized student services and is happy to meet with individuals and representatives of student organizations with problems, concerns, questions or suggestions on any matter relating to student life and services on campus.
The Centre for Student Development is a resource for all McMaster students. It offers services in four main areas: personal counselling, academic skills (including writing skills and English as a Second Language), services for students with disabilities (including ATLAS, a program for students with Learning Disabilities) and Leadership Training. All contact with CSD is confidential. For a complete staff listing, visit http://csd.mcmaster.ca/staff.htm.

Personal Counselling

Students are encouraged to seek assistance from the Centre if they experience any type of personal, emotional, social or mental health concerns. Workshops, groups, and other sessions are also offered periodically throughout the year. For more information visit http://csd.mcmaster.ca/personal.

Academic Skills

The Centre offers workshops, small group seminars and individual counselling on a wide range of academic skills matters. The Centre has launched a new program called Academic Skills Online, which offers learning strategies and online videos 24 hours a day.

Academic Skills include:
- Advanced learning strategies (e.g. note taking, lecture and reading)
- Time management, personal organization and study habits
- Motivation, procrastination, stress and energy management
- Exam taking skills (e.g. multiple choice, exam preparation)
- Academic writing skills development

For more information, please visit http://csd.mcmaster.ca/academic.

Services for Students with Disabilities

The Centre for Student Development can provide advice to current and potential students and applicants with disabilities. Once admitted to the University, students with disabilities are encouraged to contact the Centre at an early date (two or three months prior to registration) to ensure sufficient time to make arrangements regarding their needs. Even if accommodation or assistance is not immediately required, students are encouraged to maintain contact with the Centre in case a need for assistance should arise at a later date.

The Centre assists students with issues concerning the accessibility of campus facilities, the provision of special equipment and alternative media formats and other issues. It provides support for students with chronic medical and mental health disabilities and students who are deaf or hard of hearing. It also offers counselling, advice, support and workshops to help students meet their educational objectives. For more information visit http://csd.mcmaster.ca/osswd.

English as a Second Language (ESL) Support @ Mac

If their native language is not English, students may wish to use one or more of the following services: daytime courses in Listening/Speaking and Reading/Writing for Academic Excellence; evening conversation classes in English; Speakeasy (one-on-one conversation) and the Conversation Circle (group-based); Opening Doors: Preparation for Employment; or The Writing Clinic. Evening classes are also offered during the academic term.

All classes are non-credit and free to all McMaster students. For more information on any of the ESL programs, please visit our web site at http://csd.mcmaster.ca/esi, or contact the ESL coordinators at csdeal@mcmaster.ca.

Assistive Technology Learning and Academic Support (ATLAS)

The ATLAS Program which is located in the Commons Building Room B104, offers assistive technology training and support for software packages to help students with learning disabilities with their reading, writing and organizational skills. In addition, computer stations with assistive technology software are available in the lab for students to use.
ATHLETICS AND RECREATION

Web Address
http://www.athrec.mcmaster.ca

Email Address
iwyne@mcmaster.ca (Customer Service Line)

Director of Athletics and Recreation
Thérèse A. Quigley

The Department of Athletics and Recreation provides a wide variety of opportunities for students involved in high performance athletic competition, intramural and club competition as well as recreation, fitness and instructional and outdoor recreation programs. A diverse program of recreational activities is available for those who wish to keep fit, compete in active pursuits at their own level, and enjoy sports and active living opportunities of their choice. Access to the various facilities on campus is open to all McMaster students.

The facilities include a 50-metre pool, an outdoor 400-metre chevron track, eight tennis courts, several gyms, dance studio and a fitness centre, covering 7,700 square feet, known as The Pulse. It features computerized cardiovascular equipment, circuit training, aerobic floor and a comprehensive strength training area. An additional aerobics floor of 2464 square feet in the Activity Centre completes the Pulse programming.

The Department of Athletics and Recreation ALTITUDE program utilizes our newest facility, the 50-foot Alpine Tower and Team Development Course. The first of its kind in Canada, it includes 32 climbing routes, rope ladders, swinging logs, a giant swing and low ropes elements.

Many different club activities are available, along with instructional assistance. Off-campus field trips in canoeing, rock climbing, horseback riding, hiking and many other opportunities are offered. A highly developed intramural program is a very popular outlet for student activity. Intramurals run from early fall until late spring and provide students with a competitive environment that still fosters social interaction.

The varsity program at McMaster fields 27 teams competing at the provincial (OUA) and national (CIS) level. There are also four inter-university club teams competing at various levels. Highly skilled coaches help McMaster athletes achieve their potential while competing against other universities in Ontario and across Canada. The outstanding efforts of McMaster's student-athletes and the social involvement of student supporters are focal points of student life on campus. Varsity events are a major source of school spirit for competitors and spectators alike. The Department of Athletics and Recreation takes pride in the quality programs and services provided to the McMaster Community, and urges all members of the Community to take advantage of its facilities and programs.

BOOKSTORE

Gilmour Hall, Room B101
Web Address
http://titles.mcmaster.ca/
Email Address
booketr@mcmaster.ca

Titles, McMaster University Bookstore, is owned and operated by the University and supplies all course materials for courses at McMaster. Second and third year textbooks are located in the auxiliary store located in Togo Salmon Hall, Room B203. Fourth year, and grad textbooks are located in the lower level of Gilmour Hall. A Microcomputer Centre and a Post Office are located within the Bookstore. A Health Sciences Branch is located in the McMaster University Medical Centre. In addition to course books, the Bookstore maintains a wide range of supplementary reading materials, both academic and general. Stationery and computer supplies and other items are also stocked. Charge accounts may be opened after registration.

POST OFFICE

The McMaster University Sub-Post Office is located in the Bookstore. The Post Office offers full postal service, Monday to Friday, from 9:00 a.m. to 4:00 p.m. Post Office boxes may be rented by faculty, staff, and students for the duration of their stay at McMaster.

CAREER SERVICES

Gilmour Hall, Room 110, ext. 24254
Web Address
http://careers.mcmaster.ca/
Email Address
careers@mcmaster.ca

Manager
Lisa Boniface

Career Counsellors
Laurie Barlow
Rebecca Markey
Arthur Karp

Employment Counsellors
Kerri Latham
Patricia Diver (Alumni)

Career Information Staff
Cindy Schooley
Kathryn Hryb
McMaster University has formal student exchanges with universities in 26 countries abroad and participates in the Canada Scholars Exchange Program (CANEX), which includes the following ten Canadian universities:
- McMaster University
- McGill University
- Queen's University
- Université Laval
- Université de Montreal
- University of Alberta
- University of British Columbia
- University of Toronto
- University of Waterloo
- University of Western Ontario

STUDENT FINANCIAL AID AND SCHOLARSHIPS
> Gilmour Hall, Room 120, ext. 24319
Web Address
http://sfas.mcmaster.ca
Email Address
awards@mcmaster.ca or csap@mcmaster.ca
Director
E. Seymour

The office administers a variety of programs which are accessed by more than half of all full-time students as well as a large number of part-time students attending McMaster. These programs include the Ontario Student Loan Program, Canada Student Loan Programs, Part-Time Canada Student Loan and Canada Student Grants, Ontario Work Study Program, Ontario Special Bursary Program, University Bursary and Emergency Loan Program, and Undergraduate Scholarships. In addition, the office provides administrative support to outside agencies offering scholarships and bursaries to students attending McMaster.

For more detailed profiles of program offerings, please refer to Undergraduate Academic Awards and Student Financial Aid sections in this Calendar.

CAMPUS HEALTH CENTRE
> Student Health, McMaster University Student Centre, Room B101, ext. 27700
> Health Education, McMaster University Student Centre, Room B106, ext. 27619
Web Address
http://www.mcmaster.ca/health
Medical Director
Jan Young
Clinic Director
Julie Faiservice

Health care is available to all university students year-round at the Campus Health Centre (CHC). Appointments can be made by calling (905) 525-9140 ext. 27700.

Staffed by family physicians, registered nurses, health educators and administrative staff, the Campus Health Centre provides medical care similar to a family physician at home. Services include medical assessment and treatment; annual health examinations (physicals); birth-control counselling and low cost sale of the birth control pill/patch; allergy injections; immunization; on-site laboratory; pregnancy tests; screening for sexually transmitted diseases; HIV prevention, testing and counselling; and information on counselling for any personal health concerns. A specialist in sports medicine is available for sports related injuries. Our health centre provides on-site access to an array of complementary services including: acupuncture, dietitian services, hot stone massage, meditation, reflexology and Reiki.

Our health education staff can be reached at (905) 525-9140, ext. 27619 in the McMaster University Student Centre, Room B106. They are available to individuals or groups to address questions and/or concerns about health and lifestyle issues and include such topics as: disease prevention, relationships, sexuality, contraception options, nutrition and body image, stress and emotional health and alcohol/drug/toxic use. A smoking cessation group is offered.
HOSPITALITY SERVICES

- Commons Building, Room 116, ext. 24422

Web Address
http://hospitality.mcmaster.ca

Director, Hospitality Services
Albert Y. Ng

McMaster Hospitality Services is a self-supporting department that strives to ensure that dining experiences on campus are positive. Our goal is to offer a balance of service and value beyond our customers' expectations and support the broader mandate of the Student Affairs portfolio.

All students living in residence are required to purchase a meal plan. The MAC Express Meal Plan works on a debit system and offers a variety of meal plan options for residence and off-campus students. Depending on the meal plan chosen, this allows students to use one card at all Hospitality Services locations and at our off-campus vendors. For 2004-2005 the off-campus vendors included Boston Pizza, East Side Mario's, Kelsey's, Pita Pit, Pizza Pizza, The Snooty Fox, and Quarters Pub; off-campus students and other members of the University community may purchase a meal plan option at the MAC Express Centre, located in the Commons Building, Room 128. For more information on meal plans, contact us at ext. 27445, express@mcmaster.ca or visit our web site.

Hospitality Services has five full-service dining locations located conveniently across campus:

- Diversity Cafe is a new cafeteria dedicated to preparing vegetarian foods. This will allow students to adhere to a variety of religious or ideological dietary needs in a shared space. Scheduling to open winter 2005, McMaster will renovate the Rathskeller cafeteria to house this facility, transforming one of McMaster's heritage sites into a new space to promote programming focused on intercultural dialogue and debate campus diversity.
- Our newest location is The Bistro in Michael G. DeGroote Centre for Learning and Discovery provides Tim Horton's coffee and a variety of 'Grab-n-Go' items.
- The Commons Marketplace provides students with a varied dining experience and is home to Your Healthy Choice, Pacific Rim, Chef's Table, Piller's Deli and Pizza++.
- East Meets West Bistro, our fine dining facility is located in the Mary E. Keyses Residence Building. This restaurant is set in a two-story glass atrium and features Asian and Continental cuisine. The Bistro offers gourmet pizza, rotisserie and stir fry menus. Flight next door, Mac's Mini Mart offers Needo Pita and Tim Hortons in addition to a number of convenience store products.
- La Piazza, an open 'Marche Style' marketplace is located in the McMaster University Student Centre and features Pizza Pizza, Tim Hortons, Piller's Deli and Creation X International Grill. You will also find Made in Japan, Tim Hortons and Williams Coffee Pub kiosks in the Centre.
- The Cafe 2000 is located in the Institute for Applied Health Sciences and features Mr. Sub, Pizza Pizza, Tim Hortons, a "wrap" station and more.
- The Vokery, in Kenneth Taylor Hall, is a popular lunch destination for Chinese food prepared fresh to order.
- MAC Express locations are conveniently found in the John Hodgins Engineering Building and Chester New Hall. Math Cafe in Hamilton Hall provides fair trade coffees from regular coffee to a gourmet cappuccino with a variety of 'Grab-n-Go' items.
- Hava Java, located on the second floor of Burke Science Building and the Tech Wave Cafe located in the Information Technology Building, both feature Starbucks coffee in addition to a variety of delicious desserts.

Visit our web site at http://hospitality.mcmaster.ca for our Dining on Campus menus, hours of operation, exciting special events, meal plan information and more.

HOUSING AND CONFERENCE SERVICES

Web Address
http://housing.mcmaster.ca

Email Address
housing@mcmaster.ca

Director, Housing and Conference Services
Catherine Miller

RESIDENCES

The University owns and operates 11 on-campus residence buildings, accommodating a total of 3,366 students. The nine traditional-style residences offer a variety of theme and lifestyle options: International House and Le Maison Francaise for those interested in learning about other cultures; Halcyon (Quiet) House and quiet lodges; Wellness House for those wishing to balance healthy living with academic studies and all female environments. Housing and Conference Services will expand the opportunity for lifestyle options based on interest and demand.

In addition, an apartment-style residence (Bates Residence) accommodates approximately 500 male and female students and a suite-style residence building (Mary E. Keyses Residence) houses 280 students. All apartments and suites are furnished (except for a television).

Eighty percent of the spaces in residence are reserved for incoming first-year students. Admission offers to residence are based on a student's academic average for the fall/winter term. All students with an 80% admission average are guaranteed a space in residence provided they meet the established residence application and deposit deadline.

First-year students will receive a residence application and instructions regarding application procedures along with their offer of admission to the University. To accept the offer of residence, students must return their completed Residence Application form and a deposit to the Residence Admissions Office before the specified deadline. This deposit will then be applied to the student's residence fees. Students who do not receive an offer of residence with their offer of admission to the University may apply to the Residence Admissions Office. To accept the offer of residence, students must return their completed Residence Application form and a deposit to the Residence Admissions Office before the specified deadline. This deposit will then be applied to the student's residence fees. Students who do not receive an offer of residence with their offer of admission to the University may apply to the Residence Admissions Office. 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This deposit will then be applied to the student's residence fees.

Residents use their student ID cards as a debit card for food purchases at all Residence dining locations located on campus as well as designated local off-campus restaurants. (Note: Residence fees and meal plans do not include the December holiday break.) Additional meal plan information, including optional reduced meal plans for Bates and Mary E. Keyses Residence, is available in the 2005-2006 Campus Living available through Housing and Conference Services, Commons Building, Room 101, (905) 525-9140 ext. 24342, email housing@mcmaster.ca, for detailed information.

All students in all residences are required to purchase one of the following meal plans: light, small, regular, large or extra-large. Residents use their student ID cards as a debit card for food purchases made at all Hospitality Services locations on campus as well as designated local off-campus restaurants. (Note: Residence fees and meal plans do not include the December holiday break.) Additional meal plan information, including optional reduced meal plans for Bates and Mary E. Keyses Residence, is available in the 2005-2006 Campus Living available through Housing and Conference Services, Commons Building, Room 101, (905) 525-9140 ext. 24342, email housing@mcmaster.ca, for detailed information.

Please visit our web site to learn more about each residence, the Residence Discipline Code, MacOnline and the other services available to McMaster's residence students at http://housing.mcmaster.ca.

RESIDENCE ADMISSIONS

This area is responsible for residence admission policies and procedures, including: the Residence Agreement/Contract, residence applications, deposits and room assignments; the waiting list and withdrawal procedures; medical and grade appeals; and various Housing publications. Enquiries about residence should be directed to Residence Admissions, Housing and Conference Services, Commons Building, Room 101, (905) 525-9140 ext. 24342; email: housing@mcmaster.ca.
RESIDENCE LIFE

This area is responsible for programs designed to provide students with a positive living and learning environment and to assist them with the transition to university. Living in residence provides students with the opportunity to participate in educational, personal development interest programs, and positive and inclusive social activities. Residence Life also provides leadership opportunities including student staff, peer helper and elected residence council positions.

Residence students and student staff are supported by five full-time Residence Managers, all of whom live in residence. The staff are available to answer questions, ensure community time and coordinate programs and activities.

All students agree to be bound by the Residence Agreement/Contract and the Residence Discipline Code as a condition of applying to residence at McMaster University.

RESIDENCE FACILITIES

The Residence Facilities Team is responsible for repairs and maintenance, renovations, student damages, safety and security needs, furnishings, cleaning, residence recreational facilities, and the 24 hour Housing and Conference Service Centres located in Mary E. Keyes Residence (west campus, ext. 24898) and the Commons Building (north campus, ext. 27222).

CONFERENCE SERVICES

- McKay Hall, Room 124, ext. 24761
  
  Web Address: http://housing.mcmaster.ca/mainpage.html
  
  Conference Services is responsible for booking all indoor and outdoor non-academic events on campus.

  During the summer months, Conference Services arranges accommodation, food and meeting facilities on campus for conferences, conventions, and touring groups. Residence accommodation is also available for summer students and casual guests. For more information, please visit our website.

OFF-CAMPUS HOUSING

- McMaster University Student Centre, Room B112, ext. 24086
  
  Web Address: http://www.macocho.com
  
  Email Address: ocho@mcmaster.ca
  
  The Off-Campus Resource Centre (OCRC) maintains up-to-date lists of available rental accommodation in Hamilton and the surrounding area. Among other services, it also provides free bus route maps, city zone maps, free use of telephones for students to contact landlords, information on housing by-laws and Tenant Protection Act, and personal assistance with the housing search.

  OCRC is operated on a year-round basis. Visit our web site to see all the listings of available rental units by zone and category.

PARKING

- E.T. Clarke Centre, ext. 24232 or 27416
  
  Web Address: http://parking.mcmaster.ca
  
  Campus parking facilities are limited and the availability of spaces cannot be assured.

  Travel to and from the University on foot, by public transportation and in car pools is encouraged.

  Students wishing to park a motor vehicle or motorcycle on campus are required to complete and submit a parking application. Applications are accepted between June 1 and the close of the last business day of July. It is now possible to apply electronically. The following web address: http://parking.mcmaster.ca

  Completed application forms, accompanied by a Visa or MasterCard number and authorizing signature or a cheque or money order, payable to McMaster University, in the amount required for the full period must be forwarded to: Parking and Transit Services E.T. Clarke Centre, McMaster University Hamilton, Ontario L8S 4K1.

  Cheques post-dated after July 31 will not be accepted. (Parking applications and/or parking permits will be withdrawn and additional fees applied for NSF cheques.)

If any applicable zone is oversubscribed, there will be a lottery draw. Undergraduate students not in residence may apply for available spaces in Zone C only. The procedure for allocation of these spaces will be developed in consultation with the MSU Executive. Students in residence requiring parking can apply for Zone 7 only, and may apply at any time of the year.

Special arrangements can be made for disabled parking privileges. Copies of the complete rules and regulations concerning parking at McMaster University are available at the Parking and Transit Services Office.

The Parking and Transit Office has the overall responsibility for dealing with parking matters. If you have a problem, parking personnel will assist you. The office is located in the E.T. Clarke Centre, (905) 525-9140 ext. 24232 or 27416 and is open Monday to Friday from 9:00 a.m. to 4:00 p.m.

UNIVERSITY CHAPLAINS

- McMaster University Student Centre, Room 231, ext. 24207
  
  Web Address: http://www.mcmaster.ca/chaplain
  
  Email Address: chaplain@mcmaster.ca
  
  The McMaster Chaplaincy Centre is open to all students and the campus community. The Chaplaincy Centre is staffed by Carol Wood, Ecumenical Chaplain; Michael Fallon, Christian Reformed Chaplain; Father Jack Hurley, Roman Catholic Chaplain and Mary Dingle, Assistant to the Chaplains. The Office is open between 8:30 a.m. and 4:30 p.m., Monday through Thursday, and between 8:30 a.m. and 3:30 p.m. on Friday. Appointments outside of these hours can be arranged.

  The Centre offers personal and confidential counselling for a wide range of concerns; groups to deal with topics such as bereavement support; and an experience of community through supper groups, Christian worship and discussion groups. In addition, the Chaplaincy Centre provides advocacy for students in need; works cooperatively with a variety of student groups; and promotes interfaith events and dialogue on campus.

STUDENT GOVERNMENT AND ORGANIZATIONS

McMASTER STUDENTS UNION

- McMaster University Student Centre, Room 201, ext. 22003
  
  Web Address: http://www.msu.mcmaster.ca
  
  Purpose: The McMaster Students Union is a student-operated corporation with a cash flow exceeding 3.5 million dollars and extensive operations spanning over 30 unique departments. More than 15,000 full-time undergraduate students (enrolled in 18 units or more) belong to the MSU by virtue of their supplementary fees paid at registration.

Services of the MSU: Considered one of the most extensive student unions in Canada, the MSU offers an array of services as well as employment and volunteer opportunities for students at McMaster. These services include the campus restaurant/night club (Quarters), a convenience store (The Union Market), a games room (House of Games), the Design and Copy Centre, an information centre (Compass), a child care centre, the Gay, Lesbian, Bisexual and Transgendered Centre, a yearbook (The Marmor), the Student Health Insurance Plan, a campus events department (which organizes Welcome Week, Homecoming and other special events), MSU Childcare Centre, and a jointly funded Ombuds Office. The MSU offers volunteer opportunities through the Emergency First Response Team (EFFT), a radio station (93.3 CFMU FM), a newspaper (The Silhouette), a Student Walk Home Attendant Team (SWHAT), a Student Health Education Centre (SHEC), the Maroons, and more than 170 clubs, including academic, political, religious, cultural and general interest.

ACADEMIC FACILITIES, STUDENT SERVICES AND ORGANIZATIONS
Student Government: The Student Representative Assembly (SRA) consists of 35 elected individuals who represent student needs in crucial matters and is the governing body of the MSU. It meets bi-weekly to discuss issues varying from the fate of the campus radio station to the amount of study space on campus. The President is elected by the entire student body while the Vice-Presidents Administration, Education and Finance are elected by the SRA.

The MSU also offers a First Year Council made up of first year students which deals with issues specific to first year students. Student Centre: The MSU is the major stakeholder in the new McMaster University Student Centre. Most of the mentioned services are located here, including the President and student representatives offices. For further information, visit the MSU Main Office, MUSC Room 201, or call (905) 525-9140, ext. 22003.

Fraternities and Sororities are not recognized by McMaster University and are not permitted to associate with the University in any way. The University is not responsible for any acts by these groups.

OMBUDS OFFICE

➤ McMaster University Student Centre, Room 210, ext. 24151
Web Address
http://www.mcmaster.ca/ombuds
Email Address
ombuds@mcmaster.ca

Shelley Lancaster
Carolyn Brendan

The Ombuds Office provides information and advice to the McMaster community to assist in the resolution of University related complaints and concerns. The Ombuds Office handles academic and non-academic matters as well as issues arising out of the provision of services. Students come to the Office with questions about such issues as grade appeals, petitions, codes of conduct and employment on campus.

The Ombuds Office is a neutral, confidential service provided by the McMaster Students Union in conjunction with the University.

MCMASTER ASSOCIATION OF PART-TIME STUDENTS (MAPS)

➤ McMaster University Student Centre, Room 234, ext 22021
Web Address
http://www.mcmaster.ca/maps/
Email Address
maps@mcmaster.ca

MAPS provides the opportunities and methods for part-time students to communicate their needs and ideas to university officials, by ensuring representation on university governing bodies and committees, and by the Association's direct contact with university administrators on matters such as course availability, evening services, tuition and ancillary fees.

MAPS is also pleased to offer four awards: the Centennial Award for degree students, the Centennial Award for certificate students, the Martin W. Winder Award, and a Gold Medal. MAPS has also established bursaries to assist students who have demonstrated financial need.

In addition, there is a MAPS Work Study Program available to part-time students who have demonstrated financial need. This program allows part-time students to work for eight to ten hours a week for ten weeks. Contact Student Financial Aid and Scholarship Office, ext. 24319, for information.

There are three computer centers in the office for your use where you can access your student record, surf the Web, use email, WordPerfect, Word or Excel.

MAPS provides a bridge between you and the University, helping you to feel a part of McMaster's student body. We urge you to participate as often as possible in the academic and social events which will be available to you at McMaster.

MCMASTER UNIVERSITY-ALUMNI ASSOCIATION

➤ President's Residence, ext 23900 or 1-888-217-6003 (Toll-free)
Web Address
http://www.mcmaster.ca/ua
Email Address
alumni@mcmaster.ca

Following convocation, all graduates of McMaster University automatically become members of the McMaster Alumni Association (MAA) and join over 100,000 alumni living in over 125 countries. The Association's mission statement addresses a number of goals: support of McMaster University, involvement of alumni, recognition of alumni achievements, alumni services and benefits, alumni communication, and involvement of current students.

Our alumni branch program creates connections in geographic areas like Brantford, Vancouver, Ottawa, Toronto and Hong Kong. Branches also connect alumni to their faculty or department through groups like the Michael G. DeGroote School of Business Alumni Association. Still other branches create connections among Mac grads who share a common interest or affinity, like the MSU Alumni Branch or Athletics Alumni Association.

The MAA also offers programs in the greater Hamilton community. The McMaster Alumni Connection (MAC) Luncheon Series brings high profile speakers to downtown Hamilton to talk with McMaster alumni and friends, and the Albert Lager Event Series expands your educational relationship with Mac into a lifelong affair by providing fun and unique opportunities to enjoy lectures, trips and seminars. Alumni Weekend occurs every year in June and is the largest single alumni event. It incorporates class reunions and other events like the Alumni Gallery Induction Ceremony designed to attract alumni to the McMaster campus.

The Association also gives its members the chance to obtain unique or discounted products or services through its Services and Benefits MAA Board of Directors, and along with hundreds of other alumni volunteers, provide alumni programming in conjunction with the Office of Alumni Advancement. Both the Office and the Association can be contacted in the President's Residence, or by phone at (905) 525-9140 ext 23900, 1-888-217-6003 (Toll free), by email at alumni@mcmaster.ca or by fax at (905) 524-1733.
STUDENT FINANCIAL AID

WEB ADDRESS: http://sfas.mcmaster.ca
EMAIL ADDRESS: osap@mcmaster.ca

Manager, Student Financial Aid
Tracie Long
For information on any of the programs which follow, please contact:
Office of Student Financial Aid & Scholarships
Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-9140, ext. 24319

ONTARIO STUDENT ASSISTANCE PROGRAM

Financial aid to help students meet the costs of post-secondary education is available from the federal and provincial governments through the Ontario Student Assistance Program (OSAP). The various components of OSAP are:

- Canada Student Loans/Canada Study Grants
- Part-time Canada Student Loans/Canada Study Grants for High-Need Part-time Students
- Ontario Student Loans
- Ontario Special Bursary Plan
- Ontario Work-Study
- Child Care Bursary
- Bursaries for Students with Disabilities
- Queen Elizabeth II (Aiming for the Top) Scholarship
- Millennium Bursary

To be eligible to be considered for assistance under these OSAP programs, a student must be a Canadian citizen, permanent resident of Canada or a protected person; must meet Ontario residency requirements and must meet the specific application requirements of the program. The amount of financial aid awarded is based on financial need.

It is strongly recommended that students apply for OSAP at http://osap.gov.on.ca by July 15 to ensure that their applications are processed by the start of classes.

All of the government programs described in this text are modified and restricted annually to reflect the changing needs of students from the Province of Ontario. It is, therefore, recommended that you discuss your specific financial requirements with a Student Loans and Awards Officer in the Office of Student Financial Aid & Scholarships as early as possible.

Canada Student Loans

This federal government plan, administered by the provincial government, provides loans to students demonstrating financial need, who are enrolled in at least 60% of a full course load (students with permanent disabilities may enrol in 40% of a full course load) per term in an approved degree, diploma or certificate program of at least 12 weeks in length at a ministry approved educational institution (anywhere in the world) and have passed a credit check. The Government of Canada pays the interest on the loan while the student is studying full-time.

Part-Time Canada Student Loans

The federal government also provides Canada Student Loans for part-time students demonstrating financial need, who are enrolled in 20-59% of a full course load (students with permanent disabilities may enrol in 20-99% of a full course load), per term in courses leading to a degree, diploma or certificate in an approved program at a ministry approved educational institution. Part-time Canada Student Loans assist with a student's allowable costs for tuition, books, transportation, day care and incidentals and are interest-bearing after 30 days. Repayment responsibilities begin with 30 days of negotiating the loan.

Canada Study Grants are available to high need part-time students who are studying part-time for very specific reasons (inability to attend full-time). Students submitting part-time loan applications will be assessed for grant eligibility.

Ontario Student Loans

Ontario Student Loans provide loans to full-time students whose financial needs are not fully covered by Canada Student Loans. To be considered for Ontario Student Loans, students must meet the criteria outlined under the Canada Student Loans Program (above) and OSAP's Ontario residency requirements. Ontario Student Loans are only available to students enrolled in an approved program at an approved public university or college of applied arts and technology in Canada, or an approved private post-secondary institution in Ontario. The provincial government pays the interest on the loans while the student is studying full-time.

Ontario Special Bursary Plan

This plan helps students who demonstrate exceptional levels of financial need who are unable to attend school full-time. Bursaries are available to eligible part-time students enrolled in approved programs at recognized post-secondary institutions in Ontario only. Students must be working towards their first post-secondary degree, diploma or certificate.

Ontario Work-Study

The Work-Study Program provides part-time jobs during the school year to students who demonstrate financial need to help them meet their education-related costs. It also helps students who lack the resources expected under OSAP criteria or, who have an assessed need under OSAP which is not met because of loan maximums or, who do not wish to borrow further due to high debt load. Costs of this plan are shared by the provincial government and McMaster University.

Child Care Bursary

This plan is intended to assist full-time students who have applied to OSAP and who demonstrate financial need. Eligible students must have three or more children, 11 years of age and under.

Bursaries for Students with Disabilities

This plan is intended to assist students with disabilities, who demonstrate financial need, to meet disability-related costs related to their participation in post-secondary education. For more information, contact the Centre for Student Development at http://cad.mcmaster.ca/.

Canada Study Grants

Canada Study Grants are funded by the federal government and administered by the provincial government, through the Ontario Student Assistance Program (OSAP). Policies regarding eligibility and amounts are established by the federal government and procedures on how to apply are established by the province of Ontario. Canada Study Grants include the following:

- Canada Study Grant for Students with Dependents

- Canada Study Grant for Students with Permanent Disabilities

- Canada Study Grant for High-Need Students with Permanent Disabilities

- Canada Study Grant for High-Need Part-time Students

- Canada Study Grant for Women in Doctoral Studies

All Canada Study Grants are non-repayable and taxable.

Queen Elizabeth II (Aiming for the Top) Scholarship

The Queen Elizabeth II (Aiming for the Top) Scholarship is designed to recognize students who have shown academic excellence at the high school level and to assist students with financial need. The value of the scholarship varies between $100 and $3,500 per academic year. You may be considered for a Queen Elizabeth II (Aiming for the Top) Scholarship if you:

- attend an Ontario high school in 2004/2005 and achieve academic excellence;

- are an Ontario resident (as defined by OSAP);

- apply to attend an Ontario university through the Ontario Universities' Application Centre, or a college of applied arts and technology through the Ontario College Application Service, or apply to attend another Ontario post secondary institution (e.g. a private career college) that is approved for the purposes of this scholarship;

- will be a full-time post-secondary student in the 2005/2006 academic year; and

- meet all other application requirements/deadlines.

Millennium Bursary

The Canada Millennium Scholarship Foundation Bursary is available for full-time students who have the highest assessed need, as determined by the Province of Ontario, and who meet all of the program's eligibility requirements. Details on the eligibility requirements are available on the Canada Millennium Scholarship Foundation web site at http://www.millenniumscholarships.ca. The value of the bursary is $3,000.
**McMASTER SUMMER WORK PROGRAMS**

McMaster Summer Work Programs offer part-time and full-time summer jobs to students demonstrating financial need to help them to meet costs not recognized under regular federal and provincial financial aid programs. In particular, these programs are intended to assist students who lack resources relative to their assessed financial need and those who do not wish to borrow further due to a high debt load.

To apply for the McMaster Summer Work Programs identified below, students should see their application and deadline information at http://sfas.mcmaster.ca.

**THE R. ROSS CRAIG MEMORIAL FUND WORK PROGRAM**
Established in 1997 in memory of R. Ross Craig. A variable number of employment opportunities are 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 for Studies of Children at Risk, McMaster University. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90786)

**THE HAMIL FAMILY FOUNDATION WORK PROGRAM**
Established in 1996 by the Hamil Family Foundation. A variable number of employment opportunities are available to students in any program who demonstrate financial need. 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 Student Financial Aid & Scholarships. (90656)

**THE SALLY HORSFALL WORK PROGRAM**
Established in 1996, the Centre for Studies of Children at Risk, 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. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90657)

**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 Centre. A variable number of employment opportunities will be made available through the Edward and Margaret Lyons Humanities Communications Centre to assist students demonstrating financial need. These jobs will provide an opportunity for students to pursue research in the fields of computing and human communication. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90658)

**THE McMaster “McWORK” PROGRAM**
Established in 1996 by the University with the goal of creating meaningful employment opportunities for current full-time students who demonstrate financial need. To be eligible for consideration, students must be approved for the Summer Work Program through the Office of Student Financial Aid & Scholarships. (90659)

**SHORT-TERM EMERGENCY LOANS**

Assistance in the form of short-term emergency loans is sometimes available to graduate or undergraduate students. Such loans cannot be given to pay tuition, bookstore, residence or other university expenses. Repayment of any loan is expected within 90 days or before the end of the student’s study period. Students requesting a short-term loan must meet with a representative from the Office of Student Financial Aid & Scholarships to complete an application.

A number of funds exist to provide assistance to students in financial need.

**EDITH M. GRIFFEN LOAN FUND**
Established in 1957 by Paardeburg Chapter, IODE, in honour of Mrs. H.S. Griffen.

**MARGARET B. SUTTERBY MEMORIAL FUND**
Established in 1956 by the 67th University Battery Chapter, IODE.

**THE MCLROY LOAN FUND**
Established in 1956 by the University Women’s Club of Hamilton. To assist female students in the final level of any program.

**THE IVOR WYNNE MEMORIAL LOAN FUND**
Established in 1971 in memory of Ivor Wynne, Dean of Students. To assist students in any program.

**THE UNIVERSITY LOAN FUNDS**
Small short-term emergency loans from the University funds are available to assist students in any program. These funds have been supported through contributions from a number of local Chapters, Imperial Order Daughters of the Empire, including the Emma Frances Pratt, Princess Marina and Sovereign Chapters.

**BURSARIES**

Bursaries are granted by the University Bursary Selection Committee on the basis of demonstrated financial need. They are intended to supplement a student’s own financial contribution, parental assistance and government aid to help the student to complete the academic year.

Application procedures and deadline information are available from the Office of Student Financial Aid & Scholarships, Gilmore Hall, Room 120 or on our web site at http://sfas.mcmaster.ca. Any government-sponsored student loan applicant who is registered and in good standing (not on academic probation twice) as a student of McMaster University is eligible to apply.

Bursaries have been grouped according to category and/or Faculty.

**GENERAL BURSARIES**

**THE 4 WINDS BURSARIES**
Established in 1997 by John F. Evans and Patricia Peacock-Evans in recognition of John’s long-standing association with McMaster as Chair of The President’s Club Executive Committee. 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. (90708)

**THE AINSWORTH BURSARIES**
Established in 1995. To be granted to undergraduate students in any program who demonstrate financial need. Preference to be given to female students. (90578)

**THE PHYLLIS MAY ATKEN BURSARY FUND**
Established in 1997 by the bequest of Phyllis May Aitken. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90653)

**THE AMEX CANADA BURSARIES**
Established in 1997 by AMEX Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90605)

**THE AUBURN INDUSTRIAL SERVICES LTD BURSARIES**
Established in 1997 by Auburn Industrial Services Ltd. under the McMaster Student Opportunity Fund initiative. 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. (90697)

**THE JOY BABY BURSARIES**
Established in 1997 by Joy Babby under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90609)

**THE CHARLES MURRAY BALL BURSARIES**
Established in 1993 by bequest of May Alexandra Ball in memory of her brother Charles Murray Ball. To assist students in any program who demonstrate financial need. (90600)

**THE D.L. HOWARD BENTALL AND DR. SHIRLEY F. BENTALL BURSARIES**
Established in 1999 by Dr. D. Howard Bentall (Class of ‘37) and Dr. Shirley F. Bentall (Class of ‘46) under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90855)

**THE BETZNER FAMILY MEMORIAL BURSARIES**
Established in 1996 by the Betzner Family of Dundas, Ontario. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90660)

**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. A variable number of bursaries to be granted to students annually who demonstrate financial need. (90960)

**THE BOWES FAMILY BURSARIES**
Established in 1996 by Eleanor and Terence Aurin of Cambridge. 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. (90581)
THE BRANTFORD ALUMNI BRANCH BURSARIES
Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association under the McMaster Student Opportunity Fund initiative. 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. (90583)

BURSARIES FOR IN-COURSE VISA STUDENTS
Established in 1982 by the University to assist visa students in any program. (90547)

BURSARIES FOR VISA STUDENTS
Established in 1999. A variable number of bursaries to be granted to visa students in any program who demonstrate financial need. (90933)

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. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90584)

THE JAMES CALVIN BURSARIES
Established in 1997 by bequest of James Calvin. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90831)

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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90817)

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. To be granted to students who demonstrate financial need. Preference will be given to the recipient of the Betty Taylor Campbell Scholarship. (90932)

THE ELVA CARROLL BURSARY
Established in 1996 by Elva Carroll under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Elva Carroll Award. (90999)

THE ANNE AND HAROLD CHALK MEMORIAL BURSARIES
Established by bequest of Anne Maria Luise Chalk and Harold Henry Chalk of Ottawa. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90966)

THE CHAWEKERS 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. To provide assistance to students who demonstrate financial need. Value: $1,800. (9097)

THE CIBC BURSARIES
Established in 1997 by the Canadian Imperial Bank of Commerce under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90683)

THE SAM M. CINO BURSARY
Established in 1997 by Sam Cino in support of McMaster students. To be granted to a student enrolled in any program who demonstrates financial need. (90684)

THE HUGH CLARK BURSARIES
Established in 1997 by Hugh Clark in support of McMaster students. 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. (90685)

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. To be awarded to a student in good academic standing who is a Canadian citizen or permanent resident. (90507)

THE CLASS OF ’46 GOLDEN ANNIVERSARY BURSARIES
Established by the Year ’46 in honour of their fiftieth reunion on June 1, 1996. 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. (90584)

THE CLASS OF ’47 GOLDEN ANNIVERSARY BURSARIES
Established in 1997 by the Class of ’47 in honour of their 50th Anniversary Reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90590)

THE CLASS OF ’49 GOLDEN ANNIVERSARY BURSARIES
Established by the Class of ’49 in honour of their 50th Anniversary Reunion in 1999. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90591)

THE CLASS OF ’51 GOLDEN ANNIVERSARY BURSARIES
Established by the Class of ’51 in honour of their 50th Anniversary Reunion in 2001. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90686)

THE CLASS OF ’57 BURSARIES
Established in 1997 by the Class of ’57 in honour of their 40th Anniversary Reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90687)

THE CLASS OF ’60 GOLDEN ANNIVERSARY BURSARIES
Established by the Class of 1960 in honour of its 50th reunion. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90942)

THE DORIS PARTRIDGE COLE BURSARY
Established in 1981, this bursary is to be granted to a worthy student in memory of Doris Partridge Cole (Class of ’45). (90508)

THE CONNOR, CLARK & LUNN BURSARIES
Established in 1986 by Connor, Clark & Lunn in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a McMaster student in any program who demonstrates financial need. (90666)

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. To be granted to a student enrolled in any program who demonstrates financial need. (90963)

THE THOMAS DALY BURSARIES
Established in 1996 by family, friends and colleagues of Thomas Daly. A variable number of bursaries to be granted to students in any undergraduate program who demonstrate financial need. (90592)

THE EDWARD FRANK DAVIS MEMORIAL BURSARY
Established in 1996 by bequest in memory of Edward Frank Davis under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Edward Frank Davis Memorial Award. (90900)

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. To be granted to students enrolled in any program who demonstrate financial need. (90698)

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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90698)

THE EVANS, PHILP BURSARIES
Established in 1996 by the partners of Evans, Philip in support of McMaster students. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90671)

THE 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. To be granted to a full-time student in any program who demonstrates financial need. Preference to be given to a mature female student. (90704)

THE DONALD A. FEATHER BURSARY
Established in 2003 by family in honour of Donald A. Feather (B.A. ’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. To be granted to a student in any Faculty who demonstrates financial need. (91010)
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. To be granted to students in any program who demonstrate financial need. (90683)

THE EDWIN W. HILBORN BURSARY
Established in 1965 by bequest of Edwin W. Hilborn. To be granted to a student in any program. (90520)

THE LLOYD ANDREW HILGARTNER BURSARIES
Established in 1997 by bequest of Lloyd Andrew Hilgartner. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90834)

THE INTER-RESIDENCE COUNCIL BURSARY
Established in 1996 by the Inter-Residence Council in support of McMaster students. To be granted to a student in any program who demonstrates financial need. (90880)

THE FORRESTER-FORBES BURSARIES
Established in 1997 by Shelley Forster and Douglas Gregor in support of McMaster students. To be granted to a student in any program who demonstrates financial need. (90707)

THE JADDCO ANDERSON BURSARY
Established in 1997 by Jadddco Anderson Limited in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90738)

THE EXECUTIVE BURSARIES
Established in 1997 by The Hamilton Spectator in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90743)

THE 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. To be granted to a student who demonstrates financial need with a minimum 6.0 Cumulative Average in any program. Preference to be given to students who show leadership and participation in McMaster student life. (90747)

THE LELAND GREGORY BURSARIES
Established in 1997 by the bequest of Leland Andrew Gregory. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90719)

THE MARY E. KEYES 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. To be granted to a student who demonstrates financial need with a minimum 6.0 Cumulative Average in any program. Preference to be given to students who show leadership and participation in McMaster student life. (90747)

THE LINDA F. LAMBERT BURSARY
Established in 1997 by Linda F. Lambert in support of students who demonstrate financial need. (90680)

THE BETTY MAY LAMB MEMORIAL BURSARY
Established in 1991 by family, friends, colleagues in memory of Betty May Lamb, an employee at McMaster University for 22 years, most recently as Executive Assistant to the Faculty Association from 1988-91. To assist students in any program who demonstrate financial need. (90555)

THE LUCY S. LAMBERT BURSARY
Established in 1997 by Lucy S. Lambert in support of students who demonstrate financial need. (90602)

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. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90609)
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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90611)

THE GARY LAUTENS MEMORIAL BURSARIES
Established in 1996 by Mrs. Jackle 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. 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. (90613)

THE BERTRAM LEGGAT MEMORIAL BURSARIES
Established in 1996 by his family and friends in memory of Bertram Leggat, O.C., as a tribute to his dedication to the community, his esteem in the legal profession and his devotion to his family. A variable number of bursaries to be granted to students who demonstrate financial need. (90614)

THE LINCLUDEN MANAGEMENT BURSARIES
Established in 1997 by Lincleden Management Ltd. under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90755)

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. 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. (90907)

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. To be granted to students enrolled in any program who demonstrate financial need. (90781)

THE LINDA MATTHEWS BURSARIES
Established in 1997 by Linda Matthews (Class of '69). 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. (90664)

THE ANDREW McFARLANE BURSARIES
Established in 1986 by bequest of Andrew McFarlane of Hamilton. To be granted to a student or students who are in good standing and have demonstrated financial need. (90526)

THE McMaster BURSARIES
Established in 1990 by the University to assist undergraduate students in any program. (90527)

THE McMaster GENERAL BURSARIES
Established in 1996 by the University to assist undergraduate students in any program who demonstrate financial need. (90624)

THE McMaster ALUMNÆ CENTENNIAL BURSARY
Established in 1996 by the McMaster Women's Alumni, Hamilton Branch, to be granted to a mature 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. (90528)

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. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. (90662)

THE McMaster ASSOCIATION OF PART-TIME STUDENTS BURSARIES
Established in 1989 in recognition of McMaster's Centennial celebration to assist students currently enrolled in a degree or certificate program who, without such assistance, would be unable to continue their studies. Consideration may also be given to students who would not otherwise enroll without such assistance. Applications will be reviewed by the MAPS Centennial Bursary Selection Committee. (90539)

THE McMaster ASSOCIATION OF PART-TIME STUDENTS 20TH ANNIVERSARY BURSARY
Established in 1999 in honour of the 20th anniversary of the McMaster Association of Part-Time Students (MAPS) to commemorate its silver anniversary. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the MAPS Bursary Selection Committee. (90935)

THE McMaster ASSOCIATION OF PART-TIME STUDENTS 25TH ANNIVERSARY BURSARY
Established in 2004 by the McMaster Association of Part-Time Students (MAPS) to commemorate its silver anniversary. To be granted to students currently enrolled, on a part-time basis, in a degree, diploma or certificate program, who demonstrate financial need. Applications will be reviewed by the McMaster Student Opportunity Fund Committee. (90968)

THE McMaster ATHLETIC COUNCIL (MAC) BURSARIES
Established in 1997 by The Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The McMaster Athletic (MAC) Award. (90906)

THE McMaster SAVINGS AND CREDIT UNION LIMITED BURSARIES
Established in 1997 by McMaster Savings and Credit Union Limited in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted annually to McMaster students enrolled in any program who demonstrate financial need. (90822)

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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90627)

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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90788)

THE A.J. MELLONI MEMORIAL FUND
To be granted to a student in any program. (90532)

THE MELOCHE MONNEX INC. BURSARY
Established in 1997 by Meiloche Monnex Inc. under the McMaster Student Opportunity Fund initiative in the belief that students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90779)

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. To be granted to a student enrolled in any program who demonstrates financial need. (90778)

THE WALLACE R. MORRIS BURSARY FUND
Established in 1997 by bequest of Wallace Ronald Morris. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90530)

THE JOHN DOUGLAS MOYER BURSARY
Established in 1998 by bequest of John Douglas Moyer to assist needy students. (90534)

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. 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. (90909)

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 McMaster community and in support of the efforts of McMaster University to ensure that all students have the opportunity to achieve their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90781)

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. To be granted to students in any program who demonstrate financial need. (90782)
THE ONCOLOGY NURSING PROGRAM BURSARY
Established in 1997 in recognition of the contribution of McMaster students under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of the Oncology Nursing Program Award. (90910)

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. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90684)

THE ROBERT AND RUTH PHILIP STUDENT BURSARIES
Established in 1996 by Robert and Ruth Philip of Hamilton, Ontario. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90635)

THE PIONEER GROUP LTD. BURSARY
Established in 1997 by the Pioneer Group of Companies Inc. under the McMaster Student Opportunity Fund initiative. 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. (90911)

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. 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. (90912)

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. 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. (90913)

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. A variable number of bursaries to be granted to McMaster students who demonstrate financial need. (90797)

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. To be granted to a student enrolled in any program who demonstrates financial need. (90824)

THE JAMES AND ELIZABETH ROBERTS BURSARIES
Established in 1957 by R. H. Roberts in memory of his parents to assist any male student of good academic standing. (90538)

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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90795)

THE HELEN LENORE ROSZELL MEMORIAL BURSARIES
Established in 2000 by bequest of Helen Lenore Roszell. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90861)

THE ROTARY CLUB OF ANCASTER BURSARY
Established in 1997 by the Rotary Club of Ancaster under the McMaster Student Opportunity Fund initiative. 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. (90914)

THE ROTARY CLUB OF BURLINGTON CENTRAL BURSARY
Established in 1997 by the Rotary Club of Burlington Central under the McMaster Student Opportunity Fund initiative. 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. (90915)

THE ROTARY CLUB OF HAMILTON BURSARY
Established in 1997 by the Rotary Club of Hamilton under the McMaster Student Opportunity Fund initiative. 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. (90875)

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. 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. (90876)

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. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. (90799)

THE HELEN SANSONE BURSARIES
Established in 1996 by bequest of Helen Sansone of Hamilton, Ontario. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90841)

THE SATURN OF HAMILTON EAST BURSARY
Established in 1996 by SATURN of Hamilton East under the McMaster Student Opportunity Fund initiative. 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. (90919)

THE SCIENCE CLASS OF '97 LEGACY BURSARY
Established in 1997 by the Science Class of '97 under the McMaster Student Opportunity Fund initiative. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of The Science Class of '97 Legacy Award. (90922)

THE MYKOLA SEMENIUK BURSARIES
Established in 1991 by bequest of Mykola Semeniuk to assist students who demonstrate financial need and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative. (90551)

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. 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. (90967)

THE MEENA AND NARESH SINHA BURSARY
Established in 1996 by Meena and Narish Sinha under the McMaster Student Opportunity Fund initiative. 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. (90921)

THE ALBERT EDWARD SMITH AND JEAN MCAVISH SMITH BURSARY
Established in 1998 by Mrs. Jean McaVish Smith (Class of '31), in memory of Albert Edward Smith (Class of '29) under the McMaster Student Opportunity Fund initiative. To be granted to a student in any program who demonstrates financial need. (90836)

THE SAM SMURLICK BURSARY
Established in 1978 by the Smurlick family in memory of Sam Smurlick (Class of '35). To be granted to a student in any program who demonstrates financial need. (90541)

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. 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. (90922)

THE SOMERVILLE BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to a recipient of The Somerville Scholarships. (9081)

THE ST. PAUL GUARANTEE INSURANCE 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. A variable number of bursaries to be granted annually to McMaster students who demonstrate financial need. (90757)

THE ADAM SUDAR PRINTMAKING BURSARY
Established in 1997 in memory of Adam Sudar by his friends under the McMaster Student Opportunity Fund initiative. 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. (90823)

THE TARBUtT CONSTRUCTION LTD. BURSARY
Established in 1997 by Torburtt Construction Ltd., under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90732)
THE STEPHEN F.H. THERELKED BURSARY
Established in 1997 by friends and colleagues of Stephen F.H. Threlkeld under the McMaster Student Opportunity Fund initiative. 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. (90924)

THE TKK INC. BURSARY
Established in 1997 by TKK Inc. under the McMaster Student Opportunity Fund initiative. 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. (90925)

THE RAY AND JOYCE TRULL BURSARY
Established in 1988 by Roger and Janet Trull and their children in honour of Ray and Joyce Trull. To be granted to a student in any program who demonstrates financial need. (90837)

THE ROGER TRULL BURSARY
Established in 1997 by friends and colleagues under the McMaster Student Opportunity Fund initiative. 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. (90926)

THE EDITH H. TURNER FOUNDATION BURSARIES
Established in 1995 by The Edith H. Turner Foundation in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90648)

THE TYNOWSKI BURSARY
Established in 1997 by the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Tynowski Scholarship. (90953)

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. 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. (90938)

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. To be granted to a student in any program who demonstrates financial need. (90962)

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. To be granted to a student in any program who demonstrates financial need. (90997)

THE WALLINGFORD HALL BURSARIES
Established through anonymous donations to assist students in any program who demonstrate financial need. Preference will be given to the recipient of The Wallingford Hall Bursary. (90548)

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. To be awarded to a student in any program who demonstrates financial need. (90589)

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. 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. (90928)

THE ROSS FAWCETT WEBB BURSARY FUND
Established in 1983 by the Hamilton Community Foundation in memory of Ross Fawcett Webb. 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. (90971)

THE ARTHUR AND MARGARET WEIZS BURSARY
Established in 2004 by Arthur Weizs (L.L.D. 2004) and Margaret Weizs under the McMaster Student Opportunity Fund II initiative. To be granted to students enrolled in any program who demonstrate financial need. (91008)

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. To be granted to students enrolled in any program who demonstrate financial need. (90651)

THE WESCAST INDUSTRIES BURSARY
Established in 1997 by Wescast Industries Inc. under the McMaster Student Opportunity Fund Initiative. 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. (90829)

THE ALLAN AND JOY WILLIAMS BURSARY
Established in 1986 by Mary Williams (Class of '87), Anne Williams (Class of '85) and Ellen and Don Walker under the McMaster Student Opportunity Fund initiative. 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. (90877)

THE YATES BURSARIES
Established in 1963 by bequest of William Henry Yates of Hamilton. To assist students in any program. (90549)

THE GLADYS A. YOUNG BURSARY
Established in 1997 under the McMaster Student Opportunity Fund Initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Gladys A. Young Scholarship. (90878)

THE ZENON ENVIRONMENTAL BURSARY
Established in 1997 by Zenon Environmental Inc. under the McMaster Student Opportunity Fund Initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Zenon Environmental Bursary. (90931)

THE ZOOM MEDIA INC. BURSARY
Established in 1997 by Zoom Media Inc. in support of McMaster students under the McMaster Student Opportunity Fund initiative. 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. (90932)

BURSARIES FOR STUDENTS WITH DISABILITIES

THE AUBREY DALGLEISH BURSARY
Established in 1985. To be granted to a student in any program who demonstrates financial need with special preference given to handicapped students and/or students in the Faculty of Business. (90509)

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. To be granted to a disabled student in any program who demonstrates financial need. Students should have registered with the Centre for Student Development. (90553)

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. A variable number of bursaries to be granted based upon demonstrated financial need in each of the following areas:

a) The Richard Konrad Bursaries for students enrolled in any program.
b) The Richard Konrad Bursaries for physically challenged students registered with the Centre for Student Development, who are enrolled in any program. (90790)

THE SERTOMA CLUB BURSARY
Established in 1989 by the Sertoma Club of Hamilton. To be granted to a hearing disabled student in any program who demonstrates financial need. In a year that a suitable candidate is not found, the bursary will be granted to a student with another disability provided they demonstrate financial need. Students must have registered with the Centre for Student Development. (90540)

THE LILLIAN R. STEGNE MEMORIAL BURSARIES
Established in 1990 in memory of Lillian Rose Stegne (Class of '62) by family, friends and colleagues. Two or three bursaries to be granted to handicapped students in any program who demonstrate financial need. (90543)

ATHLETIC BURSARIES

All athletic bursaries are only applicable to students in Level II or higher who meet the OUA and the CIAU regulations for Athletic Bursaries. Verification of eligibility will be done in consultation with the Department of Athletics.

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. 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. (90695)
THE SAM DARRAGH GENERAL ATHLETIC BURSARY
Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative. 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. (90697)

THE SAM DARRAGH MEMORIAL BURSARY
Established in 1997 by friends of Sam Darragh under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in intersport football. (908279)

THE SADIE LUDLOW BURSARIES
Established in 1996 by the family and friends of Sadie Ludlow, former McMaster employee from 1957 to 1977, and an Outstanding Athlete who loved Sports. A variable number of bursaries to be granted to students who have demonstrated financial need and involvement in either McMaster interuniversity football or intersport women's tennis. (90615)

THE JOHN McCaHILL MEMORIAL BURSARY
Established in 2001 in loving memory of John (Jack) Woodhouse McCaHill by his family and friends. To be granted to a student who demonstrates financial need and who demonstrates outstanding athletic achievement in men's basketball, golf, football, hockey or tennis. (90669)

THE MCMcSTER MEN'S ATHLETICS BURSARY
Established by past and present student-athletes and friends of McMaster Interuniversity Athletics to assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in men's interuniversity athletics. (90625)

THE MCMcSTER MEN'S BASKETBALL BURSARY
Established by past and present student-athletes and friends of McMaster Men's Basketball to assist students in any academic program who demonstrate financial need and who demonstrate outstanding athletic participation in the sport of men's basketball. (90770)

THE MCMcSTER SQUASH AND GOLF BURSARY
Established by past and present student-athletes and friends of McMaster Golf and Squash 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. (90771)

THE MCMcSTER WOMEN'S BASKETBALL BURSARY
Established by past and present student-athletes and friends of McMaster Women's Basketball 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. (90772)

THE MCMcSTER WOMEN'S VOLLEYBALL BURSARY
Established by past and present student-athletes and friends of McMaster Women's Volleyball 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. (90773)

THE NHL PLAYERS' ASSOCIATION BURSARY
Established in 1999 by The NHL Players' Association Alumni. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in an intersport sport. (90689)

THE HAROLD NOLAN MEMORIAL FOOTBALL BURSARY
Established in 2003 by Ma and John Swart. To be granted to a student enrolled in any program who demonstrates financial need and who has demonstrated outstanding athletic achievement in inter university football. (90978)

THE THOMAS ALEXANDER PAIN BURSARY
Established by past and present student-athletes and friends of McMaster Football to assist students in any academic program who demonstrate financial need and who demonstrate outstanding participation in the sport of football. (90777)

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 and as well as the student-athletes who demonstrated financial need. Preference to be given to students who demonstrate qualities of leadership and service to the community through programs such as The Marauder Outreach program and Community Service. (90637)

COMMUNITY SERVICE BURSARIES

THE ERIC JOHN BRETZLER BURSARY
Established in 1997 by family and friends in memory of Eric John Breetzler (Class of '92). To be granted to a student enrolled in any program who demonstrates financial need. Preference will be given to students associated with the McMaster Student Union. (90814)

THE ACHIBALD R. CROZIER BURSARIES
Established in 1982 in memory of Archibald (Archie) Crozier (Class of '35), former professional football player and Chair of the Ontario Energy Board for 17 years. 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. (90565)

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. 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. (90713)

THE RAYMOND C. LABARGE MEMORIAL BURSARIES
Established in 1973 by friends and associates in memory of Raymond C. Labarge (Class of '36') of Ottawa. A variable number of bursaries to be granted to students enrolled in Level III or IV of any program who demonstrate financial need. A minimum Cumulative Average of 8.0 is required. (90524)

THE LYNDEN LIONS CLUB BURSARY
Established in 1997 by the Lynden Lions Club under the McMaster Student Opportunity Fund initiative to provide assistance to McMaster students in financial need. Preference to be given to students who have demonstrated leadership and service to McMaster University and/or the Lions International objective to take an active interest in the civic, cultural, social and moral welfare of the community. 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. (90758)

REGIONAL BURSARIES

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. To provide assistance to McMaster students who demonstrate financial need. Preference will be given to students from Haldimand Norfolk County. (90803)

THE ANCASTER LIONS CLUB BURSARY
Established in 1997 by the Ancaster 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. To be granted to a student enrolled in any program who has demonstrated financial need. Preference to be given to students who currently reside in the town of Ancaster. (90804)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) BURSARY
Established in 1997 by the Canadian Federation of University Women (Hamilton) in support of the McMaster Student Opportunity Fund initiative. To be granted to a student in any academic program who demonstrates financial need. (90828)

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 1958. To assist Hamilton students who demonstrate financial need. (90535)

THE WILLIAM A. DETENBECK BURSARIES
Established in 1996 by William Detenbeck in honour of the Detenbeck Family. A variable number of bursaries to be granted to students who demonstrate qualities of leadership and service to an Aboriginal community in Canada and who demonstrate financial need. (90597)

THE DUNDAS BURSARIES
Established in 1996 from funds donated anonymously for the purpose of providing students with an opportunity to achieve their educational goals. To provide assistance to McMaster students in financial need. Preference will be given to students from the Dundas area. (90599)
THE CYRUS EATON FOUNDATION BURSARY
Established in 2000 by the Cyrus Eaton Foundation of Cleveland, Ohio, in support of McMaster students. To be granted to a student in any program who demonstrates financial need. Preference will be given to students from Nova Scotia. (90944)

FIRSTONTARIO CREDIT UNION
Established in 1989 by members of the FirstOntario Credit Union. To be granted to a student in any program who demonstrates financial need. Preference will be given to students from Hamilton-Wentworth Region. (90725)

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. 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. (90722)

THE HAMILTON CITIZENS' MEMORIAL BURSARIES
Established in 1947 by the Hamilton Citizens' Committee for War Services. Proceeds to be used to assist undergraduate students who are residents of the Hamilton-Wentworth Region. (90516)

HAMILTON COMMUNITY FOUNDATION BURSARIES
Established in 1997 by the Hamilton Community Foundation from the income of funds generously donated by citizens of this community, notably the late sisters Genevieve Chaney and Cordelia Enslyn, and the late Mr. Ross F. Webb. A variable number of bursaries to be awarded to full-time students, registered 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. (90723)

THE MARY A. HILL BURSARY
Established in 1976 by bequest of Mary A. Hill. To be granted to a female student in any program who demonstrates financial need. Preference will be given to one who has graduated from a secondary school in Hamilton. (90521)

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. Preference will be given to children and grandchildren of employees and retirees of The Hamilton-Wentworth Regional Police. (90537)

THE KIWANIS CLUB OF HAMILTON EAST BURSARY
Established in 1997 by the Kiwanis Club of Hamilton East under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. Preference will be given to members and former members of the Hamilton East Kiwanis Boys' and Girls' Club. (90749)

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. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students from the Owen Sound area. (90753)

THE PAUL R. MACPHERSON BURSARY
Established 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. To 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. (90618)

THE MCMASTER SAVINGS AND CREDIT UNION LTD. BURSARIES
Established in 1993 by the McMaster Credit Union Limited. To assist students in any program. Preference to be given to students who are members of the McMaster Savings and Credit Union or, in the absence of such members, children of employees of McMaster University or Cheeklee/McMaster Hospitals. (90561)

THE LILLIAN AND LEROY PAGE BURSARIES
Established in 1997 by the Lillian and Leroy Page Foundation to enable students to pursue their educational goals. A variable number of bursaries to be granted to students from the Hamilton-Wentworth Region who demonstrate financial need. Preference will be given to students in the Faculty of Science. (90786)

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 pursuing their educational goals. 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. (90794)

THE ELEANOR AND WILFRED RYDER BURSARY
Established in 1999 by Marvin Ryder in honour of Eleanor and Wilfred Ryder. 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. (90684)

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 particularly the role that good education provides a helping hand to others. To be granted to students in any Faculty who demonstrate financial need. Preference will be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King Township. (90967)

FACULTY-SPECIFIC BURSARIES

ARTS AND SCIENCE PROGRAM

THE BIRGIT AND ROBERT BATEMAN BURSARY
Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative. 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 will be given to students who are studying Environmental Studies or Environmental Science. (90810)

THE LOUILA BRAYFORD MEMORIAL BURSARY
Established in 1996 by Mrs. Janet Leenarts in memory of her late mother, Mrs. Louila Brayford (nee Singham, Class of '34). 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. (90839)

THE GERALDINE LORETIA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (class of '35 and '39). To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum GPA of 7.0. (90870)

THE GORDON H. DEAN BURSARIES
Established in 1986 by Gordon H. Dean of Stoney Creek. To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in Level III of a program in Arts and Science or Level III of a program in the Faculty of Humanities. (90594)

THE GEORGE P. GILMOUR MEMORIAL BURSARY
Established in 1997 by the Class of '62 in support of McMaster students. To be granted to a student enrolled in the Arts and Science Program who has demonstrated financial need. Preference will be given to students who win the George P. Gilmour Memorial Scholarship. (90714)

THE JOHNS FAMILY BURSARIES
Established by Martin W. Johns and family. A variable number of bursaries to be granted to students enrolled in the Arts and Science Program who demonstrate financial need. (90668)

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. 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 (90970)
THE SAM AND IRENE WATSON BURSARY FUND
Established in 1986 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative 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 (90840)

FACULTY 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 1999 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. Preference will be given to a mature student. (90801)

THE MATT CASEY BURSARY
Established in 1997 by Mr. Matthias Casey (Class of '83) under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Business. Preference will be given to students enrolled in the M.B.A. Program in the Finance stream. (90861)

THE DAVID CLARK BURSARIES
Established in 1996 by David I. Clark and Marilyn D. Eustace. 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. (90858)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of '35 and '39). To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90870)

THE AUDREY DALGLEISH BURSARY
Established in 1985. To be granted to a student in any program who demonstrate financial need with special preference given to handicapped students and/or students in the Faculty of Business. (90509)

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. 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. (90593)

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. 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. (90599)

THE GEORGE AND MARGARET EDUPRIOT BURSARY
Established in 1997 by Sandra Edupriot in honour of her parents George and Margaret Edupriot under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in either the Faculty of Business or the Computer Science program in the Faculty of Science. (90701)

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. To be granted to students enrolled in the Faculty of Business who demonstrate financial need. (90705)

THE FINANCIAL EXECUTIVES INSTITUTE BURSARY
Established in 1987 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. To be granted to a student enrolled in Level II of the Commerce program who demonstrates financial need, has attained a minimum CA 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 CA of 6.0 in the Commerce program. (90829)

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. 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. (90867)

THE ALLEN AND MILLI GOLDFAMILY FOUNDATION BURSARIES
Established in 1997 from funds donated by the Allen and Milli Gould Family Foundation, in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to McMaster students enrolled in the Faculty of Business who demonstrate financial need. Preference to be given to M.B.A. Co-op students. (90718)

THE GARY GRAHAM BURSARY
Established in 1997 by Gary Graham under the McMaster Student Opportunity Fund initiative. 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. (90717)

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. To be granted to a Level III or Level IV Commerce student taking two or more of the Human Resource and Management Area courses who demonstrates financial need. (90860)

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. 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. (90516)

THE JOHANNA MICHAEL HOLMOBE MEMORIAL BURSARY
Established in 2004 by bequest of Ruth Anne Holmboe in memory of her husband Johannes Michael Holmboe. To be granted to students enrolled in the Faculty of Business who demonstrate financial need. (91006)

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. 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. (90841)

THE MARK JANTZI MEMORIAL BURSARY
Established in 2004 by Paul and Harne 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. 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. (91004)

THE JAN KELLEY MARKETING BURSARY
Established in 1997 by Kelley Advertising Inc., founded in Hamilton in 1913. 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. (90745)

THE KPMG BURSARIES
Established in 1986 by KPMG in support of its belief that students should have the opportunity to pursue their educational aspirations. A variable number of bursaries to be granted to students enrolled in the Faculty of Business who demonstrate financial need. (90507)

THE 3M CANADA INC. BURSARIES
Established in 1986. To be granted to two students in their final year of study who demonstrate financial need. Ours to an M.B.A. student who has attained at least a 6 point average and one to a Science student who has attained a Cumulative Average of at least 9.0 at the most recent review. (90525)

THE MANULIFE FINANCIAL BURSARIES
Established in 1997 by Manulife Financial under the McMaster Student Opportunity Fund initiative. 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. (90762)
THE McMaster M.B.A. ALUMNI ASSOCIATION BURSARIES
Established in 1996 by the McMaster M.B.A. Alumni Association. A variable number of bursaries to be granted to students enrolled in the first year of the DeGroote School of Business M.B.A. program who demonstrate financial need. (90626)

THE MINICH FAMILY BURSARIES
Established in 1995 by E. A. Minich and family. A variable number of bursaries to be granted to students enrolled in Business I 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. (90628)

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. To be granted to a student enrolled in the Faculty of Business who demonstrates financial need. (90784)

THE DR. ALFRED AND LAURA OAKIE BURSARIES
Established in 1996 by Dr. Alfred U. Oakie. A variable number of bursaries to be granted to students enrolled in Business I who demonstrate financial need. (90631)

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. 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. (90669)

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. 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. (90639)

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. A variable number of bursaries to be granted to students enrolled in a program in Business or Engineering who demonstrate financial need. (90640)

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. 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 III or IV. (90600)

THE GINO AND ROBERTA SCAPILLATI BURSARY
Established in 2004 by Gino Scapillati ’81 and Roberta Scapillati ’79 under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Business or Faculty of Social Sciences who demonstrates financial need. (91005)

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. 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. (90802)

THE TERRY SEAWRIGHT BURSARY
Established in 1996 by Terry Seawright, Lecturer in the Faculty of Business. 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. (90643)

THE STELCO UNDERGRADUATE BURSARIES
Established in 1996 by Stelco—a market-driven, technologically advanced group of businesses committed to maintaining leadership roles as steel producers—in support of students who, without financial aid, would be unable to pursue their educational goals. 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. (90644)

MOSSADIQ AND YASMIN UMEDALY BURSARIES
Established in 1999 by Mossadziq (M.B.A. ’74) and Yasmin Umedaly under the McMaster Student Opportunity Fund Initiative. To be granted to students enrolled in Business I or first year of the M.B.A. program who demonstrate financial need. (90666)

THE SAM AND IRENE WATSON BURSARY FUND
Established in 1998 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative 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 (90640)

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. 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. (90652)

THE WRIGHT FAMILY BURSARY
Established in 2003 by Thomas C. Wright, M.B.A. ’72 under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Business or the Faculty of Science who demonstrates financial need. (90999)

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. 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. (90550)

FACULTY OF ENGINEERING

THE ANDREW FOUNDATION BURSARIES
Established in 1997 by the Andrew Foundation under the McMaster Student Opportunity Fund Initiative. 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. (90806)

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. A variable number of bursaries to be awarded to undergraduate students in a full-time program in Engineering who demonstrate financial need. Value: $700 each (90500)

THE BARTEK BURSARIES
Established in 1996 by Bartek Ingredients Inc. of Stoney Creek in support of McMaster students. 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 Dean’s Honour List. (90672)

THE CANADA DIRECT SALES DIVISION BURSARY
Established in 1997 by Canon Canada Inc. - OE Division in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Program, the Environmental Studies Program or an Engineering and Society Program. (90820)

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. 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. (90819)

THE COMPUSMART BURSARIES FUND
Established in 1997 by JMG Computraits in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need. Preference will be given to McMaster students enrolled in a program in Computer Science or Computer Engineering. (90741)

THE GERALDINE LORRETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of ’35 and ’39). To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90870)
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. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90696)

THE ENGINEERING CLASS OF '97 LEGACY BURSARY
Established in 1997 by the graduating class in Engineering under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. (90688)

THE GENERAL CONTRACTORS ASSOCIATION OF HAMILTON BURSARIES
Established in 1997 by the General Contractors Association of Hamilton under the McMaster Student Opportunity Fund initiative. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90710)

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. A variable number of bursaries to be granted to students who are enrolled in the Faculty of Engineering and who demonstrate financial need. (90712)

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. 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. (90718)

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. To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. (90730)

THE INGLIS BURSARIES
Established in 1996 by Paul F. Inglis of Mississauga. A variable number of bursaries to be granted to students enrolled in a program in Commerce or Engineering who demonstrate financial need. Preference to be given to students enrolled in Engineering Management. (90606)

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. 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. (90841)

THE SZE-WAI LEE MEMORIAL BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative in honour of Sze-Wai Lee. 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. (90792)

THE LIBURDI ENGINEERING LIMITED BURSARY
Established in 1997 by Liburdi Engineering Limited under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering program who demonstrates financial need. (90754)

THE RONALD E. MATERICK BURSARY
Established in 1996 by Ronald E. Materick (Class of '70). To be granted to a student enrolled in the Faculty of Engineering who demonstrates financial need. Preference to be given to a student enrolled in Civil Engineering. (90665)

THE NEIL D. McARTHUR BURSARIES
Established in 1997 by the Annes and Neil McArthur Foundation in memory of Mrs. McArthur’s parents, Joseph and Josephine Hryniszak. 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. (90765)

THE MCMASTER ENGINEERING SOCIETY BURSARY
Established in 1999 by the McMaster Engineering Society. To be granted to a student in the Faculty of Engineering who demonstrates financial need. (90663)

THE MERITOR AUTOMOTIVE INC. BURSARY
Established in 1999 by Meritor Automotive Inc. under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a Mechanical Engineering program who demonstrates financial need. (90865)

THE DR. F. A. MIRZA BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Dr. F.A. Mirza Scholarship. (90895)

THE ROBERT J. JOHN MORRIS BURSARIES
Established in 1996 by family, friends and colleagues of Robert John Morris. 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. (90630)

THE ACHIE MOUGHALIAN BURSARIES
Established by bequest in 1998. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90852)

THE NCR (WATERLOO) BURSARY
Established in 1998 by NCR (Waterloo) under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Engineering and Management program who demonstrates financial need. (90842)

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. A variable number of bursaries to be granted to students enrolled in a Mechanical Engineering program who demonstrate financial need. (90785)

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. A variable number of bursaries to be granted to students enrolled in Level II 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. (90832)

THE PATRIOT FORGE INC. BURSARY
Established in 1997 by Patriot Forge Inc. in support of McMaster students. 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. (90768)

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. To be granted to a student enrolled in a program in Engineering who has demonstrated financial need and involvement in University activities including the McMaster Choir, varsity wrestling, karate club and issues related to the environment and social justice. (90576)

THE PROCOR BURSARIES
Established in 1997 by Procort Ltd. in support of its belief that all students should have the opportunity to pursue their educational goals. 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. (90669)

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. 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. (90639)

THE ROBERTSON-YATES CORPORATION BURSARIES
Established in 1998 by the Robertson-Yates Corporation of Hamilton in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in a program in Business or Engineering who demonstrate financial need. (90840)

THE LEO W. SETO BURSARY
Established in 2003 by Leo W. Soto (B.Eng. Mgt. ’87 and M.Eng. ’90) under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Engineering who demonstrates financial need. (90998)

THE LESTIE W. AND ELIZABETH SHEMILT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to a student who demonstrates financial need and is enrolled in an Engineering program. (90863)
THE STELCO UNDERGRADUATE BURSARIES
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. 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. (90644)

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. 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 Honours Geography and Environmental Studies or an Engineering and Society Program. (90939)

THE TURKSTRA LUMBER BURSARY
Established in 1996 by the Turkstra Lumber Company Limited. 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 Sessional Average of at least 7.0 at the most recent review. (90647)

THE SAM AND IRENE WATSON BURSARY FUND
Established in 1998 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative 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 (90640)

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. 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. (90652)

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. 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. (90550)

FACULTY OF HEALTH SCIENCES

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. To be granted to a student in the Bachelor of Health Sciences (Honours) program who demonstrates financial need. (90865)

THE DOUGLAS IAN BROWN BURSARY
Established in 1997 by Douglas A. and Lois Aileen Brown in honour of their son Douglas Ian Brown. To be granted to a McMaster student enrolled in the Faculty of Health Sciences who demonstrates financial need. (90815)

THE ED BUFFETT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. 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. (90816)

COMMUNITY NURSING REGISTRY - HAMILTON BURSARIES
Established in 2000 by the Community Nursing Registry - Hamilton in support of students pursuing a professional career in nursing. A variable number of bursaries to be granted to students enrolled in Level II 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. (90843)

THE JEAN, MARTHA AND LAURIE DOUCET MEMORIAL BURSARIES
Established in 1998 in memory of Jean, Martha and Laurie Doucet for their years of service and commitment to the nursing profession. 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. (90851)

THE MARGO AND FRASER FELL BURSARIES
Established in 1999 by Margot (Class of ’52) and Fraser Fell (Class of ’49). 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. (90845)

THE RON AND GINA FRASER BURSARIES
Established in 2004 by The Ronald K. Fraser Foundation and Gina E. Fraser under the McMaster Student Opportunity Fund II initiative. A variable number of bursaries, each equivalent to the value of one year of tuition, will be granted to full-time students enrolled in Level I of the Nursing or Bachelor of Health Sciences programs who demonstrate the highest level of financial need as determined by the Office of Student Financial Aid & Scholarships. Special consideration will be given to students who self-identify as (i) current or former Crown wards or (ii) whose families’ main source of income is from provincial social assistance programs.

This bursary is tenable for up to four years.

Value: full undergraduate tuition annually (91017)

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. The fund provides up to four awards to assist students, with demonstrated financial need, in Level III or IV of the B.Sc.N. program (basic and/or, post-diploma stream). (90519)

THE HAZEL MAY HINKS BURSARIES
Established in 1996 by bequest of Hazel May Hinks of Burlington, Ontario. 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. (90604)

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. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering, the Faculty ofBusiness or the Schools of Medicine and Rehabilitation Science in the Faculty of Health Sciences who demonstrate financial need. (90841)

THE KENTS FAMILY BURSARY
Established in 1997 by the Kents Family under the McMaster Student Opportunity Fund initiative. 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. (90747)

THE PHILLIP GORDON KETTLE BURSARY
Established in 1996 in memory of Phillip Gordon Kettle. 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. (90878)

THE MANULIFE FINANCIAL BURSARIES
Established in 1997 by Manulife Financial under the McMaster Student Opportunity Fund initiative. 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. (90762)

THE JANET McKNIGHT MEMORIAL BURSARIES
Established in 1996 in memory of Janet McKnight by the Pembert Family. A variable number of bursaries to be granted to students enrolled in the final level of the Nursing program who demonstrate financial need. (90823)

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 to assist a student beyond Level I in the University's Bachelor of Science in Nursing program. (90531)

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. To be granted to a student who demonstrates financial need and has completed at least 30 units in the Midwifery, Physiotherapy or Nursing program. (90774)

THE MDS INC. BURSARY
Established in 1997 by MDS Inc., under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Health Sciences who demonstrates financial need. (90775)

OAKRUN FARM BAKERY BURSARY
Established in 2004 by Oakrun Farm Bakery, under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need. (91019)
THE O’SHAUGHNESSY BURSARY
Established in 1986 by the family and friends of the late Margaret O’Shaughnessy, RN, this bursary is to be used to alleviate financial need for students pursuing an education in Nursing (basic or post-grad stream) in Level I, II, III, or IV. (90035)

THE PASSI FAMILY BURSARY
Established in 1997 by Chitra and Narender Passi under the McMaster Student Opportunity Fund initiative in the belief that all students should have the opportunity to pursue their educational goals. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences. Preference will be given to students enrolled in the Diploma in Child Life Studies Full-time Diploma Program. (90787)

THE DR. SUSAN BEVERLEY FLANK MEMORIAL BURSARY
Established in 1997 by Mr. William J. Plank, family and friends, in memory of Dr. Susan Beverley Plank (Class of ’90). To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90791)

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. To be granted to a student who demonstrates financial need and is enrolled in the Faculty of Health Sciences, School of Medicine. (90801)

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. To be granted to a student in the School of Nursing who demonstrates financial need. (91003)

THE SYLVIA AND BRIAN WALKER BURSARIES
Established in 1996 by Sylvia (Hunt) and Brian Walker. 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. (90650)

THE AUDREY AND BOB WAUGH BURSARY
Established in 1997 by Audrey and Bob Waugh under the McMaster Student Opportunity Fund II initiative. 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. (90796)

THE DR. JANET WEISZ BURSARY
Established in 2004 by Dr. Janet Weisz, under the McMaster Student Opportunity Trust Fund II initiative. To be granted to students enrolled in the Faculty of Health Sciences who demonstrate financial need. (91012)

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. To be granted to an undergraduate or graduate student enrolled in a program in English, who demonstrates financial need. (90607)

THE ESTELLA AND CHUB BAXTER BURSARY
Established in 2003 by Estella and Chub Baxter under the McMaster Student Opportunity Fund II initiative. 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. (90591)

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. 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. (90911)

THE WILLIAM DAVID BROADHEAD MEMORIAL BURSARY
Established in 2005 by family in memory of William David Broadhead (Class of ’39) under the McMaster Student Opportunity Fund II initiative. 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. (90992)

THE MARIE IRELAND BUSH MEMORIAL BURSARIES
Established in 1996 by Helen Ireland Caldwell in memory of Marie Ireland Bush, Class of ’48 and dedicated teacher, who instilled in her students a love of learning. A variable number of bursaries to be granted to students enrolled in a program in English who demonstrate financial need. (90583)

THE HELEN CALDWELL BURSARY
Established in 2000 by Helen Caldwell (Class of ’42, Faculty of Humanities.) To be granted to a student enrolled in Level III or IV of the Women’s Studies Program who demonstrates financial need. (90940)

THE NORMAN NATHANIEL CASKEY BURSARIES
Established in 1996 by June Caskey of Hamilton in memory of her father. A variable number of bursaries to be granted to students enrolled in a program in Music who demonstrate financial need. (90565)

THE GERALDINE LORRETTA COSFORD BURSARIES
Established in 1997 by Geraldine Loretta Cosford under the McMaster Student Opportunity Fund initiative. 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 I. (90692)

THE GERALDINE LORRETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of ’35 and ’39). To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum GPA of 7.0. (90870)

THE SUZANNE E. CRAVEN BURSARY
Established in 1997 by Mrs. Suzanne Craven in support of McMaster students. To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90694)

THE EARL FRANKLIN DAMUDE BURSARY
Established in 1993 by Dr. Christa Sasa, in memory of Earl Franklin Damude (Class of ’36). To be granted to a student who demonstrates financial need and has completed Level III of a program in English or History. (90570)

THE DARVILLE BURSARY
Established in 2004 by Jack S. Darville (Class of ’68) under the McMaster Student Opportunity Fund II initiative. 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. (90967)

THE GORDON H. DEAN BURSARIES
Established in 1996 by Gordon H. Dean of Stoney Creek. To be granted to a student who demonstrates financial need. Preference will be given to a student enrolled in Level III of a program in Arts and Science or Level III of a program in the Faculty of Humanities. (90584)

THE MARGERY E. DIXON MEMORIAL BURSARY
Established in 2003 in loving memory of Margery E. Dixon (Class of ’35) by Geraldine Phexin under the McMaster Student Opportunity Fund II initiative. A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. Preference to be given to students enrolled in a program in the Department of English and Cultural Studies. (90994)

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. A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. (90956)

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. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. (90702)

THE FESTITALIA CORPORATION BURSARY
Established in 1997 by the Festitalia Corporation under the McMaster Student Opportunity Fund initiative. To be granted, in alternating years, to a student who demonstrates financial need and is enrolled in the Department of Modern Languages and Linguistics, specializing in Italian, or is enrolled in the School of the Arts. (90706)

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. 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. (90657)

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. To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference to be given to students in Level II or III of a Music program, (91007)
THE HALL FAMILY BURSARY
Established in 2004 by Frederick A. Hall under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. (91001)

THE HAMILTON PERFORMING ARTS BURSARY
Established in 1997 by the Hamilton Performing Arts Foundation Inc. under the McMaster Student Opportunity Fund initiative. To be granted to students who have completed at least 30 units 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 Dean’s Honour list. (90724)

THE MARGARET HARGREAVES BURSARIES
Established in 1997 by Susan Hargreaves Walker in loving memory of her mother, Margaret Hargreaves. 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. (90729)

THE HARWOOD BURSARIES
Established in 1990 by bequest of Dr. William Harwood of Hamilton in memory of his beloved wife Grace and devoted daughter Willow Ruth Laurie (Class of ’50). A variable number of bursaries to be granted to students studying Music who demonstrate musical ability. Preference will be given to students who have demonstrated financial need. Value: Not to exceed $1,000 (90517)

THE GENERAL HUMANITIES BURSARY FUND
The General Humanities Bursary Fund, established in 1997 by Humanities alumni, will be granted to undergraduate students at McMaster registered in any Humanities program who demonstrate financial need. (90734)

THE JULIA HURTIG BURSARY
Established by family and friends of the late Julia Hurtig in 1985. This bursary will be granted to a student entering Level I 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. (90622)

THE IVY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Ivy Scholarship. (90672)

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). A variable number of bursaries to be granted to students who demonstrate financial need. Preference will be given to students enrolled in the Department of English and Cultural Studies. (90736)

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. To be granted to students who have completed at least Level I of an undergraduate program in any of the Faculty of Social Sciences or the Faculty of Humanities. Preference to be given to students who have attained a minimum Cumulative Average of 7.0. (90965)

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. 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 Modern Languages and Linguistics. (90947)

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. A variable number of bursaries to be granted to students enrolled in a program in Art, Theatre & Film Studies or Music who demonstrate financial need. (90612)

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. 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 Modern Languages and Linguistics. (90620)

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. 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 who have a minimum admission average of 80% and who are from Grey or Bruce Counties. Value: Minimum $1,000 (90970)

THE McMaster HISPANIC SOCIETY BURSARY
Established in 1999 by the McMaster Hispanic Society under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in a Modern Languages program and enrolled in Hispanic Studies courses who demonstrates financial need. Preference will be given to students who demonstrate a strong interest in the University and community through their involvement in extracurricular activities. (90864)

THE JAMES C. MOORE MEMORIAL BURSARY
Established in 1989 by family and friends in memory of James C. Moore. To be granted to a student in Humanities or Social Sciences who demonstrates financial need and involvement in student government. (90866)

THE THERESE E. MOORE BURSARY
Established in 2003 by David M. Moore ’96 in honour of his mother, Therese E. Moore. To be granted to a student enrolled in a program in History who demonstrates financial need. (91000)

THE SAMMON MUNROE BURSARY
Established in 2003 by Robert Munroe ’72 and Sheila Sammon under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the History of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in History. (90982)

THE PATTERSON-WILSON BURSARIES
Established in 2003 by the bequest of Laurence Cholwill Patterson under the McMaster Student Opportunity Fund II initiative. To be granted to students in the Faculty of Humanities who demonstrate financial need. (90995)

THE DR. HOLLAND AND MRS. ELVIRA PETERSON BURSARY
Established in 1997 by Dr. Holland and Mrs. Elvira Peterson under the McMaster Student Opportunity Fund II initiative. To be granted to a student who demonstrates financial need and is enrolled in Level II or higher of a Hispanic Studies or German program in the Department of Modern Languages and Linguistics. (90789)

THE ELVIRA AND HOLLAND PETERSON BURSARY
Established in 2003 by Mrs. Elvira Peterson (Class of ’59) and Dr. Holland Peterson. To be granted to a Level III student enrolled in the Honours Arts, History or Combined Honours Art History Program who demonstrates financial need. (90948)

THE LILLIAN PLUMB BURSARY
Established in 1998 by David Plumb in honour of his mother, Lillian Plumb. To be granted to a student enrolled in a program in the Department of English, Cultural and Cultural Studies and who demonstrates financial need. (90853)

THE MARY ROMEO BURSARY IN ART HISTORY
Established in 1997 by Mary Romeo, a lifelong patron of the arts. To be granted to undergraduate and graduate students who have demonstrated financial need and are enrolled in a program in Art History. (90668)

THE SMYRNIA BURSARIES
Established in 1996 by Dr. W. Smyniw. To be granted to students who are Canadian citizens or permanent residents who demonstrate financial need and are enrolled in a graduate program in the Faculty of Humanities above Level I. (90861)

THE DONALD W. THOMAS BURSARIES
Established in 1996 by Donald W. Thomas, a student of Dundas, Ontario. A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. (90645)

THE GRAHAM RONALD TOOP BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Graham Ronald Toop Scholarship. (90865)

THE ROBERTA GRAY TROXEL BURSARY
Established in 1997 by Roberta Gray Troxel under the McMaster Student Opportunity Fund initiative. 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. (90736)

THE TRESSILLA TRUBLY MEMORIAL BURSARY
Established in 1992 from the bequest of Treessilla Truby (M.C.S.P.) and Past-President of the Zonta Club of Hamilton II. To be granted to a female student who has completed Level II of a program in Music. (90596)
THE JOHN AND JOAN VAN DUZER BURSARY  
Established in 2003 by John ('50) and Joan Van Duzer under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Humanities who demonstrates financial need. (90993)

THE CATHERINE VASAS-BROWN BURSARIES  
Established in 1996 by J. Allan Brown in honour of Catherine Vasas-Brown. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90649)

THE SYLVIA AND BRIAN WALKER BURSARIES  
Established in 1996 by Sylvia (Hurn) and Brian Walker. 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. (90650)

THE SAM AND IRENE WATSON BURSARY FUND  
Established in 1998 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative 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 (90840)

THE CLIFFORD JOHNSTON WEBSTER MEMORIAL BURSARIES  
Established in 1993 by Viola Webster in memory of her brother Clifford Johnston Webster (Class of '41). To assist students who demonstrate financial need enrolled in the Honours English program who are Canadian citizens or permanent residents and who have graduated from a public secondary school in Ontario. Applicants should have a record of academic excellence that has normally been at the upper second-class level or higher. If sufficient applicants are not eligible in the Honours English program, the bursaries are available, under similar conditions, to students in the Honours French program. (90659)

THE MARY DRYDEN WILLIS BURSARY  
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. To be granted to students enrolled in Level II or higher in the Faculty of Humanities who have attained a minimum CA of 7.0 and who demonstrate financial need. (90669)

THE KATHRYN A. WILSON BURSARIES  
Established in 2000 by bequest of Kathryn A. Wilson. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90949)

THE SHEILA ZACK MEMORIAL BURSARY  
The Sheila Zack Memorial bursary established by the 45th Annual Brith Sports Celebrity Dinner, to be awarded to a student with financial need enrolled in a program in Theatre & Film Studies at McMaster University. (90764)

FACULTY OF SCIENCE

THE BIRGIT AND ROBERT BATEMAN BURSARY  
Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative. 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. (90810)

THE CANADA DIRECT SALES DIVISION BURSARY  
Established in 1997 by Canon Canada Inc. - OE Division in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Program, the Environmental Studies Program or an Engineering and Society Program. (90820)

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. 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. (90741)

THE GERALDINE LORRETTA COSFORD MEMORIAL BURSARIES  
Established in 1989 by Geraldine Loretta Cosford (Class of '35 and '39).  
To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90670)

THE GEORGE AND MARGARET EDRUP T BURSARY  
Established in 1997 by Sandra Edrupt in honour of her parents George and Margaret Edrupt under the McMaster Student Opportunity Fund Initiative. To be granted to a student who demonstrates financial need and is enrolled in either the Faculty of Business or the Computer Science program in the Faculty of Science. (90701)

THE JAMES EDWARD GRADER MEMORIAL BURSARY  
Established in 1964 by his sister. To be granted to a student enrolled in the Faculty of Science specializing in Earth Sciences who demonstrates financial need. (90513)

THE ASMAHAN HAFeZ MEMORIAL BURSARY  
Established in 1997 by her family in memory of Asmahan Haferz. To be granted to a student enrolled in Level I of the Faculty of Science who demonstrates financial need. (90721)

THE JENSEN BURSARY  
Established in 1997 by Dr. Doris E.N. Jensen in conjunction with the McMaster Student Opportunity Fund initiative. To be granted to a student in the Faculty of Science, Level II or higher, who demonstrates financial need. Preference to be given to a student registered in a co-op program in the Faculty of Science. (90740)

THE NORMAN D. LANE BURSARIES  
Established in 1996 by family and friends in honour of Dr. Norman D. Lane, distinguished mathematician and former President of the International Mathematical Congress in 1966. A variable number of bursaries to be granted to students enrolled in a program in Mathematics who demonstrate financial need. (90610)

THE 3M CANADA INC. BURSARIES  
Established in 1989. To be granted to two students in their final year of studies who demonstrate financial need. One to an M.B.A. student who has attained at least a 6 point average and one to a Science student who has attained a Cumulative Average of at least 9.0 at the most recent review. (90525)

THE JOHN AND HELEN MAXWELL BURSARIES  
Established in 1998 by John and Helen Maxwell of Ottawa. A variable number of bursaries to be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference to be granted to students enrolled in a program in Earth Sciences or Chemistry. (90621)

THE NEIL D. McARTHUR BURSARIES  
Established in 1997 by the Anne and Neil McArthur Foundation in memory of Mr. McArthur's parents, Joseph and Josephine Hryntszak. 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. (90765)

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. 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 (90970)

THE DR. BRIAN MccANN MEMORIAL BURSARY  
Established in 2004 by friends, colleagues and former students in memory of Dr. Brian McCann. To be granted to a student in the School of Geography and Earth Sciences who demonstrates financial need and is enrolled in a course offered by the School with an additional cost for a field component. (91015)

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. 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. (91011)

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. A variable number of bursaries to be granted to students enrolled in the School of Geography and Earth Sciences who demonstrate financial need. Preference will be given to students who have completed Level III of an Honours Geography program with a Cumulative Average of 8.0 at the most recent review. (90983)
THE ERIC SCHLICHTING MEMORIAL BURSARY
Established in 1986 by his family, classmates and friends. To assist a student in a program in the Faculty of Science who demonstrates financial need. Preference will be given to a student enrolled in Earth Sciences. (90539)

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. To be granted to a student in the Faculty of Science who demonstrates financial need. Preference will be given to a student who has attained a minimum Cumulative Average of 7.0 at the most recent review. (90884)

THE STELCO UNDERGRADUATE BURSARIES
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. 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. (90444)

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. A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference will be given to students enrolled in the Earth and Environmental Sciences, the Honours Geography and Environmental Studies or an Engineering and Society Program. (90938)

THE BROOKE P. TOWNSEND BURSARY
Established in 1996 by Brooke P. Townsend. To be granted to a student in any program who has demonstrated financial need. Preference will be given to a female student enrolled in the Faculty of Science. (90670)

THE SAM AND IRENE WATSON BURSARY FUND
Established in 1998 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who had completed their second year with a Cumulative 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 (90840)

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. To be granted to a student enrolled in the Kinesiology program who demonstrates financial need. (90790)

THE WRIGHT FAMILY BURSARY
Established in 2003 by Thomas C. Wright, M.B.A. ’72 under the McMaster Student Opportunity Fund II initiative. To be granted to a student in the Faculty of Business or the Faculty of Science who demonstrates financial need. (90999)

THE JOHN YARWOOD MEMORIAL BURSARY
Established in 1998 by family and friends in memory of Dr. A.J. Yarwood. To be granted to a Level II student enrolled in an Honours Chemistry program who demonstrates financial need. (90844)

FACULTY OF SOCIAL SCIENCES

THE ANTHROPOLOGY BURSARY
Established in 1996 by faculty, alumni and other friends of the Department of Anthropology. To be granted to students who have completed Level II of a program in Anthropology and who demonstrate financial need. Preference will be given to students entering Level III. (90579)

THE ATKINSON CHARITABLE FOUNDATION BURSARY
Established in 1996 by The Atkinson Charitable Foundation. 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. (90866)

THE BIRGIT AND ROBERT BATeman BURSARY
Established in 1997 by Birgit and Robert Bateman under the McMaster Student Opportunity Fund initiative. 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. (90810)

THE NORMA BERTI BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative by Norma Bertl, active Stelco employee for 34 years and recognized by the Hamilton Council of Women as Woman of the Year for her charitable community contributions. To be granted to a student who demonstrates financial need and is enrolled in a program in Labour Studies. (90812)

THE SIDNEY L. BLUM BURSARY
Established in 1989 by friends and associates in memory of Sidney L. Blum. To be granted to undergraduates or graduates in good standing, enrolled in a program in Social Work who demonstrate financial need. Preference will be given to undergraduate students registered in the summer term in SOC WORK 3006. (90506)

THE DR. RICHARD A. BRYMER MEMORIAL BURSARY
Established in 1996, 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. To be granted to a student enrolled in a program in Sociology or Anthropology who demonstrates financial need. (90845)

THE JODIE ANNE BULL MEMORIAL BURSARIES
Established in 1996 by her family in memory of Jodie Anne Bull. 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 Labour Studies. (90673)

THE CANADA DIRECT SALES DIVISION BURSARY
Established in 1997 by Canon Canada Inc. - OE Division in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in the Environmental Science Program, the Environmental Studies Program or an Engineering and Society Program. (90820)

THE ELEANOR TURNER CARMERT BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. 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. (90864)

THE CLASS OF '46 BURSARIES
Established in the Year '46 in honour of their 40th class reunion. To be granted to a student in a program in Gerontology. (90821)

THE GERALDINE LORETTA COSFORD GENERAL BURSARIES
Established in 1999 by Geraldine Loretta Cosford (Class of '35 and '39). To be granted to students enrolled in the Arts and Science Program, the Faculties of Business, Engineering, Humanities, Science and Social Sciences who demonstrate financial need and have attained a minimum CA of 7.0. (90870)

THE CREATIVE IMPACT COMMUNICATIONS BURSARY
Established in 2005 by Natalie Munro, Class of '86 under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (90866)

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 Stony Creek from 1969 to 1978, in recognition of his outstanding contributions to labour and to men and women in the greater Hamilton area. A variable number of bursaries to be granted to students enrolled in a program in Labour Studies who demonstrate financial need. The value of this award shall be not less than $300. (90595)

PATRICIA ANNE DICCIICCIO MEMORIAL BURSARY
Established in 1998 this bursary is to be granted to a student or students enrolled in a program which includes Gerontology as a major, who is a Canadian citizen or permanent resident and who exhibits financial need. (90510)

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. A variable number of bursaries to be granted annually to students enrolled in a Gerontology course who demonstrate financial need. (90846)

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. 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. (90857)
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 Citizen of the Year in 1991. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students enrolled in a Labour Studies program. (90601)

THE REG GISBORN BURSARIES
Established in 1997 as a tribute to Reg Gisborn, valued Stelco employee, President of Local 1005 from 1951-62 and New Democratic Party Hamilton East M.P.P. for twenty years until 1975. A variable number of bursaries to be granted to McMaster students enrolled in a program in Labour Studies who demonstrate financial need. (90715)

THE HAMILTON AND DISTRICT LABOUR COUNCIL BURSARY
Established in 1997 by the Hamilton and District Labour Council under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Labour Studies Program who demonstrates financial need. (90726)

THE HAMILTON FOLLIES INC. (GERITOL FOLLIES) BURSARY
Established in 1997 by the Hamilton Follies Inc. (Geritol Follies) under the McMaster Student Opportunity Fund initiative. To be granted to a student in any program who demonstrates financial need. Preference to be given to a student who has completed at least 30 units in the Gerontology program. (90722)

THE MARGARET HARGREAVES BURSARIES
Established in 1997 by Susan Hargreaves Walker in loving memory of her mother, Margaret Hargreaves. 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. (90729)

THE GORDON HOLSEY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative as a tribute to Gordon Holsey, founding member of Local 1005 and valued member of the Union’s Negotiations Committee. To be granted to a student enrolled in a Labour Studies program who demonstrates financial need. (90753)

THE JOHN B. IBBSTER BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by John B. Ibbster of Stoney Creek, valued member of the United Steelworkers of America for 59 years and honoured war veteran by Canada and the navy on four occasions. To be granted to a student enrolled in a program in Labour Studies who demonstrates financial need. (90650)

THE JAMES A. JOHNSON CLASS OF '97 BURSARIES
Established by the Economics graduating Class of '97, faculty of the Department of Economics, and friends, under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in an Economics program. (90757)

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. To be granted to mature part-time students who have completed at least Level I 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 Cumulative Average of 7.0. (90682)

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 BA/BSW degree from McMaster University in 1996. 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. (90847)

THE LISSON BROTHERS BURSARY
Established in 1997 under the McMaster Student Opportunity Fund as a tribute to Brian, Bill and John Lisson, valued Stelco employees and members of the United Steelworkers of America. To be granted to a student enrolled in the Labour Studies program who demonstrates financial need. (90756)

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. 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. (90616)

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. A variable number of bursaries to be granted to students who demonstrate financial need and are enrolled in a Bachelor of Social Work program. (90661)

THE BOB MACKENZIE BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by Bob MacKenzie, political organizer for the United Steelworkers of Hamilton and valued MPP for Hamilton East for twenty years. To be granted to a student enrolled in a program in Labour Studies who demonstrates financial need. (90617)

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. Two bursaries to be granted to students enrolled in a program in Labour Studies who demonstrate financial need. Preference to be given to students attaining a Sessional Average of at least 7.0 at the most recent review. (90619)

THE R. CRAIG MCIVOR BURSARIES
Established in 1996 as a tribute to Professor R. Craig McIvor by his family, colleagues and students. 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 Honour program in Economics. (90622)

THE GARY JAMES MINNETT BURSARY
Established in 1999 in memory of Gary James Minnett (BA/BPE ’72) by his wife, Barbara, and daughters, Samantha and Erin. To be awarded to a student enrolled in a program who demonstrates financial need. Preference will be given to a student enrolled in Kinesiology I from a high school in the Hamilton area. (90666)

THE JAMES C. MOORE MEMORIAL BURSARY
Established in 1989 by family and friends in memory of James C. Moore. To be granted to a student in Humanities or Social Sciences who demonstrates financial need and involvement in student government. (90666)

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. A variable number of bursaries to be granted to students enrolled in a program in Political Science who demonstrate financial need. (90684)

THE CAROLE AND ALEXANDER NAKEFF BURSARIES
Established in 2000 by Carole Anne Nakeff (Class of ’69) and Dr. Alexander Nakeff. A variable number of bursaries to be granted to students enrolled in a Political Science or Environmental Studies program who demonstrate financial need. (90684)

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. A variable number of bursaries will be granted annually to McMaster students enrolled in the Gerontology program who demonstrate financial need. Preference to be given to students who have participated in a conference or workshop on Gerontology. (90783)

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. 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. (91011)
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. A variable number of bursaries to be granted to students enrolled in the Social Work program who have demonstrated financial need. (90538)

THE PEVENSING BURSARIES
Established in 1986 by David Hannaford (Class of '84). 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. (90676)

THE GEORGE PLUMB MEMORIAL BURSARY
Established in 1986 by David Plumb in memory of his father George Plumb. To be granted to a student enrolled in a program in Gerontology who demonstrates financial need. Preference to be given to a mature student. (90636)

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. To be granted to a student enrolled in a Gerontology program who demonstrates financial need. Preference to be given to students enrolled in a Labour studies program. (90642)

THE GINO AND ROBERTA SCAPILLATI BURSARY
Established in 2004 by Gino Scapillati '81 and Roberta Scapillati '79 under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in the Faculty of Business or Faculty of Social Sciences who demonstrates financial need. (91005)

THE GERALD AND Verna Simpson Bursary
Established in 1997 under the McMaster Student Opportunity Fund initiative. Preference will be given, if financial need is demonstrated, to the recipient of The Gerald and Verna Simpson Scholarship. (90886)

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. To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. (91009)

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. A variable number of bursaries to be granted to full-time students enrolled in a Social Sciences program involving Anthropology, Economics, Geography, Gerontology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work or Sociology and who demonstrate financial need. (90542)

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. 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 Earth and Environmental Sciences, the Honours Geography and Environmental Studies or an Engineering and Society Program. (90539)

THE THOMAS H.B. SYMONS BURSARY
Established in 1997 by Professor Thomas H.B. Symons under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in the Faculty of Social Sciences with a minimum Cumulative Average of 8.0 at the most recent review who demonstrate financial need. Preference will be given to students studying Canadian Politics. (90882)

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. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (90975)

THE TRILLIUM NON PROFIT VENTURES FOR YOUTH BURSARY
Established in 2004 by Trillium Non Profit Ventures for Youth. To be granted to students who demonstrate financial need. Preference will be given to students enrolled in the School of Social Work. (91014)

THE SAM AND IRENE WATSON BURSARY
Established in 1996 by the estate of Irene Mary Watson. To be granted to students who demonstrate financial need and who have completed their second year with a Cumulative 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. (90840)

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 1983-1984, in recognition of his outstanding contributions to labour and labour studies. To be granted to a student who demonstrates financial need and is enrolled in a program in Labour Studies. The value of this bursary shall be no less than $300. (90793)

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. To be granted to a student enrolled in the Kinesiology program who demonstrates financial need. (90790)

THE ZONTA CLUB OF HAMILTON I BURSARIES
Established in 1997 by the Zonta Club of Hamilton 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. 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. (90550)

SUPPLEMENTARY BURSARY AID FOR AWARD RECIPIENTS
Several donors to McMaster's Undergraduate Scholarships Program, in response to the Student Opportunity Trust Fund initiative of the Ontario Government, made donations in 1996-97 for the purpose of assisting a specific scholarship or award recipient who demonstrates financial need. To qualify for bursary support, scholarship and award recipients are required to demonstrate financial need in accordance with that required of applicants to the general McMaster Bursary Program:

- The Betty Taylor Campbell Scholarship
- The George P. Gilmour Memorial Scholarship
- The Dundas Scholarships
- The Gary Lautens Memorial Scholarship
- The Somerville Scholarships

TRAVEL BURSARY PROGRAM
Travel bursaries assist students taking a McMaster course during the Spring/Summer semester which includes a placement requirement in a community outside Ontario. To apply, students must complete a McMaster bursary application, available in Gilmour Hall, Room 120. Please note that travel bursaries do not apply to programs where placement costs are an integral part of the normal study term, such as the School of Medicine within the Faculty of Health Sciences.

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 studies in the Engineering and Society program. 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 Student Financial Aid & Scholarships. (90953)

EXCHANGE PROGRAM BURSARIES
Bursary support may be available to students participating in McMaster approved exchange programs. Application procedures and deadline information are available from the Office of Student Financial Aid & Scholarships, Gilmour Hall, Room 120 or on our web site at http://sfas.mcmaster.ca. For further information about exchange programs, please refer to International Study in the General Academic Regulations section and Student Exchanges in the Academic Facilities, Student Services and Organizations section of this Calendar.
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. 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 who is participating in one of McMaster's formal exchange programs. Preference will be given to students who have demonstrated a lively interest in the humanities and the human and social implications of scientific developments. (90677)

THE CHAN VIN CHAK BURSARY
Established in 1997 by Tak Chan in honour of his great grandfather, Mr. Chan Yin Chak. This bursary will be used to help defray expenses of Level III 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. (90665)

THE FREEMAN FAMILY FOUNDATION BURSARY FUND FOR STUDY AT THE HEBREW UNIVERSITY OF JERUSALEM
Established in 1997 under the McMaster Student Opportunity Fund initiative in the belief that all students should have the opportunity to pursue their educational goals. To be granted, on the recommendation of the Religious Studies Selection Committee, to graduate and undergraduate students who demonstrate financial need and have enrolled in session(s) of study at the Hebrew University of Jerusalem. Applicants must have lived in Ontario for 12 consecutive months directly prior to commencing full-time post-secondary studies. (90618)

Value: Up to a maximum of $15,000 for graduate, $10,000 for undergraduate, and $3,000 for summer students.

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. 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 one of McMaster's formal exchange programs. Preference to be given to students who have been active in international clubs and associations. (90656)

THE LIVV POLYTECHNIC STATE UNIVERSITY EXCHANGE PROGRAM BURSARY
Established in 2000 by the Hamilton Ukrainian Community. To be granted to visa students who have demonstrated financial need and are attending McMaster as participants in the Livv Polytechnic State University Exchange Program. (90664)

THE MCLAY BURSARY
Established in 1954 by David and Jean McIay under the McMaster Student Opportunity Fund initiative. 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. (90676)

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. To be granted to students who wish to participate in exchange programs, who demonstrate financial need and who are enrolled in Level II or III of a program. Preference to be given to international exchanges, for students from the Faculty of Engineering or the Faculty of Humanities with a CA above 7.0 at the most recent review and who have shown leadership and involvement in university and/or community activities. (90849)

THE RANDOLPH E. ROSS MEMORIAL BURSARY
Established in 1989 by family and friends in memory of Dr. Randolph E. Ross, who was a dedicated and cherished faculty member over for 25 years at McMaster University. 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. (90854)

THE JAMES MASON YOUNG BURSARY
Established in 1996 by James Mason Young in honour of his family's longstanding association with McMaster University. 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. (90779)

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THE COMMUNITY CONTRIBUTION AWARDS

The Community Contribution Awards represent recognition for contribution to the University or the community-at-large. To be eligible for consideration for the Community Contribution Awards, full-time and part-time students must be registered in Level II, III, IV or V of a first baccalaureate program. Eligible candidates must be registered and in good standing as a student of McMaster University.

A student may receive only one Community Contribution Award per year, but may be considered for the same or other awards the following year. A student may apply to a maximum of only three Community Contribution Awards per year.

The number of awards with monetary benefit but a notation will appear on the student's transcript. The recipient of these awards may be eligible to receive the corresponding donor bursary if financial need is demonstrated. Further information on our bursary program can be found at http://sfas.mcmaster.ca/bursary/macbur.html.

The Community Contribution Awards are awarded by a Selection Committee based on an application. Application forms may be picked up in the Office of Student Financial Aid & Scholarships in Gilmour Hall, Room 120 after February 1. Completed applications are to be received by the Office of Student Financial Aid & Scholarships by April 15.

THEATKINSON CHARITABLE FOUNDATION AWARD
Established in 1996 by The Atkinson Charitable Foundation. 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. (80022 541)

THE AUBURN INDUSTRIAL SERVICES LTD. AWARDS
Established in 1997 by Auburn Industrial Services Ltd. To be awarded to students enrolled in any program who display superior leadership or innovative skills. (80037 563)

BRANTFORD ALUMNI BRANCH
COMMUNITY CONTRIBUTION AWARDS
Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association. 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. (80052)

THE ELVA CARROL AWARD
Established in 1996 by Elva Carrol. To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation. Preference to be given to an athlete who participates on an inter-university women’s team and has demonstrated leadership and fair play. (80028 547)

THE EDWARD FRANK DAVIS MEMORIAL AWARD
Established in 1996 by bequest in memory of Edward Frank Davis. A variable number of awards to be granted to students entering any program who have shown commitment and contribution to their community through volunteer work. (60060 619)

THE DAMIAN MIGUEL HEADLEY AWARDS
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of ’99). 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. (80050 576)

THE RUDY HEINZII AWARD
Established in 1996 by family, friends and colleagues upon the retirement of Rudy Heinzi as Dean of Student Affairs, in recognition of 32 years of dedicated service to students and to the McMaster University community. 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. (80004 520)

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. 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 appropriate 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. (80023 542)

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. To be awarded to a student in any program who has demonstrated service to the community-at-large. (80032 561)

THE ALEC JOHN ROYSTON MacMILLAN MEMORIAL AWARDS
Established in 1996 by his family in memory of Alec John Royston MacMillan. Three awards to be granted upon completion of Level I: 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. (80012 531)

THE McMASTER ATHLETIC COUNCIL AWARD
Established in 1997 by the Men's Athletic Council and the Women's Intercollegiate Athletics Council under the McMaster Student Opportunity Fund initiative. To be awarded to a student enrolled in any program who demonstrates outstanding athletic participation. Preference will be given to students in Level II or higher who exhibit leadership and dedication to sport and prove to be an overall asset to their team(s). (80033 552)

THE ROBERT JOHN MORRIS AWARDS
Established in 1996 by family, friends and colleagues of Robert John Morris. Six awards: three to be granted to students upon completion of Level I or higher of a program in Engineering, and three to be granted to students upon completion of Level II 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. (80024 543)

THE HELEN K. MUSSALLEM AWARD
Established in 1996 by Dr. Helen K. Mussallam (C.C., B.N., Ed.D., LL.D (Queen’s), D.Sc., D.S.L.D., F.R.C.N., M.R.S.H.) to stimulate interest in professional nursing affairs through participation in meetings, conferences, professional nursing associations and societies related to the field of nursing. 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. (80009 528)

THE ONCOLOGY NURSING PROGRAM AWARDS
Established in 1997 in recognition of the contribution of McMaster students. To be awarded to students enrolled in the Oncology 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. (80040 566)

THE PIONEER GROUP INC. LEADERSHIP AWARDS
Established in 1997 by the Pioneer Group of Companies Inc. in recognition of the community contributions of McMaster students. 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. (80025 544)

THE GORDON AND JANE PRICE AWARDS
Established in 1997 by their sons in honour of Gordon and Jane Price. 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. (80048 574)

THE GORDON RAYMOND 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. 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. (80011 536)
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. 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. (80044 570)

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. 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. (80041 567)

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. To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. (80042 568)

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. To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. (80044 570)

THE SATURN OF HAMILTON EAST ACHIEVEMENT AWARDS
Established in 1996 by SATURN of Hamilton East. To be awarded to McMaster students who promote the ideals of leadership and community service. One award to be given in each Faculty. (80020 539)

THE SCIENCE CLASS OF ’97 LEGACY AWARD
Established in 1997 by the Science Class of ’97. To be awarded to a student enrolled in the Faculty of Science who, in the judgment of a selection committee, has demonstrated leadership, innovativeness and/or community service. Preference will be given to students entering Level III or IV. (80030 549)

THE MEENA AND NARESH SINHA AWARD
Established in 1996 by Meena and Naresh Sinha. To be awarded to a student enrolled in the Faculty of Engineering who, in the judgment of the selection committee, has demonstrated leadership or innovative skills through participation in either University and/or community activities. (80014 533)

THE LORNA AND DAVID SOMERS AWARD
Established in 1997 by Lorna Somers (Class of ’81) and David Somers (Class of ’88) under the McMaster Student Opportunity Fund Initiative. 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 English. (80031 550)

THE ADAM SUDAR PRINTMAKING AWARD
Established in 1997 in memory of Adam Sudar by his friends, this award fund will be used to assist students entering Level III or IV of the Honours Art Program at McMaster who, in the judgment of the School of the Arts, 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. (80054 580)

THE STEPHEN F. H. THRELKELD AWARD
Established in 1997 by friends and colleagues of Stephen F. H. Threlkeld. To be awarded to a student entering Level IV of an Honours program in Biology 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. (80026 545)

THE TKK INC. AWARDS
Established in 1997 by TKK Inc. in recognition of the contributions of McMaster students. To be awarded to students enrolled in the Faculty of Engineering who demonstrate outstanding athletic participation and display superior leadership or innovative skills. (80046 572)

THE ROGER TRULL 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. 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. (80053 579)

THE UBS GLOBAL ASSETS MANAGEMENT (CANADA) COMPANY AWARDS
Established in 1997 by Brinson Partners Inc. under the McMaster Student Opportunity Fund initiative. 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. (80036 555)

THE SAM WATSON MEMORIAL AWARD
Established in 1996 by his wife Irene M. Watson and friends of Samuel Watson. One or two awards to be granted to students enrolled in a program in Arts and Science who, in the judgment of the Arts and Science Program Admissions, Awards and Review Committee, have made a notable contribution in the community-at-large through participation in extra-curricular activities. (80002 546)

THE WESCRAFT INDUSTRIES CONTINUOUS LEARNING AWARD
Established in 1997 by Wescraft Industries Inc. in recognition of the contributions of McMaster students. 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. (80047 573)

THE ALLAN AND JOY WILLIAMS AWARD
Established in 1996 by Mary Williams (Class of ’87), Anne Williams (Class of ’99) and Eileen and Dan Walker in honour of their parents. To be awarded to a student enrolled in any program who, in the judgment of the Department of English, has made a notable contribution to campus and community life and demonstrates a lively interest in English studies. (80019 538)

THE ZENON ENVIRONMENTAL AWARDS
Established in 1997 by Zenon Environmental Inc. in recognition of the contributions of McMaster students. To be awarded to students enrolled in the Faculty of Engineering who display superior leadership or innovative skills. Preference to be given to students enrolled in the Manufacturing Engineering and Society program. (80051 577)

THE ZOOM MEDIA AWARDS
Established in 1997 by Zoom Media Inc. in support of McMaster students. A variable number of awards to be granted to students enrolled in any program who, in the judgment of the selection committee, have demonstrated superior leadership and innovative skills through participation in either university and/or community activities. (80029 548)
UNDERGRADUATE ACADEMIC AWARDS

WEB ADDRESS: http://fas.mcmaster.ca
EMAIL ADDRESS: awards@mcmaster.ca

Director, Student Financial Aid & Scholarships
Elizabeth Seymour
For Information, please contact:
Office of Student Financial Aid & Scholarships
Gilmour Hall, Room 120
McMaster University
Hamilton, Ontario, L8S 4L8
Telephone: (905) 525-9140, ext. 24319

The University Senate, acting on behalf of generous benefactors and donors to the University, bestows academic awards on entering, in-course and graduating students to encourage and recognize high levels of scholarship. In recognizing such scholastic achievement, the University requires all recipients of academic awards to fulfill a set of general conditions, in addition to meeting the particular terms attached to individual academic awards. The general conditions and terms have been established to ensure equity in competition and a high academic standing. Any interpretation of the conditions attaching to academic awards is solely the prerogative of the Undergraduate Council.

TERMINOLOGY
An explanation of the terminology used to describe Academic Awards is provided in the sections of the Calendar described below. Please refer to the Glossary section of this Calendar for definitions of Continuing Students, Cumulative Average (CA), Level, Post-Degree Students, Review and Reviewing Period.

Baccalaureate Degrees are those listed in the Degrees and Programs section of this calendar, the abbreviations of which start with the letter B, such as B.A., B.Com.

Failures are determined by reviewing period, not by session. They include failures in Extra courses.

Full-time Student for academic purposes is an undergraduate student who is registered in at least 24 units in the Fall/Winter session, including Extra Courses.

Graduat Awards are granted to eligible students on the completion of their graduating session.

In-Course Awards are granted to eligible students, based on academic achievement in other than their graduating session.

Part-time Studies Awards are referred to under Category C. To be eligible for these awards, students must have been registered in at least 50% of all units attempted at McMaster, while fulfilling the University's definition of a part-time student as described in the Glossary section of this Calendar.

Session, for scholarship purposes, refers to the Fall/Winter session. The Fall/Winter session is the period from September to April as defined in the Sessional Dates section of this Calendar.

Reviewing Period for scholarship purposes, normally refers to work completed during the Fall/Winter session. Please refer to the Glossary section of this Calendar.

Sessional Average (SA) is a weighted average based on the grades attained in a session. Overload courses and Extra courses are included in the Sessional Average.

GENERAL CONDITIONS FOR ACADEMIC AWARDS

1. The University Academic Awards listed below are provided exclusively for students entering, registered in, or graduating from baccalaureate degree programs at McMaster University. Continuing Students, Post-degree Students, and students registered in the McMaster Medical program are not eligible for these awards.

2. To ensure a wide distribution of the limited number of awards, there are restrictions on the number of awards that a student may receive. An eligible student may be granted:
   a) travel scholarships and awards such as books and medals; and
   b) awards granted on the basis of an application; and
   c) awards continued from a previous year (including entrance scholarships), except as provided by the particular terms of an award; and
   d) either one award greater than or equal to the value of a Senate Scholarship ($600 in 2004-2005) and one award of less than the value of a Senate Scholarship, or two awards of less than the value of a Senate Scholarship.

   When a student is named the winner of an award but may not retain it because of the conditions listed above, the next eligible student will be granted the award.

3. The monetary benefits of travel scholarships, awards won by graduating students, and awards such as books and medals will be disbursed directly to the student.

4. The monetary benefits of awards, other than those listed in 3., above, will be disbursed only if the recipient is registered in a baccalaureate degree program, or a specific program when explicitly required by terms of award, at McMaster University in the next Fall/Winter session after the award was earned and will be allocated in the following manner:
   a) the monetary benefits of award(s) will be credited to the student's academic fees account up to the value of the academic fees for the level and program in which the student is registered.
   b) the monetary benefits of award(s) which exceed the value of academic fees for the level and program in which the student is registered will be credited to one or more of the student's other University accounts (e.g. residence and/or bookstore, etc.).

   Amounts in excess of the student's monetary obligation to the University will be disbursed directly to the student in November or December.

5. Awards credited to the student's academic fees account are not refundable in cash under any circumstances.

6. Awards credited to the student's academic fees account may be used only to defray academic fees for baccalaureate degree courses taken during the Fall/Winter session in which the account is credited with the awards. Students wishing to defer the benefits of an award to a later session should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic, and payments are not normally granted for more than one calendar year.

7. Students holding four-year, full-fees scholarships who choose to accelerate their program and to complete their degree earlier than normal by completing Spring/Summer session courses and who wish to employ the benefits of their award to defray the academic fees for baccalaureate degree courses taken during the Fall/Winter session in which the account is credited with the awards. Students wishing to defer the benefits of an award to a later session should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic.

8. The University reserves the right to withdraw or amend the terms of, any award, and to suspend granting of an award or to adjust the stated value of an award in years in which insufficient investment income is available due to fluctuations in investment markets.

9. Appeals on the basis of exceptional circumstances must be submitted in writing to the Office of Student Financial Aid & Scholarships. To submit an appeal, students must provide a covering letter outlining the situation and include relevant documentation which might include a letter of support from the Associate Dean/Director of the program and medical documentation if appropriate. The appeal must be submitted to the Undergraduate Council Awards Committee c/o the Awards Officer in Gilmour Hall, Room 120.

10. The particular terms for University Academic Awards are listed in TERMS OF AWARDS.

CATEGORIES OF AWARDS

1. Awards for Entering Students (page 344)
   - McMaster President's Awards
   - McMaster Honour Awards
   - Music Awards
   - Other Awards
   - Awards Open to International Students

2. In-Course, Graduand and Second Degree Awards (page 345)

3. In-Course, Graduand and Second Degree Scholarships and Prizes by Faculty (page 364)

INDEX OF AWARDS (page 3727)
To find a specific award, use the Index of Awards.
TERMS OF AWARDS

Awards for Entering Students (A)

1. These awards are provided exclusively for those qualifying for admission to Level I of a first baccalaureate degree in the Fall/Winter session as full-time students.
2. Students who have registered at any post-secondary institution at any time after graduation from high school will not be considered for an entrance award.
3. Canadian students are eligible for any entrance award regardless of where they complete their secondary school education. Any other student completing the final year of secondary school in Canada is also eligible, including CEGEP and IB students entering Level I.
4. International students studying outside Canada are not eligible for any entrance awards administered by the Office of Student Financial Aid & Scholarships.
5. To be considered for an entrance award, students must obtain at least a first-class average in the secondary school credits required for University admission to their program of study and must apply for admission to the University not more than two years after completion of their secondary school studies.
6. Final admission average for entrance awards is calculated using the prerequisites for program of study plus the next best Grade 12 U or M (or OAC) courses to a total of six final grades. Courses completed after June 30 will not be used to calculate the final average for scholarship purposes. Bonus points for students in the International Baccalaureate program are included in the calculation of final admission average for scholarship purposes.
7. Registration in or transfer to, another program of study at any time may result in forfeiture of the award. Students are advised to consult with the Office of Student Financial Aid & Scholarships and their Faculty Advisor prior to making any changes to their program of study or course load.
8. Students who withdraw or drop below 24 units on or before December 31 will lose their entrance scholarship.
9. Recipients of entrance awards that are renewable must obtain at least a 9.5 on a minimum of 24 units in the Fall/Winter session in Level I and register in the next Fall/Winter session in order to receive the second installment of the award.
10. Recipients may retain an entrance award which provides for awards beyond Level I while registered in a first baccalaureate degree program and until graduation or for four years (five years if registered in a five-level program), whichever is less. In order to retain such awards, students must complete 24 units during each successive Fall/Winter session at the University and must maintain a Sessional Average of at least 9.5 and obtain no failures.

Awards for Part-Time In-Course Students (B)

These awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in June or November, are provided exclusively for first baccalaureate degree students registered full-time qualifying on the basis of work included at the May review (or deferred examinations resulting therefrom) in other than graduating session.
2. Students choosing to graduate at the subsequent Fall Convocation will retain the transcript notation and monetary value of any donor-funded awards (e.g. The Accenture Inc. Scholarship). Recipients of University awards (e.g. Dr. L. Hooker Scholarships) will retain the transcript notation but forfeit the monetary benefit of the awards.
3. Students choosing to withdraw after the May review will retain the transcript notation but forfeit the monetary benefit of all awards.
4. In addition to meeting the General Conditions, a student must remain registered as a full-time student during the Fall/Winter session immediately prior to the May review and obtain a Sessional Average of 9.5 and no failures.

Awards for Graduating Students (D)

These awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in June or November, are provided exclusively for full-time or part-time first baccalaureate degree students qualifying on the basis of achievement during the Spring/Summer or Fall/Winter sessions immediately preceding the May review (or deferred examinations resulting therefrom). Students must have completed a minimum of 18 units and who qualify on the basis of work included at the most recent review in other than their graduating session.
2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.
3. The Cumulative Average will be used to break any tie in the competition for awards which are based on another criterion.
4. An award name ending with an )* indicates that the award is open to both full-time and part-time second baccalaureate degree students.

Awards for In-Course Degree Students (E)

These awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in May, are provided exclusively for graduating students qualifying on the basis of achievement in their first baccalaureate degree program.
2. In addition to meeting the General Conditions, a student must obtain:
   a) Cumulative Average of at least 8.0;
   b) no failures in the courses last taken in:
      i) either the number of units specified in the Calendar for the final year of their program;
      ii) or, if the Calendar does not specify the program work by individual levels, the final 24 units of work.

Awards for Second Baccalaureate Degree Students (F)

These awards are based on competition across the University or within a Faculty or program.

1. These awards, which are granted in June or November, are provided for either full-time or part-time second baccalaureate degree students qualifying on the basis of achievement during the Spring/Summer or Fall/Winter sessions immediately preceding the May review (or deferred examinations resulting therefrom).
2. In addition to meeting the General Conditions, a student must obtain, at the most recent review, a Cumulative Average of at least 8.0 and no failures.
3. The Cumulative Average will be used to break any tie in the competition for these awards which are based on another criterion.
4. A number of awards in this category are also listed in Category D - Specific Achievement Awards, and are indicated by an asterisk after the award name.
AWARDS FOR ENTERING STUDENTS

◆ The McMaster President's Awards

McMaster University will reward students with the highest academic standing in their final year of secondary school. Students must obtain a final admission average of 95% or higher to their program of study. No application is required.

Value: $3,000

The President's Award is renewable at the same value in the second year provided that students remain full-time and achieve a Sessional Average of 9.5 (approximately 80%), with no failures, in their first year of University study.

◆ The McMaster Honour Awards

McMaster University will reward students with high academic standing in their final year of secondary school. Honour Awards are based on the final admission average to the program of study. No application is required.

- 90 - 94.99%: $2,000
- 85 - 89.99%: $1,000
- 80 - 84.99%: $500

The Honour Awards are renewable at the same value in the second year provided that students remain full-time and achieve a Sessional Average of 9.5 (approximately 80%), with no failures, in their first year of University study.

McMaster's Awards for Entering Students are supported by the following:

THE ASHBAUGH SCHOLARSHIPS
Established in 1989 by bequest of Frederick K. Ashbaugh of St. Petersburg, Florida, in memory of Mary Eliza Kingston. (20140)

THE A.H. ATKINSON EDUCATION FUND SCHOLARSHIP
Established in 2001 by the A.H. Atkinson Education Fund. To be awarded to a student entering the Faculty of Engineering. (20141)

THE CHARLES MURRAY BALL ENTRANCE SCHOLARSHIPS
Established in 1953 by bequest of Mary Alexandra Ball in memory of her brother. A variable number of scholarships to be awarded to students entering a full-time program of study. (20142)

THE CHANCELLOR'S SCHOLARSHIPS (FACULTY OR PROGRAM-SPECIFIC)
A variable number to be awarded to students entering a Level 1 Program in the Faculties of Business, Health Sciences, Humanities and Social Sciences. (20143)

THE CLASS OF 1952 GOLDEN ANNIVERSARY ENTRANCE AWARDS
Established in 2001 by the Class of 1952 in honour of its 50th reunion. A maximum number of four entrance scholarships to be awarded each year to students entering any Level 1 program. (20146)

THE CUCOA-COLA SCHOLARSHIPS
Established in 1998 by Coca-Cola Bottling Ltd. A variable number of scholarships to be awarded to students entering a full-time program of study. (20145)

THE HELEN M. CURRY SCHOLARSHIP
Established in 1941 by bequest of Helen Maud Curry of Drumbo, Ontario. To be awarded every four years; the 15th award was made in 2000. (20146)

THE DE VILLIERS - MAHAFFY MERIT AWARD
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 Stelco Canada, Boehringer Ingelheim, Smithkline Beecham, Monsanto and the Royal Bank. Two scholarships will be awarded to outstanding students graduating from a secondary school in the Halton Region; (a) one to a student entering a full-time program of study, and (b) one to a student entering full-time science in Science I or Music I. Preference will be given to women students. (20130)

THE DUNDAS SCHOLARSHIPS
Established in 1984 from funds donated anonymously. A variable number of scholarships to be awarded to students from Dundas and surrounding area entering a full-time program of study. (20147)

The recipient of this award is eligible to receive additional aid through the corresponding Supplemental Bursary Aid Fund if he/she demonstrates financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Student Financial Aid section of this Calendar.

THE GEORGE AND NORA ELWIN SCHOLARSHIPS
Established in 1979 by bequest of George and Nora Elwin of Hamilton. (20148)

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 1969. A variable number of scholarships to be awarded to students entering the Faculty of Humanities. (20134)

THE FORTINOS SCHOLARSHIP
Established in 1960 by John Fortino. To be awarded to an outstanding full-time student entering the School of Business. (20137)

THE H.P. FRID SCHOLARSHIP
Established in 1992 by the family of H.P. Frid in memory of the late H.P. Frid. To be awarded to a promising student entering a full-time program of study. (20136)

THE GENERAL MOTORS ENTRANCE SCHOLARSHIPS
Established in 1999 by General Motors of Canada Limited. A variable number to be awarded to female students entering the Faculty of Engineering. (20127)

THE GOVERNORS' SCHOLARSHIPS
A variable number to be awarded to students entering a full-time program of study. (20149)

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. To be awarded to an outstanding student entering the Faculty of Engineering. (20123)

THE NELLIE P. HOGG SCHOLARSHIP
Established in 1985 by bequest of Nellie P. Hogg of Hamilton. One scholarship to be awarded to a woman student entering a full-time program of study. (20150)

THE DR. HARRY LYMAN HOOKER ENTRANCE SCHOLARSHIPS
Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. (20151)

THE CATHRYN E. KAAKE MERIT AWARD
Established in 1996 in memory of Cathryn E. Kake (Class of '78) by family and friends. (20125)

THE RAYMOND C. LABARGE MERIT AWARDS
Established in 1990 in memory of Raymond C. Labarge (Class of '36) of Ottawa. (20127)

THE MARION LAING-KNOX ENTRANCE SCHOLARSHIP
Established in 2000 by bequest of Marion Laing-Knox. To be awarded to a student entering the Faculty of Humanities in a full-time program of study who presents an outstanding final admission average. (20128)

THE LLOYD MEMORIAL SCHOLARSHIP
Established in 1956 in memory of Henry Hoyes and Lizzie Lloyd by their children. Grade 12 U or M (or OAC) subjects to be included are: Physics, Chemistry, two credits of Mathematics, and either Biology or a third credit of Mathematics. (20151)

THE JOSEPHINE MAGEE SCHOLARSHIP
Established in 1959 by bequest of Josephine Magee of Hamilton. To be awarded on the basis of general proficiency in the subjects required for admission to students from any province or territory of Canada. (20153)

THE ALBERT MATTHEWS SCHOLARSHIP
Established in 1920. Grade 12 U or M (or OAC) subjects to be included are Latin and a language other than English. (20154)

THE HAROLD MATTHEWS MEMORIAL SCHOLARSHIP
Established in 1917. Grade 12 U or M (or OAC) subjects to be included are French and either German or Spanish. (20155)

THE ISABELLA CAMPBELL MCNEE SCHOLARSHIP
Established in 1915 and augmented in 1922. Grade 12 U or M (or OAC) subjects to be included are three credits of Mathematics and Physics. (20156)

THE MOURTON COLLEGE ENTRANCE SCHOLARSHIP
Established in 1980 from funds originally subscribed by the Alumni of Moulton College during the years 1946 to 1949. To be awarded to a woman student entering a full-time program of study. (20157)

THE ALVIN I. OGILVIE SCHOLARSHIPS
Established in 1984 by bequest of Alvin I. Ogilvie of Hamilton. Five scholarships to be awarded to students entering a full-time program of study. (20138)

THE LILLIAN AND LEROY PAGE FOUNDATION SCHOLARSHIP
Established in 1982 by donation of the Lillian and Leroy Page Foundation for a student from the Hamilton area entering the Faculty of Science. (20129)
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.
Two to be awarded. (20128)

THE A. G. REILLY SCHOLARSHIPS
Established in 1991 by bequest of Lois E. Reilly of Toronto. A variable number of scholarships to be awarded to students entering a full-time program of study. (20159)

THE D. E. THOMSON SCHOLARSHIP
Established in 1905 and augmented in 1915. Grade 12 U or M (or OAC) subjects to be included are English and either Latin or French. (20159)

THE TYNOWSKI SCHOLARSHIP
Established in 1999 by the University, friends and colleagues of Olga Tynowski, for her outstanding contributions to McMaster University during 46 years of service. To be awarded to an outstanding student entering a full-time program of study. (20160)

THE WALLINGTON HALL ENTRANCE SCHOLARSHIP
Established in 1993. To be awarded to a student entering a full-time program of study. (20135)

THE WHEELER SCHOLARSHIP
Established in 1915. Grade 12 or M (or OAC) subjects to be included are: History, English and a language other than English. (20161)

◆ Music Awards

THE JOAN FRANCES BOWLING ENTRANCE SCHOLARSHIPS
Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. 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.
Value: $1,600 each (20059 559)

THE MERRILL FRANCIS GAGE ENTRANCE SCHOLARSHIP
Established in 1982 from the estate of Merrill Francis Gage of Hamilton. 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.
Value: $900 (20031)

THE FRANK THOROLLSON MEMORIAL SCHOLARSHIPS
Established in 1975 in memory of Professor Frank Thorolfson, first Chair of the Department of Music. 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.
Value: $1,000 each (20028)

◆ Other Awards

THE NORTHEL NETWORKS ENTRANCE SCHOLARSHIPS
Established in 1999 by NorTel Networks. A variable number of scholarships to be awarded to students entering the Faculty of Engineering.
Value: $6,000 each ($3,000/yr) (2012 0 876)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION ENTRANCE SCHOLARSHIP
Established in 1981 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students entering the Faculty of Engineering.
Value: $1,000 each (20027 232)

THE DOMINIC ROSART SCHOLARSHIP
Established in 2002 by Mrs. Patsy Rosart in loving memory of her husband Dominic Rosart. To be awarded to the student entering Level I of a full-time program of study in the Faculty of Health Sciences who has the highest final admission average and is eligible for OSAP or an equivalent provincial student assistance program. Award is tenable for up to four years provided the recipient maintains a Sessional Average of 9.5. Value: $20,000 ($5,000 per year) (20132)

Awards Open to International Students

INTERNATIONAL AWARDS
Each year there are a number of International Awards provided exclusively for international students qualifying for admission to Level I of a first baccalaureate degree program. All eligible international students are automatically considered by each Faculty/Program Admissions Committee.
Value: $2,000 each

These awards are administered by the Office of International Affairs (Gilmour Hall, Room 307).

The following support the International Awards, as outlined above:

THE MCMASTER CHINESE ALUMNI (TORONTO CHAPTER)
INTERNATIONAL ENTRANCE SCHOLARSHIPS
Established in 1999 by Chinese Alumni (Toronto Chapter) of McMaster University.

NG MAN-CHUNG MEMORIAL SCHOLARSHIPS FOR INTERNATIONAL STUDENTS
Established in 2000 by Mr. Ng Man-Chung in memory of his late wife, Mr. Ching Yung Chiu-Woo, father and mother-in-law of four McMaster graduates.

NOTE
An award name ending with an * indicates that the award is open to both full-time and part-time second baccalaureate degree students.

THE ACCENTURE INC. SCHOLARSHIP
Established in 1998 by Andersen Consulting. To be awarded to a student entering the final year of study in Engineering, Science or Commerce 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.
Value: $850 (30249 800)

Students who wish to be considered for this award must be registered with the Centre for Student Development. Application forms can be picked up at the Centre or in the Office of Student Financial Aid & Scholarships. Completed application forms should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE ACHIEVEMENT AWARDS OF EXCELLENCE
Established in 1996. A variable number of scholarships to be awarded to students who, in the judgment of the Centre for Student Development, give evidence of outstanding academic achievement.
Value: $800 (40085 794)

Students who wish to be considered for this award must be registered with the Centre for Student Development. Application forms can be picked up at the Centre or in the Office of Student Financial Aid & Scholarships. Completed application forms should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE A.C.I. (ONTARIO CHAPTER) SCHOLARSHIP
Established in 1992 by the American Concrete Institute (Ontario Chapter). To be awarded to a student entering Level IV of the Civil Engineering program who, in the judgment of the Department of Civil Engineering, has demonstrated outstanding academic achievement and knowledge of concrete technology.
Value: $300 (30215 319)

THE AIR LIQUIDE CANADA INC. SCHOLARSHIPS
Established in 1999 by Air Liquide Canada. Two scholarships to be awarded to students in a Level II or III program in Chemical Engineering, Material Sciences and Engineering and/or Mechanical and Manufacturing Engineering who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement. The recipients must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session.
Value: $1,000 each (30258)

THE HENRIETTA ALDERSON SCHOLARSHIP
Established in 2002 in memory of Henrietta Jane Alderson. Two scholarships to be awarded to students in the B.Sc.N. program who are entering Level II (A Stream) or Level IV (B and C Streams) and, in the judgment of the School of Nursing, have demonstrated exceptional achievement in required science courses.
Value: $3,150 each (30287)

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 Grie G Alexander. A variable number of scholarships to be awarded to students who have completed Level I and 30 to 75 units 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 session.
Value: $5,500 each (30174)

Travel Scholarship applications are due February 15th.
<table>
<thead>
<tr>
<th>Award Name</th>
<th>Established</th>
<th>Criteria</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THE W.K. ALLAN MEMORIAL SCHOLARSHIP</strong></td>
<td>1994</td>
<td>In memory of William Kellock Allan (Class of '31) by his wife, Yvonne and augmented in 2002 by his family. To be awarded to a student entering the final level of a program in Mathematics or Physics who has achieved the highest Sessional Average.</td>
<td>$1,100 (30221 355)</td>
</tr>
<tr>
<td><strong>THE CAMERON D. ALLEN BOOK PRIZE</strong></td>
<td>1978</td>
<td>In memory of Cameron D. Allen. To be awarded to a student graduating from an Honours program in Geography who, in the judgment of the School of Geography and Earth Sciences, shows outstanding achievement in studies in climatology.</td>
<td>$220 (50009 267)</td>
</tr>
<tr>
<td><strong>THE ALUMNI ASSOCIATION SCHOLARSHIP</strong></td>
<td>1974</td>
<td>Established in 1974 by the McMaster University Alumni Association and later augmented by bequest of Harold E. Amy. To be awarded to a student who has completed at least Level II, III, or IV in the Arts &amp; Science Program, has achieved notable academic standing.</td>
<td>$300 (40001 004)</td>
</tr>
<tr>
<td><strong>THE AMBASSADOR OF SPAIN BOOK PRIZE</strong></td>
<td>1982</td>
<td>Established in 1982. To be awarded to a graduating student in a program in the Department of Modern Languages and Linguistics who, in the judgment of the Department, has achieved notable proficiency in Spanish.</td>
<td>$375 (50000)</td>
</tr>
<tr>
<td><strong>THE E.H. AMBROSE GOLD MEDAL</strong></td>
<td>1971</td>
<td>Established in 1971 by Clarkson Gordon in memory of their former Hamilton partner, E.H. Ambrose, who contributed to teaching during more than 35 years of service.</td>
<td>$40 (40002 005)</td>
</tr>
<tr>
<td><strong>THE ANATOMY PRIZE</strong></td>
<td>1992</td>
<td>To be awarded every other year to a student who has completed Level III (or equivalent), has studied biological structure and who, in the judgment of the Education Program in Anatomy, has demonstrated excellence in Anatomy.</td>
<td>$1,000 and a medal (40088 847)</td>
</tr>
<tr>
<td><strong>THE ANTHROPOLOGY PRIZE</strong></td>
<td>1982</td>
<td>Established in 1982. To be awarded to the graduating student who has completed a program in Anthropology primarily on a part-time basis and who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.</td>
<td>$50 (50004)</td>
</tr>
<tr>
<td><strong>THE ARTS &amp; SCIENCE EXPERIENTIAL LEARNING TRAVEL SCHOLARSHIP</strong></td>
<td>2002</td>
<td>Established in 2002 by Arts &amp; Science alumni. To be awarded to a student who has completed at least Level II of the Honours Arts &amp; Science Program, is currently registered in an Arts &amp; Science Experiential Learning course, and who, in the judgment of the Arts &amp; Science Program, has achieved notable academic standing.</td>
<td>$1,000 (30290)</td>
</tr>
<tr>
<td><strong>THE ARTS &amp; SCIENCE PROGRAM BOOK AWARD</strong></td>
<td>1995</td>
<td>Established in 1995. To be awarded from time to time to an Arts &amp; Science student who, in the judgment of the Arts &amp; Science Program Awards Committee, has demonstrated outstanding academic achievement in both arts and science.</td>
<td>$75 (40078 390)</td>
</tr>
<tr>
<td><strong>THE EDGAR R. ASHALL SCHOLARSHIP</strong></td>
<td>1965</td>
<td>Established in 1965 by bequest of his wife, Edith M. Ashall.</td>
<td>$200 for books (30162)</td>
</tr>
<tr>
<td><strong>THE ASM INTERNATIONAL (ONTARIO CHAPTER) SCHOLARSHIP</strong></td>
<td>1971</td>
<td>Established in 1971 by the local Chapter of the American Society for Metals. Three scholarships to be awarded to students who have completed Level I and 30-85 units of the Honours Materials Science or Materials Engineering program and who attain the highest Sessional Average (at least 3.5).</td>
<td>$1,000 each (30003 003)</td>
</tr>
<tr>
<td><strong>THE A.H. ATKINSON PRIZE</strong></td>
<td>1990</td>
<td>Established in 1990 by Atkinson Engineering Consultants Limited. To be awarded to the student in a Civil Engineering program who achieves the highest average in Civ Eng 3G3 and 3J04, taken in one session.</td>
<td>$200 (30001 342)</td>
</tr>
<tr>
<td><strong>THE ATOMIC ENERGY OF CANADA LIMITED SCHOLARSHIPS</strong></td>
<td>2001</td>
<td>Established in 2001 by Atomic Energy of Canada Limited (AECL). Four scholarships to be awarded to students who have completed Level I in the Faculty of Engineering and who, in the judgment of the Faculty of Engineering, have demonstrated outstanding academic achievement and qualities of leadership at McMaster or in the community.</td>
<td>$2,500 each (30276 1544)</td>
</tr>
<tr>
<td><strong>THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS</strong></td>
<td>1999</td>
<td>Established in 1999 by the Bank of Montreal. A variable number of scholarships to be awarded to students entering Level II, III, or IV of the Humanities Combined Honours Multimedia program who, in the judgment of the School of the Arts, have demonstrated outstanding academic achievement in the Humanities Multimedia program or great promise in the area of Humanities multimedia.</td>
<td>$1,000 each (30259)</td>
</tr>
<tr>
<td><strong>THE CHARLES MURRAY BALL SCHOLARSHIPS IN EARTH SCIENCES</strong></td>
<td>1991</td>
<td>Established in 1991 by May A. Ball in memory of her brother Murray Ball. Four scholarships to be awarded to students entering Level II, III, IV, or V of the B.Sc. program in the School of Geography and Earth Sciences who, in the judgment of the School of Geography and Earth Sciences, have attained notable standing.</td>
<td>$2,300 each (30162)</td>
</tr>
<tr>
<td><strong>THE DOUGLAS BANKIER MEMORIAL SCHOLARSHIP</strong></td>
<td>1977</td>
<td>Established in 1977 in memory of Professor J. Douglas Bankier by his friends, colleagues, and former students. To be awarded to the student who has completed Level I and at least 60 units of an Honours program in the Department of Mathematics and Statistics, who attains the highest Sessional Average and who in that session achieves a grade of at least B in STATS 3D03 and 3D03.</td>
<td>$375 (30076)</td>
</tr>
<tr>
<td><strong>THE WILLIAM AND LIDA BARNES MEMORIAL PRIZE IN HISTORY</strong></td>
<td>1969</td>
<td>Established in 1969 in memory of William D. Barnes, of Morgantown, West Virginia. To be awarded to the graduating student in the judgment of the Department of History, has attained notable standing in an Honours History program.</td>
<td>$150 (50050)</td>
</tr>
<tr>
<td><strong>THE SCOTT BARTLETT MEMORIAL PRIZE</strong></td>
<td>1985</td>
<td>Established in 1985 in memory of Scott N. Bartlett by his family and friends. To be awarded to a student who has completed Level I and 60-75 units of the Honours Commerce Program and who, in the judgment of the Faculty of Business, has achieved high standing in COMMERCE 3F3A and 3F3B, taken in one session.</td>
<td>$200 (30134 012)</td>
</tr>
<tr>
<td><strong>THE BASU MEDAL</strong></td>
<td>1984</td>
<td>Established in 1984 in memory of Professor Sanjyo Basu by friends, colleagues and accounting organizations. 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 4A3, 4C3, 4D3, 4E3, 4F3.</td>
<td>$100 (50006 013)</td>
</tr>
</tbody>
</table>
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. To be awarded to the student who has completed Level I and 60-75 units of a program in Commerce and who attains the highest Sessional Average. Value: $1,400 (30102 257)

THE MARIAN BATES BOOK PRIZE
Established in 1967, Centennial Year, by the Alumnae members of the McMaster Alumnae Association in honour of Marion Bates, Dean of Women from 1947 to 1965. 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. Value: $85 for books (50034)

THE BATES RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: $750 (30155)

THE BARBARA AND RONALD BAYNE
GERONTOLgy INTERNSHIP AWARD
Established in 2001 by Barbara and Ronald Bayne to provide practical leaning experience for Gerontology students. To be awarded to a student who has completed at least Level II in a program in Gerontology and who, in the judgment of the Gerontology Program, has indicated a clear internship plan and demonstrated notable academic achievement and qualities of leadership at McMaster or in the community. Value: $450 (40106 1571)

Note: Application required (500 word essay outlining internship plans). To be submitted to the McMaster Centre for Gerontological Studies by October 15th.

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. To be awarded to students who demonstrate high academic standing in 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, Commerce, Engineering Physics, English, French, Geography and Earth Sciences, History, Materials Science, Mathematics, Modern Languages and Linguistics, Physics or Religious Studies and who demonstrate a lively interest in the humanities and the human and social implications of scientific developments.

Value: $2,200 (30236 561)

Travel Scholarship applications are due February 15th.

THE BEAUTY COUNSELORS OF CANADA SCHOLARSHIP
Established in 1990 by Beauty Counselors of Canada Limited. To be awarded to the student who has completed Science I with the highest Sessional Average and who is entering Level II of the Honours Biochemistry, or Honours Chemistry program.

Value: $350 (30008 014)

THE BENTALL SCHOLARSHIPS
Established in 2001 by Dr. C. Howard Bentall (Class of ’37) and Dr. Shirley F. Bentall (Class of ’48). A variable number of scholarships to be awarded to students in any Faculty who demonstrate outstanding academic achievement.

Value: $1,500 each (30261 1547)

THE LOUISE E. BETTGER SCHOLARSHIPS IN MUSIC
Established in 1982 in memory of Louise E. Betttger of New Hamburg, Ontario, by her nieces and nephews. 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 who has completed Music I or an additional 30-75 units; (b) one to a keyboard student who has completed Level I and 30-75 units; and (c) one to a student who has completed Music I and who has demonstrated overall musical excellence.

Value: $450 each (30097 015)

THE J.P. BICKELL FOUNDATION MINING SCHOLARSHIP
Established in 2002 by the J.P. Bickell Foundation. A variable number of scholarships to be awarded to students who, in the judgment of the School of Geography and Earth Sciences, demonstrate an interest in the field of mining, and have completed Level II of an Honours Earth and Environmental Sciences, Honours Science (Geoscience) or B.Sc. Geoscience program.

Value: $2,000 minimum (30291)

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. To be awarded to a student graduating from an Honours program in Computer Science who has completed the program primarily on a part-time basis and who attains the highest Cumulative Average.

Value: $350 and a medal (50985 389)

THE BIOLOGY ACHIEVEMENT AWARD
Established in 2004 by the Department of Biology. A variable number to be awarded to students registered in Science I who, in the judgment of the Department of Biology, have achieved the highest standing in BIOLOGY 1A03 or the highest standing in BIOLOGY 1AA3.

Value: Book (40113)

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 from 1958 to 1978. To be awarded to the student who, in the judgment of the Department of Psychology, has demonstrated outstanding achievement in PSYCH 4D06 (Honours Thesis).

Value: $600 (40076 381)

THE ABE BLACK MEMORIAL PRIZES
Established in 1982 by friends and colleagues of Dr. A.H. Black in memory of a distinguished member of the Department of Psychology from 1958 to 1978. Three prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. program in Psychology; (b) one to the student who attains the highest Cumulative Average in the Honours B.Sc. program in Psychology; (c) one to the student who attains the highest Cumulative Average in the Honours Biology and Psychology (Life Sciences) program.

Value: $200 each (50000 017)

THE LEONE BETTY BLACKWELL MEMORIAL BOOK PRIZE
Established in 1998 by Dr. Bonnie Blackwell in memory of her mother, Leone Betty Blackwell. To be awarded to a graduating student with the highest grade in GEO 3P03.

Value: $85 for books (50096)

THE BRIAN BLACKLEY MEMORIAL SCHOLARSHIP
Established in 1979 in memory of Dr. Brian Blackley, Professor of French, by his friends, colleagues and former students, on behalf of his wife, Dorothy. To be awarded to the student who attains the highest Sessional Average on completion of Level I and 60 to 75 units of an Honours program in Classics, Theatre & Film Studies, English, French, or Modern Languages. Students in all programs except Theatre & Film Studies must have achieved a B+ in both LINGUIST IAA3 and 1AA3.

Value: $500 (30013 1309)

THE HILDA DOROTHY BORMAN SCHOLARSHIP
Established in 1998 by bequest of Hilda Dorothy Borman. To be awarded to a student studying piano who, in the judgment of the School of the Arts, has attained high academic standing.

Value: $1,050 (30245 795)

THE JOAN FRANCES BOWLING SCHOLARSHIPS
Established in 1997 from the estate of Marie Bowling in memory of her daughter, Joan Frances Bowling. Two scholarships to be awarded to outstanding classical music scholars registered in Level II and above of a Music program and who, in the judgment of the School of the Arts, have demonstrated excellence in Music.

Value: $1,500 each (30236 559)

THE BRIEN SCHOLARSHIP IN PHILOSOPHY
Established in 1944 by Dr. J.W. Brien of Windsor. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Philosophy and who, in the judgment of the Department of Philosophy, shows the most academic promise.

Value: $475 (30014)

THE JOSEPHINE STAPLES BRIEN SCHOLARSHIP
Established in 1936 by Dr. J.W. Brien of Windsor. To be awarded to a woman student who is entering her graduating session and who qualifies on the basis of academic standing and interest in undergraduate activities.

Value: $350 for books (30091)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.
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. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Mathematical Sciences, who attains the highest Sessional Average. Tenable in Levels III and IV provided that the recipient maintains satisfactory standing in an Honours program in which mathematics, pure or applied, is the major subject of study. Value: $1,200 (50061 019)

THE TEN BROEKE-BENSSEN MEMORIAL SCHOLARSHIP
Established in 1990 in memory of Dr. James Ten Broeke and Dr. Roy C. Benssen, former Heads of the Department of Philosophy and Psychology. To be awarded to a student who has completed Level I and 30 to 75 units of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, has demonstrated outstanding academic achievement. Value: $1,000 (30195)

THE BURKE MEMORIAL RING
Presented by science graduates of the University in memory of Dean C.E. Burke. 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. (50007)

THE C.A.E. SCHOLARSHIPS IN COMPUTING AND SOFTWARE ENGINEERING
Established in 2001 by C.A.E. Inc. To be awarded to a student who has completed Level II 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. Value: $3,400 (30262 1577)

THE CRISPIN CALVO SCHOLARSHIPS
Established in 1992 by Dr. J.S. Kirkaldy and Dr. W.W. Smeltzer. Two scholarships to be awarded, one to a student with the highest combined average in CHEM 2PA3 and 2P93, the other to a student with the highest combined average in MATLS 2B03 and 2D03. Value: $1,700 each (30211)

THE BETTY TAYLOR CAMPBELL SCHOLARSHIP
Established in 1986 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medalist in 1936 and 1990 inductee into the Athletics Hall of Fame. To be awarded to a student who has completed Level I 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 Cumulative Average of 8.0. Value: $4,500 ($1,500 each year) (30246 796)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th. The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Student Financial Aid section of this Calendar.

THE ELLA HALSTEAD CAMPBELL PRIZE
Established in 1978 by Mrs. Varma Caskay and Miss June Caskay in memory of Ella Halstead Campbell and augmented by Mrs. Edna M. Miller in 1987. To be awarded to a keyboard student, registered in any level of a solo performance course, who is outstanding in the judgment of the School of the Arts. Value: $200 (30048 023)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) MEMORIAL PRIZE
Established in 1902 by current and past members of the Canadian Federation of University Women (Hamilton), formerly known as the University Women's Club of Hamilton. To be awarded to the graduating student from a program in Women's Studies who, in the judgment of the Committee of Instruction for Women's Studies, has demonstrated outstanding academic achievement in the Women's Studies component of the program. Value: $175 and book ends (50062 132)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (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. To be awarded to the woman student who has completed Level I and 70 to 90 units of a program in Engineering with the highest Cumulative Average. Value: $200 (30149 020)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) RUBY BROWN BOOK PRIZE
Established in 1970 by bequest of Mrs. Edgar Brown. To be awarded to a student in an Honours program for the most creative essay in a Level I English course. Value: $100 (40046 248)

THE CANADIAN FEDERATION OF UNIVERSITY WOMEN (HAMILTON) SCHOLARSHIP
Established in 1945 by the University Women's Club of Hamilton, now the Canadian Federation of University Women. To be awarded to the woman student who attains the highest Sessional Average in the penultimate level of any program. Value: $500 (30150 373)

THE CANADIAN INSTITUTE FOR INTERNATIONAL AFFAIRS PRIZE
Established in 1994 by the Canadian Institute of International Affairs (Hamilton Branch). To be awarded to a student who has completed Level I and at least 30 units of a program in Political Science who, in the judgment of the Department of Political Science, has achieved notable standing in at least six units of International Politics courses including an outstanding essay dealing with a topic related to the field of International Politics. Value: $300 (40071 349)

THE CANADIAN SOCIETY FOR CHEMISTRY PRIZES
Established in 1947 by the Chemical Institute of Canada. Two awards to be made to students who are entering their final year of study in a program in Chemical Engineering and who attained the highest Sessional Average. Value: $50, medal and certificate (30016 027)

THE CANADIAN SOCIETY FOR CHEMISTRY PRIZES
Established in 1947 by the Chemical Institute of Canada. Two awards to be made to students who are entering their final year of study in a program in Chemical Engineering and who attained the highest Sessional Average. Value: $50, medal and certificate (30017 028)

THE CANADIAN SOCIETY OF CIVIL ENGINEERS (HAMILTON SECTION) PRIZE
Established in 1967. To be awarded to a student entering the final level of a program in Civil Engineering who, in the judgment of the Department of Civil Engineering and Engineering Mechanics, has demonstrated participation in extracurricular activities and has attained high academic standing. Value: Plaque (50018 029)

THE EZIO CAPPADOCIA MEDAL
Established in 1986 by Professor E. Cappadocia on the occasion of his retirement from the Department of History. 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 and has contributed to the Department's activities. Value: Medal (50018 030)

THE NANCY CAR MEMORIAL SCHOLARSHIP IN KINESIOLOGY
Established in 2001 in loving memory of Kinesiology student Nancy Car. To be awarded to a student entering Level IV in Kinesiology who, in the judgment of the Faculty of Social Sciences, has attained notable academic standing and demonstrated leadership at McMaster University or in the community. Value: $400 (30277 1544)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE GRACE DOROTHY AND WILLIAM P. CARPENTER AWARD
Established in 2001 by the Hamilton Community Foundation. To be awarded to a student entering Level II in Mechanical Engineering who, in the judgment of the Department of Mechanical Engineering, demonstrates outstanding academic achievement. Preference will be given to a student who has graduated from a publicly funded secondary school in the Hamilton or Burlington area. Value: $1,500 (30284 1580)

THE JAMES ROBERTSON CARRUTHERS MEMORIAL PRIZE
Established in 1964 in memory of James Robertson Carruthers (Class of '74) by his family and friends. To be awarded to the student who, in the judgment of the Department of History, attains notable standing in HIS-TORY 2R03 and 2R03 (United States History). Value: $425 (40025 032)
THE NORMAN N. CASKEY MEMORIAL PRIZE
Established in 1983 by Mrs. Verna Caskey and Miss June Caskey in memory of husband and father. To be awarded to a student who has completed Music i or Level I and 30 to 75 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated musical excellence.
Value: $150 (30115)

THE CGA ONT. AWARD FOR EXCELLENCE
Established in 1982 by the Certified General Accountants Association of Ontario. 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 COMMERCE 2A83, 3A83, 3AC3 and 4AA3.
Value: $150 (50012 033)

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 School of Business who wish to pursue academic studies abroad. 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.
Value: $1,000 each (30263 1579)

THE CHANCELLOR'S GOLD MEDAL
Established in 1938. 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.
Value: Medal (30022)

THE CHEMICAL INSTITUTE OF CANADA (HAMILTON SECTION) PRIZES
Established in 1947 by the Hamilton Section. Two prizes to be awarded to students who have completed Level I and 30 to 60 units: (a) one to a student in an Honours program in Chemistry who, in the judgment of the Department, shows particular promise in Chemistry; and (b) one to a student in a program in Chemical Engineering who, in the judgment of the Department, shows particular promise in Chemical Engineering.
Value: $150 each (30023 035)

THE CITIZEN ACTION GROUP PRIZE
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. To be awarded to the student in a program in Social Work who submits an essay or report based on the student's field work experience that best addresses the need for innovative or non-traditional social work practice.
Value: $500 (40006 031)

THE CITY OF HAMILTON ECONOMIC DEVELOPMENT DEPARTMENT SCHOLARSHIPS
Established in 1976. (a) Two scholarships to be awarded on the basis of Sessional Average to students entering Level II of a Commerce program; (b) Four scholarships to be awarded on the basis of Sessional Average: two to students who have completed Level I and 30 to 45 units, and two to students who have completed Level I and 60 to 75 units of a program in Commerce. Recipients must have obtained all their secondary school education in the Hamilton-Wentworth Region.
Value: $775 each (six awards) (30064 072)

THE HUGH CLARK SCHOLARSHIP
Established in 1989 by Hugh Clark in celebration of McMaster’s fiftieth year since moving to Hamilton. To be awarded to the student who has completed Level I and 60 to 75 units of an Honours program in Social Sciences and attains the highest Sessional Average.
Value: $1,950 (30068 239)

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. To be awarded to a student who has completed Level I and 30 to 72 units 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.
Value: $1,300 (30175 037)
Travel Scholarship applications are due February 15th.

THE CLASS OF ’43 GOLDEN ANNIVERSARY SCHOLARSHIP
Established by the Class of ’43 in celebration of their 50th anniversary. To be awarded to the student who has completed Level I and at least 60 units 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.
Value: $600 (30141 029)

THE CLASS OF ’44 SCHOLARSHIP
Established by the Class of ’44 in celebration of their 50th anniversary. To be awarded to the student entering the penultimate year of any program who has attained the highest Sessional Average.
Value: $1,600 (30224 361)

THE CLASS OF ’50 SCHOLARSHIP IN HONOURS ECONOMICS
Established in 1982 by members of the Class of 1950 who graduated in Honours Economics. To be awarded to the student who has completed at least Level II of an Honours program in Economics, and who, in the judgment of the Department of Economics, has attained a high Sessional Average and has demonstrated leadership in undergraduate extracurricular activities.
Value: $700 (30027 038)
Students who wish to be considered for this award are encouraged to submit a resume to the Department of Economics by April 15th.

THE CLASS OF 1953 50TH ANNIVERSARY SCHOLARSHIP
Established by the Class of 1953 in honour of its 50th reunion. A variable number of scholarships to be awarded to students in Level II 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.
Value: $1,500 (30264 482)

THE CLASS OF ’92 SCIENCE LEGACY AWARD
Established by the 1992 graduating class of the Faculty of Science. To be awarded to a graduating full-time student who, in the judgment of the Faculty of Science, has demonstrated notable academic achievement; contributed to the program, and participated in extra-curricular activities during his/her time at McMaster.
Value: $1,000 (50015 1557)

THE CLASSICS PRIZE
Established in 1978 by Professor D.M. Shepherd. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Classics and who, in the judgment of the Department of Classics, shows most promise.
Value: $100 (30028 040)

THE DENTON COATES MEMORIAL SCHOLARSHIP
Established in 1982 in memory of Denton E. Coates (Class of ’70) by his friends. To be awarded to the graduating student, who, in the judgment of the Department of Materials Science and Engineering, has demonstrated outstanding achievement in independent research as exemplified by the senior thesis in MATLS 4K04.
Value: $275 (50019)

THE MARIO CORILLI MEMORIAL SCHOLARSHIP
Established in 2000 by family members in loving memory of Mario Corilli. To be awarded to a student who has completed Level I or an additional 30-75 units in the Honours Music Program and who, in the judgment of the School of the Arts, has attained notable standing. Preference is to be given to a student with an interest in opera.
Value: $500 (30265 155)

THE COMPARATIVE LITERATURE PRIZE
Established in 1986. To be awarded to a student in an Honours program in Comparative Literature who, in the judgment of the Comparative Literature Program, has achieved notable standing in Level II.
Value: $525 (40008)

THE CONSUL GENERAL OF ITALY BOOK PRIZE IN ITALIAN
Established in 2003 by the Istituto Italiano di Cultura as Cultural Section of the Consul General of Italy. To be awarded to a student in an Honours program in Modern Languages and Linguistics who attains the highest grade in a Level I course in Italian.
Value: $150 for books (40110)

THE BEATRICE CORRIGAN MEMORIAL BOOK PRIZE
Established in 1990 in memory of Professor Beatrice Corrigan by her friends and colleagues. To be awarded to the student who has completed at least nine units beyond Level I and who, in the judgment of the Department of Modern Languages and Linguistics, has achieved notable standing in Italian.
Value: $125 (40004)

THE 1950 SCHOOL OF ARTS AWARD
Established in 1982 by the Class of 1950 in honour of its 50th reunion. An amount to be awarded to the student who has completed Level I and 30 to 60 units of an Honours program in Arts and who, in the judgment of the School of the Arts, has demonstrated notable academic achievement.
Value: $500 (30028 040)

THE 1950 SCHOOL OF SCIENCE AWARD
Established in 1982 by the Class of 1950 in honour of its 50th reunion. An amount to be awarded to the student who has completed Level I and 30 to 60 units of an Honours program in Science and who, in the judgment of the School of Science, has demonstrated notable academic achievement.
Value: $500 (30028 040)

THE 1953 50TH ANNIVERSARY SCHOLARSHIP
Established by the Class of 1953 in honour of its 50th reunion. A variable number of scholarships to be awarded to students in Level II 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.
Value: $1,500 (30264 482)

THE 1953 50TH ANNIVERSARY SCHOLARSHIP
Established by the Class of 1953 in honour of its 50th reunion. A variable number of scholarships to be awarded to students in Level II 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.
Value: $1,500 (30264 482)

THE 1953 50TH ANNIVERSARY SCHOLARSHIP
Established by the Class of 1953 in honour of its 50th reunion. A variable number of scholarships to be awarded to students in Level II 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.
Value: $1,500 (30264 482)
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). Two prizes to be awarded for excellence in the study of Canadian literature: (a) one for the highest grade in ENGLISH 2G06, and (b) one for the highest grade in ENGLISH 2C03.  
Value: $175 each (40011)  

THE CSEP/SCPE UNDERGRADUATE STUDENT AWARD  
Established in 1993 by the Canadian Society for Exercise Physiology. To be awarded to the student from the Kinesiology program who, in the judgment of the Department of Kinesiology, shows a high standing in KINESIOL 2C06 (Physiology of Exercise) and either KINESIOL 4C03 or 4C03.  
Value: Medal and Certificate (50068)  

THE EDWIN MARWIN DALLEY MEMORIAL SCHOLARSHIPS  
Established in 1965 by bequest of Edwin Marwin Dalley of Hamilton.  
Value: $800 each (30164)  

THE D.M. DAVIS 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. To be awarded to a student who has completed Level I and at least 60 units of an Honours program in Biology and who attains the highest average in at least 12 units of senior level courses in whole-plant biology. Taken in one session.  
Value: $575 (40009 047)  

THE DEAN’S MEDAL FOR EXCELLENCE IN THE HUMANITIES  
Established in 2000 by Donald T. Betzner (Class of ’52). Three prizes to be awarded to the graduating students who, in the judgment of the Faculty of Humanities, have demonstrated outstanding academic achievement.  
Value: $5,300 (1st and a medal (50083))  
$3,300 (2nd and a medal (50093))  
$2,300 (3rd and a medal (50094))  

THE DR. RUDOLF DE BUDA SCHOLARSHIP  
Established in 1989 in memory of Professor de Buda by family, friends and colleagues. To be awarded to a student who has achieved high standing after completion of Level I and 71 to 73 units of Electrical or Computer Engineering program and who elects to do a four-year thesis on a topic in the field of Information Theory.  
Value: $1,900 (30041 240)  

THE JOHN DEERE LIMITED SCHOLARSHIP  
Established in 1992 by John Deere Limited. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Commerce program who, in the judgment of the School of Business, has demonstrated outstanding academic achievement in courses offered by the Human Resource/Labour Relations Area and has displayed leadership and self-motivation in extracurricular activities.  
Value: $2,000 (30268 537)  

THE DELOITTE & TOUCHE SCHOLARSHIP  
Established in 2000 by Deloitte & Touche. A variable number to be awarded to students who have completed Level I and 60 to 75 units of the Honours Commerce program who, in the judgment of the Faculty of Business, have achieved notable academic standing in COMMERCE 3ABS and 3AC3 (taken in one session), and have demonstrated qualities of leadership at McMaster University or in the community.  
Value: $1,500 each (30268 537)  

THE AUDREY DIEMERT MEMORIAL BOOK PRIZE  
Established in 1991 by family, friends and colleagues in memory of Audrey Diemert. To be awarded to a part-time student who attains the highest standing in English 2G06 or 2G06.  
Value: $100 for books (60005 258)  

THE MARGERY E. DIXON MEMORIAL SCHOLARSHIP  
Established in 2003 in loving memory of Margery E. Dixon (Class of ’35) by Geraldine Phenix. To be awarded to a student who has completed Level II of an Honours English program and who attains the highest SESSIONAL AVERAGE.  
Value: $2,000 (30301)  

THE LAURA DODSON PRIZE  
Established in 1985 by Laura Dodson (Class of ’56). To be awarded to the student graduating from the Honours Arts and Science Program who has displayed outstanding achievement in both arts and science.  
Value: $200 (50091 049)  

THE ROSEMARY DOUGLAS-MERCER MEMORIAL PRIZE  
Established in 1989. To be awarded to a student who has completed Level I and 30 to 45 units of an Honours program in French and who has attained the highest average in FRENCH 2B03 and one of 2J03 or 2J33 and one of 2W03 or 2W33.  
Value: $175 (30124)  

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. To be awarded to the full-time student in Level II of an Honours program in Philosophy who attained the most notable standing in his or her Level I program.  
Value: $200 (30066)  

THE JOAN JACKSON DUNBAR TRAVEL SCHOLARSHIP  
Established in 1980 by Mayor Lloyd D. Jackson (Class of ’09), LL.D (Class of ’05) and Mrs. Jackson of Hamilton in memory of their daughter, Joan (Class of ’40). To be awarded to a woman student who has completed Level I and 60 to 75 units 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 session.  
Value: $3,675 (30177 053)  

Travel Scholarship applications are due February 15th.  

THE EDWARDS HALL RESIDENCE SCHOLARSHIP  
Awarded to the student who resides in the residence with the highest SESSIONAL AVERAGE (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.  
Value: $750 (30156)  

THE CLARA E. ELMAN SCHOLARSHIPS  
Established in 2002 by Clara E. Elman (Class of ’48), faculty member of the School of Nursing from 1948 to 1953. A variable number of scholarships to be awarded to students who have completed Level II 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.  
Value: $1,000 each (30289)  

THE HELEN EMERY SCHOLARSHIPS IN ENVIRONMENTAL SCIENCE  
Established in 1990 by Miss Helen Emery of Barrie, Ontario. Two scholarships to be awarded to students in Level II, III, IV or V of a B.Sc. Program in the School of Geography and Earth Sciences who, in the judgment of the School of Geography and Earth Sciences, demonstrate leadership and influence in addressing environmental matters. Recipients must have attained a Sessional Average of 9.5 or greater.  
Value: $1,650 each (30184 380)  

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. To be awarded to the student who attains the highest grade in GEO 4R06.  
Value: $100 (40070 341)  

THE GABRIELE ERSAMI TRAVEL SCHOLARSHIP TO ITALY  
Established in 2003 by the Dante Alighieri Society of Hamilton, the Department of Modern Languages and Linguistics, the Julian-Dalmatians of Hamilton, and friends, in honour of Dr. Gabriele Ersami, distinguished Faculty member of the Department of Modern Languages and Linguistics. To be awarded to an outstanding student who has completed Level II 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 by the Department of Modern Languages and Linguistics.  
Value: $900 (30292)  

Travel Scholarship applications are due February 15th.  

THE L.F. EURILL PRIZE  
To be awarded in 1980 by Group Eight Engineering Limited. To be awarded to the student in a program in Electrical Engineering who attains the highest average in ELEC ENG 3P14.  
Value: $1,000 (30098 057)  

THE EUROPEAN HISTORY PRIZE  
Established in 1986 by Professor Ezio Cappadocia, on the occasion of his retirement from the Department of History, in memory of his mentor, Professor Frank H. Underhill. 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 European history courses consistently throughout the degree program.  
Value: $100 (50017 368)
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. To be awarded to a student who has completed at least 30 units beyond Level I of an Honours program with notable academic standing and has demonstrated a scholarly interest in some aspect of Asian languages, history or culture, with preference being given to a student wishing to study in China.
Value: $1,500 (30193 273)
Travel Scholarship applications are due February 15th.

THE FACULTY OF SOCIAL SCIENCES INQUIRY AWARD
Established in 2000 by the Faculty of Social Sciences INQUIRY 1S53 instructors, recipients of the President's Awards of Excellence in course design 2000-2001. To be awarded to the student who attains the highest standing in INQUIRY 1S53.
Value: $500 (40091 270)

THE FEDERATION OF CHINESE CANADIAN PROFESSIONALS EDUCATION FUNDATION SCHOLARSHIPS
Established in 1988 by the Foundation. Two scholarships to be awarded: (a) one to a student in a program in Arts and Science, and (b) one, on a rotating basis, to a student in a program in Chemistry, Mechanical Engineering, and Physics.
Value: $1,000 each (30163 056)

THE BARBARA M. FERRIER SCHOLARSHIP IN ARTS AND SCIENCE
Established in 2000 by students in the Arts and Science Program, on the occasion of Dr. B.M. Ferrier's retirement. One scholarship to be awarded to a graduating student in a B.Arts Sc. (Honours) program who, in the judgment of the Arts and Science Program, has demonstrated outstanding achievement in both the Arts and Sciences as well as exceptional leadership and service to the University community.
Value: $500 (50089 166)

THE GILMOUR MEMORIAL SCHOLARSHIP
Established in 1982 from the estate of Merrill Francis Gage of Hamilton. Two scholarships to be awarded to a student who has completed Level I and 30 to 45 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in performance on a keyboard or orchestral instrument.
Value: $450 each (30110)

THE SAMUEL GELLER MEMORIAL BOOK PRIZE
Established in 1999 by Libby Geller in memory of her husband Samuel Geller (Class of '33). To be awarded to a student who has completed Level III of an Honours Program in History and who, in the judgment of the Department of History, has attained notable academic standing.
Value: $425 for books (30261)

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. To be awarded to a student in an Honours program in the School of Geography and Earth Sciences who, in the judgment of the School, has demonstrated exceptional achievement in historical-cultural geography.
Value: $550 (40062 064)

THE GWEN GEORGE AWARD
Established in 1997 in loving memory of Gwen George by her family and friends. To be awarded to a student who has completed any Level I program 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. The scholarship is tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0. Value: $4,500 ($1,500 each year) (30040 773)

THE GERMAN EMBASSY BOOK PRIZE
To be awarded from time to time for in-course students for proficiency in Level II and/or German.
Value: Book (40018)

THE J.W.L. GILL PRIZES
Established in 1944 by bequest of J.W.L. Gill, B.A., Principal of Hamilton Technical School. Nine scholarships to be awarded on the basis of Cumulative Averages to students who have completed Level I and 60 to 75 units of Honours B.Sc. programs. Ordinarily, not more than one scholarship will be awarded in any one discipline.
Value: $325 each (30079)

THE GILMOUR MEMORIAL PRIZE
Established in 1927 by an endowment in memory of Dr. Joseph Leeming Gilmour, Honorary President of their first year in 1923, and subsequently enlarged by his children. To be awarded to the student who attains the highest standing in RELIG ST 2GG3 or 2HH3.
Value: $125 (40019)

THE 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. To be awarded to a student who has completed Level I and 60 to 75 units 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.
Value: $325 (30058 067)

THE GOVERNOR GENERAL’S ACADEMIC MEDAL
Established by Her Excellency the Governor General of Canada. To be awarded to the student graduating from a first baccalaureate degree program who, in the judgment of the selection committee, has attained the highest standing throughout the program.
Value: Medal (50022)
THE DAPHNE ETHERINGTON GRAHAM MEMORIAL SCHOLARSHIP IN ENGLISH
Established in 1986, in memory of a former student and dedicated servant of the University, by her friends, family, and Professor Emeritus R.P. Graham. To be awarded to the student, registered for a first degree after completing Level I, who attains the highest standing in 18 units of English, all taken in the same session, with an average standing of at least A+, provided that the recipient is not the holder of another scholarship of equal or greater value.
Value: $975. (30034 242)

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. To be awarded to the student, registered for a first degree after completing Level I, who attains the highest standing in 15 units of History, all taken in the same session, with an average of at least A. Value: $1,000. (30231 565)

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. 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 graduates, and who has completed the program primarily on a part-time basis. (50029)

THE GREEK COMMUNITY OF BURLINGTON AND DISTRICT SCHOLARSHIP
Established in 1983. To be awarded to the student who obtains the highest standing in GREK 1Z03 and 1Z23
Value: $250 (40020 068)

THE H.B. GREENING BOOK PRIZE
Established in 1969 by bequest of Gladys Powis Greening in memory of her husband, Herald Benjamin Greening. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Music and who, in the judgment of the School of the Arts, has demonstrated excellence in music.
Value: $100 for books (30062 069)

THE ROBERT S. HAINES MEMORIAL SCHOLARSHIP
Established in 2002 by Margaret E. Haines in memory of her twin brother Robert Samuel Haines (Class of '44). To be awarded to a student graduating from an Honours program in Chemistry who attains the highest Cumulative Average.
Value: $1,000 (50007)

THE AMELIA HALL GOLD MEDAL
Established in 1985 by members of the Class of '38 in recognition of Amelia Hall (Class of '39), 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. 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. (50003 070)

THE RUTH AND JACK HALL PRIZE
Established in 1980 by Jackie MacDonald in memory of her parents. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours program in Computer Science, or Level I and 70 to 90 units of a program in Computer Engineering, and who attains the highest Sessional Average.
Value: $252 (30131)

THE RONALD K. HAM MEMORIAL PRIZE
Established in 1971 in memory of Professor R.K. Ham by his friends and former colleagues. Awarded to the student who has completed Level I and at least 60 units, and who, in the judgment of the Department of Materials Science and Engineering, shows most promise as a materials scientist or engineer.
Value: $125 (30128)

THE HAMILTON AND DISTRICT HEAVY CONSTRUCTION ASSOCIATION SCHOLARSHIPS
Established in 2003 by the Hamilton and District Heavy Construction Association. A maximum of two scholarships 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 CIV ENG 3M03.
Value: $500 (30294)

THE BRUCE M. HAMILTON AWARD
Established in 1999 by Bruce M. Hamilton. To be awarded to a student graduating from a Commerce program who, in the judgment of the Faculty of Business, has made a significant contribution through extra-curricular activities to the benefit of McMaster University or the local community.
Value: $500 (50081 872)

THE HAMILTON CHEMICAL ASSOCIATION PRIZE
Established in 1985 by the Trustees of the Hamilton Chemical Association in memory of Dean C.E. Burke. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Chemistry and who attains the highest Cumulative Average.
Value: $140 (30063)

THE HAMILTON INDUSTRIAL SCHOLARSHIPS
Established in 1998. Value: $600 each (30165)

THE HAMILTON PORT AUTHORITY SCHOLARSHIP
Established in 1984 by the Commissioners in recognition of outstanding Canadian students who continue their studies at McMaster University. To be awarded to a student who has completed Level I and 80-75 units 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.
Value: $1,275 (30227 389)

THE DONALD HART SCHOLARSHIP
Established in 1985 by members Pamela Hart and Joel Jordan in honour of Donald Neil Hart (Class of '70). To be awarded to a student who has completed Level I and 30 to 45 units of a program in Commerce and who, in the judgment of the School of Business, has achieved high standing in the required Level II Commerce courses, taken in one session.
Value: $400 (30037 075)

THE HAWKRIFF FAMILY SCHOLARSHIPS IN BUSINESS
Established in 1998 by the Hawkriiff Family. To be awarded to a student who, in the judgment of the Faculty of Business, has attained notable academic standing 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 Cumulative Average of 8.0.
Value: $7,500 ($2,500 each year) (30256 869)

THE HAWKRIFF FAMILY SCHOLARSHIPS IN KINESIOLOGY
Established in 1998 by the Hawkriiff Family. To be awarded to a student who, in the judgment of the Department of Kinesiology, has attained notable academic standing 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 Cumulative Average of 8.0.
Value: $7,500 ($2,500 each year) (30256 869)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE CURTIS HILL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.
Value: $750 (30198)

THE HELLINIC PRIZE
Established in 1995 by the Greek communities of Hamilton and Burlington in partnership with the National Bank of Greece. To be awarded to a student entering Level IV who has completed at least 12 units in subjects pertaining to Greek studies and who, in the judgment of the Faculty of Humanities, demonstrates outstanding academic achievement in Greek studies.
Value: $1,000. (30226 386)

THE ANNA MARIE HIBBARD SCHOLARSHIP
Established in 1992 from the bequest of Anna Marie Hibbard. To be awarded to the student completing Level I who attains the highest Sessional Average. The recipient may not hold another scholarship of equal or greater value.
Value: $1,550 (30220 237)

THE ROSE HILL SCHOLARSHIP
Established in 1995 by the alumni, faculty and staff of the School of Physical Education and Athletics as a tribute to Professor Rose Hill, lifetime teacher, coach and administrator in the School. Two scholarships to be awarded to a student who has completed 60 units of the Kinesiology program and who, in the judgment of the Department of Kinesiology, has demonstrated 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.
Value: $1,200 each (30130 077)
THE DR. SHIGEAKI HINOHARA SCHOLARSHIP
Established in 2003 by Dr. Shigekai Hinohara and the School of Nursing. To be awarded every three years to a student who has completed Level I in the B.S.C.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 Cumulative Average of 9.5.
Value: $2,400 ($800 each year) (30253)

THE DR. THOMAS HOBLEY PRIZE
Established in 1936 by bequest of Mrs. A. McNea of Windsor. To be awarded to a student on the basis of the Sessional Average obtained in the penultimate level of a program in Economics or Political Science.
Value: $300 (30042)

THE HARRY LYMAN Hooker Scholarships
Established in 1981, and resulting from the bequest of Dr. H.L. Hooker. Awarded for overall academic excellence (Sessional Average of at least 9.5) to students in undergraduate programs, with the exception of those in their graduating session and those retaining scholarships of $1,000 or greater. Each year quotas are established for each Faculty and other academic units in proportion to the number of full-time undergraduate students who obtain a Sessional Average of 9.5 or greater.
Value: $1,500 each (30043)

THE BERTRAM OSMER HOOKER SCHOLARSHIP
Established in 1957 by bequest of Isabel F. Hooper. To be awarded in Arts.
Value: $250 (30161)

THE NINA LOUISE HOOKER SCHOLARSHIP
Established in 1959 by bequest of Bertram O. Hooper.
Value: $500 (30200)

THE HUGHES SCHOLARSHIP
Established in 1993 by Heidi Dickenson-Hughes in memory of her husband Peter Hughes (Class of '69). To be awarded to a student who has completed Level I and 30-75 units of the Music Program who, in the judgment of the School of the Arts, has displayed outstanding achievement in Music Education.
Value: $200 (40069 330)

THE HUMAN RIGHTS AWARD
Established in 1998 by the Theme School on International Justice and Human Rights. To be awarded to the student who attains the highest grade in POL SCI 3Y03 or 4D06.
Value: $275 for books (40087 828)

THE HUMANITIES MEDALS FOR SPECIAL ACHIEVEMENT
Established by the University in 1982. Up to five medals to be awarded to 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.
Value: Medal (50026)

THE WILLIAM D.G. HUNTER PRIZE
Established in 1985 by family, friends and colleagues in memory of Professor William D.G. Hunter, member of the Department of Economics from 1951 to 1984. To be awarded to the student who has attained the highest standing in ECON 3LL3.
Value: $500 (40080 394)

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. To be awarded to a student at graduation for distinguished achievement in an Honours program in which economics is a major field of study.
Value: Medal (50027 079)

THE PAUL HYPER PRISE
Established in 1988 in memory of Paul F. Hyper by his friends and classmates. To be awarded to the student in a program in Commerce who attains the highest standing in COMMERCE 2MA3.
Value: $250 for books (40039 980)

THE INCO SCHOLARSHIP IN ENVIRONMENTAL SCIENCE
Established in 2000 by Inco Limited. To be awarded to a student entering Level II 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.
Value: $2,000 (30275 1515)

THE INCO SCHOLARSHIP IN MATERIALS ENGINEERING
Established in 2000 by Inco Limited. To be awarded to a student entering Level II 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.
Value: $2,500 (30274 1514)

THE INTERMETCO LIMITED SCHOLARSHIP
Established in 1977. To be awarded to the student who has completed Level I and 70 to 90 units of a program in Mechanical Engineering and who, in the judgment of the Department of Mechanical Engineering, has attained notable standing.
Value: $600 (30072 884)

THE INTERNATIONAL BOOK PRIZE
To be awarded from time to time to in-course students for proficiency in German studies.
Value: Book (40024)

THE INTERN 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. To be awarded to a student who has completed at least Level I of any program who, in the judgment of an Awards Selection Committee of Undergraduate Council, has demonstrated notable academic achievement and has demonstrated leadership and influence in residence life.
Value: $400 (30228 392)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE IODE MEMORIAL SCHOLARSHIP
Established in 2000 with funds from the Paardburg Chapter and 67th University Battery Chapters of the IODE. To be awarded to a student enrolled in the Bachelor of Health Science program who has completed at least Level I and who, in the judgment of the Faculty of Health Sciences, has attained notable academic standing. Preference will be given to: a student from a secondary school in Hamilton.
Value: $500 (30285)

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. To be awarded to the student who attains the highest standing in a Level I History course.
Value: $150 (40036 081)

THE IROQUOIS TROPHY
Established in 1970 by the Department of Mechanical Engineering. To be presented to a graduating mechanical engineering student on the basis of academic excellence, participation in campus societies, clubs, or other activities, and general leadership. A replica of the Trophy is permanently held by each winner.
Value: $500 (40026)

THE ITCA COMMUNITY INVOLVEMENT PRIZE
Established in 1992 by Italian Canadian Community Involvement Incorporated. To be awarded to the student who has completed at least 30 units beyond Level I of a program in the Department of Modern Languages and Linguistics and who, in the judgment of the Department, has attained notable standing in at least six units of Italian courses above Level I. The recipient must have graduated from a secondary school in the Hamilton area.
Value: $125 (30070 086)

THE IVY SCHOLARSHIP
Established in 1971 by Professor and Mrs. G.S. French in memory of Mr. and Mrs. I.E. Ivey, the parents of Mrs. French. To be awarded to the student who has completed Level I and 60-75 units of an Honours program in Music and who, in the judgment of the School of the Arts, has attained notable standing.
Value: $125 (30074 097)

THE H.L. JACKSON MEMORIAL SCHOLARSHIP
Established in 1989 in memory of Professor H.L. Jackson by his friends and colleagues. To be awarded to the student who has completed Level I and at least 60 units of an Honours program in the Department of Mathematics and Statistics, who in the judgment of the department has demonstrated achievement in MATH 3AA3.
Value: $425 (40021 311)
THE BURTON R. JAMES MEMORIAL PRIZE
Established in 1974 by his friends and colleagues in honour of Burton R. James (Class of '59), Controller, 1963-71, Assistant Vice-President - Administration, 1971-73, McMaster University. To be awarded to the student who, in the judgment of the Faculty of Business, has attained an outstanding Cumulative Average in a program in Commerce.
Value: $200 (50008)

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 1967. To be awarded to a graduate 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.
Value: $475 (50052 088)

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. To be awarded to a student in an Arts and Science program whose work, in the judgment of the Arts and Science Programs Awards and Reviews Committee, best reflects scholarship and the spirit of inquiry.
Value: $150 (40096 249)

THE JENSEN MEMORIAL
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. To be awarded to a student graduating from the Department of 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.
Value: $800 and certificate (30002 259)

THE LAWRENCE AND KATHLEEN MARY JOHNSTON MEMORIAL PRIZE
Established in 1963. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Religious Studies and who attains the highest Sessional Average.
Value: $175 (30004 909)

THE FRANK E. JONES PRIZE
Established in 1982 in honour of Professor F.E. Jones for his outstanding contributions to the Department of Sociology. To be awarded to the full-time student with the highest Cumulative Average in an Honours program in Sociology.
Value: $50 (50020)

THE JEAN JONES PRIZE
Established in 1999 in recognition of the distinguished service of Professor Jones to the School of Social Work. To be awarded to the student who attains the highest grade in SOC WORK 2B03.
Value: $50 (40056 096)

THE DR. RONALD V. JOYCE "AMAZING" GRACE AWARD
Established in 2003 by Dr. Ronald V. Joyce ’96 in honour of his mother, Grace Joyce. A variable number to be awarded to students in Level II 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.
Value: $2,500 each (30265)

THE JURY PRIZE
Established in 1941 by bequest of J.H. Jury of Bowmanville. To be awarded to the student who has completed Level I and 30-45 units of the Honours History program and who attains the highest Sessional Average.
Value: $1,500 (30093)

THE STANFORD N. KATAMBALA EARTH SCIENCES PRIZE
Established in 1965 by contributions from friends and associates of Stanford N. Katambala, a Year III Honours Geology student from Tanzania, killed in a mine accident in Northern Ontario in September 1964. To be awarded to a student who has completed Level I and 60 to 75 units of the Honours Earth and Environmental Sciences program and who attains high standing.
Value: $75 (30143)

THE ERNEST ROBERT MacKENZIE KAY SCHOLARSHIPS
Established in 1999 by Ernest Robert MacKenzie Kay. A variable number to be awarded to students in a program in Biology, Biochemistry or Chemistry who, in the judgment of the Faculty, show outstanding academic achievement. Preference will be given to students who plan to continue in the field of medical research.
Value: $500 each (30254 044)

THE GERALD L. KEECH MEDAL
Established in 1994 by his friends and colleagues as a tribute to Gerald L. Keetch in recognition of his outstanding contributions to McMaster University during his 33 years of service in Computer Science and computer services. To be awarded to the graduating student from a program in Computer Science who attains the highest Cumulative Average. (50069 344)

THE ROBERT ALAN KENNEDY SCHOLARSHIP
Established in 1998 by Robert Alan Kennedy. To be awarded to any student entering a Level II, III or IV program in the Faculty of Business who, in the judgment of the Faculty, demonstrates outstanding academic achievement.
Value: $475 (30243 786)

THE MARY E. KEYES RESIDENCE SCHOLARSHIP
Awarded to the student with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session, who resides in the residence.
Value: $750 (30299)

THE GEORGE P. AND LEATHA M. KEYS SCHOLARSHIPS
Established in 1982 by Mrs. Leatha Keys. Three scholarships to be awarded to students who, in the judgment of the Departments of Computing and Software, and of Mathematics and Statistics, have demonstrated outstanding achievement in Honours programs in those Departments: (a) one to a student who has completed Level I and 30 to 75 units of the Computer Science program; and (b) one to a student who has completed Level I and 60 to 75 units of a program in Mathematics and; and (c) one to a student who has completed Level I and 60 to 75 units of a program in Statistics.
Value: $500 each (30057 091)

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. To be awarded to a student graduating from a program in Gerontology who, in the judgment of the Gerontology Program, has demonstrated high academic achievement and leadership in community activities.
Value: $50 (50064 317)

Students who wish to be considered for this award are encouraged to submit a resume to the McMaster Centre for Gerontological Studies by April 16th.

THE KINESIOLOGY PRIZE
Established in 1962. To be awarded to the graduating student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project.
Value: $50 (50058)

THE KINESIOLOGY PRIZES
Established in 1962. Two prizes to be awarded to students who have completed the courses in Level III of the Kinesiology program: (a) one to a student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project, and (b) one to the student who has attained the highest average in Kinesiology courses taken in Levels I, II and III.
Value: $150 each (40041)

THE KIT MEMORIAL SCHOLARSHIP
Established in 1956 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. To be awarded to a woman student either on completion of Level I and at least 30 units on the basis of journalistic ability or on completion of Level I and 60 to 75 units of an Honour program in English on the basis of Sessional Average.
Value: $200 (30095 092)
THE KPMG SCHOLARSHIP
Established in 1956 by Pettit, Hill and Bertram, Toronto, and continued after amalgamation of firms. To be awarded to an outstanding student on the basis of qualifications and academic record after the completion of Level I and 60 to 75 units of a program in Commerce. Preference will be given to students who wish to continue their studies after graduation with a practising firm of chartered accountants.
Value: $350 (30146 175)

THE RUTH LANDES PRIZE
Established in 1982 in honour of Professor Ruth Landes for her outstanding contributions to the Department of Anthropology. To be awarded to the graduating full-time student in a three-Level program in Anthropology who, in the judgment of the Department of Anthropology, has demonstrated outstanding academic achievement.
Value: $50 (50046)

THE LATIN PRIZE*
Established in 1987 by Dr. John B. Clinard. To be awarded to a student who, in the judgment of the Department of Classics, has demonstrated notable achievement in LATIN 1203 and 1223
Value: $150 (40031 845)

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. To be awarded to a student who has completed any Level I 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 tenable for up to three years provided the recipient maintains a Cumulative Average of 8.0. Students who wish to be considered for this award should consult the Office of Student Financial Aid & Scholarships.
Value: $4,125 ($1,375 each year) (30212 321)

THE BETTY MacGIBBON SCHOLARSHIP*
Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08). 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.
Value: $475 (40034)

THE MACGIBBON SCHOLARSHIP*
Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08). 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.
Value: $475 (40034)

THE WILLIAM MacKENZIE MEMORIAL PRIZE*
Established in 1977 in memory of Professor William MacKenzie by his friends and colleagues. To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in either ECON 3703 (Economic Development: Agriculture and Population) or ECON 2F03 (Globalization and Economic Development) or, in exceptional circumstances, for work in a related area.
Value: $425 (40053 312)

THE RAY LAWSON SCHOLARSHIPS
Established in 1975 by the Honourable Ray Lawson, O.B.E., D.C.L., D.Ch., LL.D., K.G.Sjt.J., Lieutenant-Governor of Ontario from 1946 to 1952. Two scholarships to be awarded for the highest Sessional Averages in an

THE AGNES AND JOHN MacNEILL MEMORIAL PRIZE
Established in 1946 by bequest of Annie MacNeill (Class of '03). To be awarded to the highest Sessional Averages in an Honours program in Engineering and Management program: (a) one to a student who has completed Level I and 70 to 90 units, and (b) one to a student who has completed Level I and at least 109 units beyond Level I.
Value: $275 each (30126 099)

THE SAKARKHANU K. LILA MEMORIAL SCHOLARSHIP*
Established in 2000 by the children and grandchildren of the late Sakarkhanu K. Lila, mother of ten. To be awarded to a full-time student who has completed Level II of the Midwifery Program and who, in the judgment of the Midwifery Program, has demonstrated academic excellence, leadership and social awareness. Preference will be given to students who have registered for or completed an overseas clinical placement in a developing country.
Value: $1,000 (3065 208)

THE LINGUISTICS PRIZE
Established in 1998. To be awarded to a student in an Honours program in Modern Languages and Linguistics who, in the judgment of the Department of Modern Languages and Linguistics, has achieved notable standing in Level II courses in Linguistics.
Value: $250 (40032)

THE CLAUDE G. LISTER SCHOLARSHIP
Established in 1999 by bequest of Pauline Detwiler Lister in memory of her husband. To be awarded to a student in a program in the School of Business.
Value: $625 (30199 262)

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 1996). One scholarship to be awarded to a graduating student who enrols in a Bachelor of Laws degree program in the academic session immediately following graduation. The scholarship is tenable for up to two years provided the recipient maintains a Cumulative Average of 8.0. Students who wish to be considered for this award should consult the Office of Student Financial Aid & Scholarships.
Value: $750 (50061 298)

THE BETTY MacMILLAN PRIZE
Established in 1970 by bequest of Professor Duncan A. MacGibbon (Class of '08). 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.
Value: $475 (40034)

APPLICATIONS
Applications and the names of two referees should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.
THE MAPS CENTENNIAL AWARD
Established in 2000 by the McMaster Association of Part-Time Students (MAPS). To be awarded to a part-time student who, in the judgment of MAPS, ranks highest in qualities of scholarship and leadership. Value: $500 and a medal (60010 1393)

Students who wish to be considered for this award must submit an application to the McMaster Association of Part-Time Students by September 15th.

THE MAPS GOLD MEDAL
Established in 1996 by the McMaster Association of Part-Time Students. To be awarded to the graduating student completing studies primarily on a part-time basis and who attains the highest Cumulative Average. (50076 397)

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 (1977-1980). To be awarded to the graduating student 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. Value: $800 (30100 02)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Sociology by April 15th.

THE ELEANOR DORNBUSH MARPLES PRIZE IN ART HISTORY
Established in 1985 by Mrs. Barbara Niedermeier and her family in memory of her sister. To be awarded to a student, who in the judgment of the School of the Arts, has demonstrated outstanding achievement. Value: $175 (40015 013)

THE ELEANOR DORNBUSH MARPLES PRIZE IN MESOZOIC PALAEONTOLOGY
Established in 1987 by Vaughan Marples in memory of his wife. To be awarded to the student who attains the highest grade in THTR&FLM 2C03. Value: $125 (40016 104)

THE RONALD E. MATERICK SCHOLARSHIPS
Established in 1987 by Ronald E. Materick (Class of '70). Four scholarships to be awarded to students who have completed at least Level II in a Civil Engineering program, who are continuing in an undergraduate Civil Engineering program, and who, in the judgment of the Department of Civil Engineering, have attained notable academic standing. Preference, for two of the scholarships, is to be given to students in the penultimate year of a Civil Engineering program. Value: $2,000 each (30127 108)

THE MATTHEWS HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: $750 (30157)

THE JOHN MAYBERRY SCHOLARSHIPS
Established in 1988 by John Mayberry. Two scholarships to be awarded to students who have completed Level II or III of a program in Chemical Engineering, Mechanical Engineering or Materials Science Engineering who, in the judgment of the Department of Chemical Engineering, have attained outstanding academic achievement. The recipients must attain a minimum Sessional Average of 9.5 at the most recent Fall/Winter session. Value: $1,000 each (30262 905)

THE CHARON BURKE MCCAIN MEMORIAL SCHOLARSHIP
Established in 2004 in memory of Charon Burke McCain by family, friends, colleagues and students. To be awarded to an Honours Arts and Science student who has completed Level II or III 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. Value: $500 (30305)

THE WILLIAM J. MCCALLON SCHOLARSHIPS
Established in 1984 in honour of Professor McCallon (B.A., '43, M.A., '46), first Dean of the School of Adult Education from 1970 to 1976. In recognition of his outstanding contribution to adult education and to the Department of Mathematical Sciences during 41 years of service. A variable number to be awarded to part-time students who have attained the highest Cumulative Average at the most recent review. Value: $250 each (60004)

THE ESTHER McCANDLESS MEMORIAL PRIZE
Established in 1864 by friends and colleagues in memory of Professor E.L. McCandless, a humanist and distinguished member of the Department of Biology from 1864 to 1863. To be awarded to a student who achieves an outstanding Cumulative Average in an Honours program in Biology. Value: $300 (50016)

THE JOHN R. MCCARTHY SCHOLARSHIP
Established in 1987 by John R. McCarthy, L.L.D., (Class of '65), former Deputy Minister of University Affairs and Deputy Minister of Education for the Province of Ontario. To be awarded to a student graduating from a program in Arts and Science, Humanities, Science, or Social Sciences who enrolls in the Faculty of Education of an Ontario university in the academic session 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 or athletic endeavours. Value: $700 (50000 107)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE W.H. 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. To be awarded to the Level II student who, in the judgment of the Department of History, attains notable standing in HISTORY 2003 or 2003. Value: $100 (40022)

THE MCGREGOR-SMITH-BURR MEMORIAL SCHOLARSHIP
Established in 1985 by members of the Faculty of Social Sciences in memory of Professor W.R. McGregor, Lee Wilson Smith and George Burr, and supplemented in 1994 by bequest from Professor W. Wilson Smith, father of Lee Wilson Smith. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours English and History program and who has the highest Sessional Average. Value: $525 (30105)

THE R.C. McVOR MEDAL
Established by the Faculty of Social Sciences in 1982 in recognition of Professor R.C. McVor, former Dean of the Faculty, for his outstanding contributions to the Faculty and the University during 35 years of service. To be awarded on the recommendation of the Faculty of Social Sciences to the full-time student in the graduating class who, on the basis of scholarship, is judged to be the outstanding member of the class of Social Sciences graduates. (50043)

THE MCKAY HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: $750 (30201)

THE A.G. MCKAY PRIZE IN CLASSICAL STUDIES
Established in 1990 by Professor Emeritus A.G. McKay. To be awarded to a graduating student from an Honours program in Classics who, in the judgment of the Department of Classics, has demonstrated outstanding academic achievement and leadership. Value: $100 (50054 289)

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. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours Classics program and who, in the judgment of the Department of Classics, has attained high academic standing. Preference will be given to students from the Regional Municipality of Hamilton-Wentworth. Value: $350 (30180 260)

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. To be awarded to a student entering Level IV 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. Value: $800 (40077 385)

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.F.R.C.S.), a member of the Department of Physics from 1930 to 1967. To be awarded to a student who has completed Level I and 30 to 45 units of an Honours program in Physics and who, in the judgment of the Department of Physics and Astronomy, has attained notable standing. Value: $500 (30186 254)
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. To be awarded to a student who has completed Level I and 80 to 75 units of an Honours program in Physics with a high Sessional Average.
Value: $575 (30011 109)

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. To be awarded to the student who attains the highest Cumulative Average in an Honours program in English.
Value: $250 (50057 279)

THE McMASTER HUMANITIES SOCIETY SCHOLARSHIPS
Established in 1998 by the McMaster Humanities Society. Two scholarships are to be awarded to students who have completed Level I and 30 units and who, in the judgment of the Faculty of Humanities, have demonstrated an enthusiastic interest in the University through their involvement in extra-curricular activities.
Value: $250 each (30244 798)

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. To be awarded to a student who in the judgment of the School of Nursing, has demonstrated leadership while participating in undergraduate activities.
Value: $300 (50082 111)

THE McMASTER UNIVERSITY FUTURES FUND GRADUAND AWARD
Established in 2000. To be awarded to the child of a member of McMaster University’s salaried pension plan who has demonstrated outstanding academic achievement. Recipient must obtain a Sessional Average of 9.5 or greater.
Value: $1,000 (50084 1498)

THE McMASTER UNIVERSITY FUTURES FUND IN-COURSE AWARDS
Established in 2000. Four scholarships are to be awarded to the children of members of the McMaster University salaried pension plan who have demonstrated outstanding academic achievement. Recipient must obtain a Sessional Average of 9.5 or greater.
Value: $1,800 each (30077 271)

THE McMASTER UNIVERSITY RETIREE SCHOLARSHIP
Established in 1992 by the McMaster University Retirees Association. To be awarded to the part-time student enrolled in a program in Gerontology who attains the highest Cumulative Average.
Value: $250 for books (60007 364)

THE McMASTER UNIVERSITY RETIREE ASSOCIATION PRIZE
Established in 1992 by the McMASTER University Retirees Association. To be awarded to the student who has completed Level I and at least 30 units of a program in Gerontology and who attains the highest Sessional Average. The student must enrol in a program in Gerontology in the subsequent Fall/Winter session.
Value: $1,000 (30187 271)

THE DONALD G. McNABB SCHOLARSHIP
Established in 1989 in memory of Donald G. McNabb (Class of ’37) by friends, family and business associates. To be awarded to the student who has completed Level I plus 80 to 75 units of an Honours program in Chemistry who, in the judgment of the Department of Chemistry, has demonstrated notable academic standing. Preference will be given to students who demonstrate leadership, self-motivation, and practical aptitude appropriate for a future in the chemical industry.
Value: $925 (30108 243)

THE SIMON McNALLY SCHOLARSHIP
Established in 1972 by S. McNally and Sons Limited, in honour of Simon McNally. One or two scholarships to be awarded to Canadian citizens who have completed Level I and 35 to 50 units of a program in Civil Engineering. Awards are based on scholarship and evidence of practical engineering experience and background.
Value: $650 each (30139 112)

THE JOHN D. McNEIL ACHIEVEMENT AWARD OF EXCELLENCE
Established in 2001 by David O. Davies in honour of John D. McNie. To be awarded to a student with a visual impairment who, in the judgment of the Centre for Student Development, demonstrates notable academic achievement.
Value: $400 (40107 1578)

Students who wish to be considered for this award must be registered with the Centre for Student Development. Application forms can be picked up at the Centre or in the Office of Student Financial Aid & Scholarships. Completed application forms should be submitted to the Office of Student Financial Aid & Scholarships by April 15th.

THE PETER McPHATER MEMORIAL SCHOLARSHIP
Established in 1986 by Peter McPhater’s friends in recognition of his art, craftsmanship and humanitarianism. To be awarded to a student who has completed Level I and 50 to 75 units of a program in Honours Art History and who, in the judgment of the School of the Arts, is outstanding.
Value: $450 (30119 114)

THE MEDICAL-SURGICAL EXCELLENCE IN CLINICAL NURSING AWARD
Established in 1996 by Professor Gerry Benson. To be awarded every two years to a student who has completed at least Level II of the Nursing Program who, in the judgment of the School of Nursing, demonstrates medical-surgical excellence in medical-surgical nursing. Students who wish to be considered for this award should consult the School of Nursing for terms and conditions.
Value: $250 (40036 799)

THE AUDREY EVELYN MEPHAM AWARD IN GERONTOLOGY*
Established in 2001 by Gordon W. Mepham in loving memory of his wife Audrey Evelyn Mepham. To be awarded to a student graduating from an Honours program in Gerontology who, in the judgment of the Gerontology Program, 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.
Value: $1,200 (50090 1559)

Students who wish to be considered for this award are encouraged to submit a resume to the McMaster Centre for Gerontological Studies by April 15th.

THE MERRIAM SCHOOL OF MUSIC SCHOLARSHIP
Established in 2003 by the Merriam School of Music. To be awarded to an Honours Music student who has completed at least 60 units of work 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.
Value: $1,000 (30298)

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. To be awarded to a student enrolling in Level IV of the Honours Biology program with an outstanding Sessional Average and a grade of at least A- in BIOLOGY 3E03 in Level III.
Value: $575 (30077 115)

THE DR. F.A. MIRZA SCHOLARSHIP
Established in 1997 in memory of Farooque Mirza by family, friends and colleagues. To be awarded to a student enrolled in a Civil Engineering program who achieves the highest average in CIV ENG 2C04 and ENGI-NEER 2P04 taken in one session.
Value: $250 (40109 781)

THE MMG-NEOSID CANADA LIMITED CERAMIC ENGINEERING PRIZE
Established in 1978 by MMG-Neosid Canada Limited. To be awarded to the student who has completed Level I and at least 75 units of the Materials Engineering program and who attains the highest standing in MATLS 3B03.
Value: $100 (40037 122)

THE MODERN LANGUAGES TRAVEL SCHOLARSHIP
Established in 1991 by the Department of Modern Languages and Linguistics. To be awarded to a student who has completed at least 30 units beyond Level I in a program in Modern Languages and who, in the judgment of the Department of Modern Languages and Linguistics, has attained notable academic standing. The purpose of the scholarship is to assist with travel expenses to study and travel abroad. Priority will be given to a student participating in the Humanities Study Elsewhere Program.
Value: $925 (30188 274)

Travel Scholarship applications are due February 15th.
THE MOFFAT KINOSHITA ARCHITECTS INC. PRIZES
Established in 1990 by Moffat Kinoshita Associates Inc. Two prizes to be awarded to: (a) the student who attains the highest grade in GEO 4H7Y; and (b) the student who attains the highest grade in GEO 4H7Z.
Value: $150 each (40060 250).

THE MOLSON SCHOLARSHIP IN ENVIRONMENTAL STUDIES
Established in 1982 by the Molson Companies Donations Fund. To be awarded to the student entering the final level of a program in Geography and Environmental Studies, Earth and Environmental Sciences, Environmental Science, or Engineering and Society, who attains the highestSessional Average.
Value: $1,100 (30213 181).

THE E.S. MOORE PRIZE
Established in 1956 by Elwood S. Moore, LL.D. (Class of '55). To be awarded to the student graduating in an Honours program in Geography who, in the judgment of the School of Geography and Earth Sciences, has attained the most notable standing in Geo.
Value: $225 (50015 116).

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. To be awarded to the student who attains the highest grade in MATLS 4C03.
Value: $125 (40061 264).

THE MICHAEL J. MORTON MEMORIAL BOOK PRIZE
Established in 1978 in memory of Dr. M.J. Morton. To be awarded to a student who has completed Level I and 60 to 75 units in an Honours program in Chemistry and who, in the judgment of the Department of Chemistry, is outstanding in the field of inorganic chemistry.
Value: $175 for books (30111).

THE ELIZABETH MOSGROVE SCHOLARSHIP
Established in 1958 by bequest of John W. Mosgrove in memory of his mother. To be awarded to descendants of members of Her Majesty's Canadian Armed Forces on the basis of Sessional Average.
Value: $1,500 (30047).
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE MOTOROLA SOFTWARE ENGINEERING SCHOLARSHIPS
Established in 1999 by the Motorola Foundation. To be awarded to two students entering Level III in a Software Engineering program who, in the judgment of the Department of Computing and Software, have achieved notable academic standing, displayed strong communication skills, demonstrated leadership and involvement in extra-curricular activities.
Value: $300 each (30252 844).

THE MOULTON COLLEGE SCHOLARSHIPS
Established in 1957 from funds originally subscribed by the Alumni of Moulton College during the years 1946 to 1949 for the expansion of Moulton College. Two scholarships to be awarded to the women students of Moulton Hall with the highest Sessional Averages: (a) one after completion of Level I and 30 to 45 units, and (b) one after completion of Level I and 60 to 75 units.
Value: $1,000 each (30112 377).

THE MOULTON HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.
Value: $750 (30239).

THE ANNE MURRAY SCHOLARSHIP
Established in 1985 in memory of Anne M. Murray (Class of ‘82) by her family. To be awarded to a student who has completed at least 30 units beyond Level I in a program in the Department of Modern Languages and Linguistics and who, in the judgment of the Department, has attained notable standing in at least nine units of German courses above Level I.
Value: $300 (30005 119).

THE ELAINE NARDOCCHI MEMORIAL SCHOLARSHIP FUND
Established in 1996 by family, colleagues and friends in memory of Dr. Elaine Nardocchi, 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. 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.
Value: $250 (40101 827).

THE NATIONAL ASSOCIATION OF CORROSION ENGINEERS PRIZE
Established in 1989 by the Toronto Section of the National Association of Corrosion Engineers. To be awarded to the graduate, who, in the judgment of the Department of Materials Science and Engineering, has submitted an outstanding thesis or project in the area of Corrosion Science and Engineering. In the absence of a qualified candidate, the award will be made to the student who attains the highest standing in MATLS 4D03.
Value: $100 (50036 120).

THE P.L. NEWBIGGING PRIZES
Established in 1989 in recognition of Dr. Lynn Newbigging for his outstanding contributions to the Department of Psychology. Four prizes to be awarded to students with the highest Cumulative Average: (a) one to a full-time student in the three-level B.A. program in Psychology; (b) one to a student in a B.A. program in Psychology who has completed the program primarily on a part-time basis; (c) one to a full-time student in the three-level B.Sc. program in Life Sciences with a concentration in Psychology; and (d) one to a student in a B.Sc. program in Life Sciences with a concentration in Psychology who has completed the program primarily on a part-time basis.
Value: $50 each (50040 230).

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 and member of the Faculty from 1955-1990, in recognition of his outstanding contributions to the Department and the University. To be awarded to the student entering Level II of an Honours program in Psychology who has attained the highest average in PSYCH 1A03 and 1A43.
Value: $375 (40072 363).

THE ALAN G. NEWCOMBE PRIZE IN PEACE STUDIES
Established in 1991 in memory of Dr. Alan G. Newcombe (1923-1991), a member of the Political Science faculty for over 20 years, to students entering Level III in the Department of Political Science, and to students graduating in an Honours program in Political Science. The prize will be awarded annually to a student who, in the judgment of the Department of Political Science, has demonstrated excellence in an active involvement in community life.
Value: $575 (30203 144).

THE ELMER NIEMEIER SCHOLARSHIP
Established in 1938 and augmented in 1962 by Dr. O.W. Niemeier. To be awarded to the student who attains the highest Sessional Average at the completion of Level I and 31 to 55 units of the Nursing program.
Value: $1,100 (30114 244).

THE ROBERT NIXON SCHOLARSHIP
Established in 1991 by the Brant-Haldimand Liberal Association in honour of Dr. Robert Nixon (Class of '50, LLD, '76). 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.
Value: $375 (30203 144).

THE NORTEL NETWORKS SCHOLARSHIPS IN INFORMATION TECHNOLOGY
Established in 1999 by Nortel Networks. Ten scholarships to be awarded to students entering a program in Electrical Engineering, Computer Engineering, Software Engineering, Engineering Physics or Computer Science.
Value: $1,000 each (30257 970).

THE DERRY NOVAK SCHOLARSHIP
Established in 1984 by the Political Science alumni and colleagues in honour of Professor Derry Novak. To be awarded to the student in a program in Political Science who, in the judgment of the Department of Political Science, has achieved high standing in Level III courses in political theory or political philosophy.
Value: $650 (40012 125).

THE FREDRIC P. OLSSEN BOOK PRIZE
Established in 1974 in memory of Professor F.P. Olsen by his family, friends and former colleagues. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours program in Chemistry and who, in the judgment of the Department of Chemistry, shows particular promise as an experimental scientist.
Value: $150 for books (30053).

THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZE
Established in 1986 by the Hamilton Branch. To be awarded to the graduating student who successfully completes SOC WORK 4DD6 and attains the highest grade in SOC WORK 4DD6 in the same session.
Value: $125 (60037 126).
THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZE
Established in 1992 by the Hamilton Branch. To be awarded to the graduating student who successfully completes SOC WORK 4D06 and attains the highest grade in SOC WORK 4D06 in the same session.
Value: $125 (50082)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION GOLD MEDAL
Established in 1961 by the Ontario Professional Engineers Foundation for Education. To be awarded to a graduate of a program in Engineering who attains the highest Cumulative Average. (50005 008)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION IN-COURSE SCHOLARSHIPS
Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students with the highest Sessional Average in the Faculty of Engineering: one to be awarded to a student after completion of Engineering I, and one to be awarded to a student after completion of Engineering II and 35-90 units.
Value: $1,000 each (30006)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION UNDERGRADUATE SCHOLARSHIPS
Established in 1961 by the Ontario Professional Engineers Foundation for Education. Two scholarships to be awarded to students in the Faculty of Engineering who have demonstrated leadership and involvement in extracurricular activities and high academic achievement.
Value: $1,000 each (40109)

THE CONNIE O'SHAUGHNESSY MEMORIAL PRIZE*
Established in 1988 by family, friends and associates of Connie O'Shaughnessy (Class '86), a part-time student who chose to return to complete a degree on a part-time basis. To be awarded to a student who has completed Level I and 30 to 60 units who, in the judgment of the Selection Committee for Part-Time Awards, has made a significant contribution to the University life of part-time students.
Value: $425 (40099 265)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE GLADYS BALLANTYNE PARKER PRIZE
Established in 1983 in memory of Gladys Ballantyne Parker by her father, Harry Ballantyne. To be awarded to the student enrolled in a program in Classics who, in the judgment of the Department of Classics, demonstrates outstanding achievement in Greek or Latin.
Value: $50 (30060 133)

THE F.W. PAULIN SCHOLARSHIP
Established in 1981 by the Canadian Engineering and Contracting Co. Limited in honour of its founder. To be awarded to a student who has completed 60 to 65 units of the Civil Engineering program, or Level I and 110 to 130 units of the Civil Engineering and Management program. Award is based on scholarship and Sessional Average of at least 9.5 and evidence of leadership, self-motivation, and practical aptitude appropriate for a future in the construction industry.
Value: $1,500 (30052 134)

THE IRENE PEARCE SCHOLARSHIP
Established in 1994 by Cantenary United Church of Hamilton in honour of Irene Pearce, organist and choir director for fifty-four years. To be awarded to a student who has completed Music 1 or 30-76 units 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.
Value: $675 (90222 356)

THE HARRY L. PENNY PRIZE
Established in 1994 in recognition of Professor Harry L. Penny, founding Director of the School of Social Work, for his outstanding contribution to the School. To be awarded to the student with the highest Cumulative Average in a Social Work program.
Value: $50 (50023)

THE PEVENING SCHOLARSHIP
Established in 1987 by David C. Hannaford (Class '84). To be awarded to a student who has completed Level I and 60 to 75 units of an Honours program in Economics and who, in the judgment of the Department of Economics, has attained notable academic standing.
Value: $600 (30120 135)

THE TONY PICKARD MEMORIAL SCHOLARSHIP
Established in 1973 by his wife and family, in honour of Captain Antony F. Pickard, O.B.E., C.D., R.C.N. (Ret'd).
Value: $425 (30172)

THE PIONEER GROUP INC. GERONTOLOGY PRIZES
Established in 1988 by the Pioneer Group Limited. Two prizes to be awarded (a) one to a full-time student and (b) one to a part-time student, both of whom are graduating from a program in Gerontology who, in the judgment of the Gerontology Program, have demonstrated high academic achievement and leadership in extracurricular activities.
Value: $45 each (50021 066)

THE PIONEER GROUP INC. PRIZE
Established in 1980. To be awarded to a student in a Gerontology program who, in the judgment of the Gerontology Program, has achieved notable academic standing, and demonstrates practical aptitude for a career in health care of the elderly.
Value: $400 (49058 270)

THE PIONEER GROUP INC. SCHOLARSHIP
Established in 1988. To be awarded to a student who has completed Level I and at least 30 units of a program in Gerontology and who, in the judgment of the Gerontology Program, achieves high standing in 12 units of Gerontology courses (excluding GERONTOL 1A03) and who, demonstrates leadership in the field of Gerontology.
Value: $500 (30125 371)

THE PIONEER GROUP INC. SCHOLARSHIP
Established in 1988. To be awarded to a student who has completed Level I and at least 30 units of a program in Gerontology and who, in the judgment of the Gerontology Program, achieves high standing in 12 units of Gerontology courses (excluding GERONTOL 1A03) and who, demonstrates leadership in the field of Gerontology.
Value: $500 each (30273 1386)

THE BRIAN POCKNELL MEMORIAL SCHOLARSHIP
Established in 2004 in memory of Brian Pocknell. To be awarded to an undergraduate student who has completed Level II in a French program and, in the judgment of the Department of French, has achieved notable academic standing.
Value: $500 (30302)

THE POLITICAL SCIENCE HONOURS ESSAY PRIZE
Established in 1982. To be awarded to the student who in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement in POL SCI 4Z06.
Value: $50 (50026)

THE POLITICAL SCIENCE PRIZE
Established in 1982. To be awarded to a graduating student who has completed a program in Political Science primarily on a part-time basis and who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.
Value: $200 (50042)

THE BILL PRESTWICH SCHOLARSHIP IN MEDICAL AND HEALTH PHYSICS
Established in 2000 by Professor Bill Prestwich and his colleagues in recognition of Bill Prestwich's career as a teacher and researcher. To be awarded to a student entering Level II of the Medical and Health Physics program with the highest Sessional Average in any Level I program.
Value: $500 (30300)

THE PRICEWATERHOUSECOOPERS SCHOLARSHIPS
Established in 2003 by PriceWaterhouseCoopers. Two scholarships to be awarded to students in the Honours Commerce program enrolled in COMMERCE 2A3B and 2A3C who, in the judgment of the School of Business, have achieved notable academic standing in COMMERCE 2A3B and 2A3C, and demonstrated qualities of leadership at McMaster or in the community.
Value: $2,500 each (30271 074)
THE PSYCHOLOGY SOCIETY PRIZES
Established in 1985 by the Psychology Society and the Faculty and Alumni of the Department of Psychology. Three prizes to be awarded to students who have completed Level I and 60 to 75 units with the highest cumulative average: (a) one in the Honours Psychology B.A. program; (b) one in the Honours Psychology B.Sc. program; and (c) one in a combined Honours program in Psychology.
Value: $70 each (30123 141)

THE DR. JOHN A. PYLPIUK SCHOLARSHIP
Established in 1967 in memory of Dr. John A. Pylpiuk and in recognition of Canada's Centennial Year. To be awarded to the student who has completed Level II of an Honours program in History with the highest sessional average and who in that session achieves a grade of at least A- in HISTORY 2T03 and 2T13.
Value: $700 (30039 142)

THE RAND MEMORIAL PRIZE OF CLASS '93
Established by the Class of 1893 in Arts, on the occasion of the 25th anniversary of graduation, 1923, in memory of Chancellor Theodore Harding Rand, to encourage original literary work. To be awarded to the student who has completed Level I and 60 to 75 units and who, in the judgment of the Department of English and Cultural Studies, has made the most notable original contribution to student publications.
Value: $250 (40045)

THE LLOYD REEDS PRIZES
Established in 1965 in recognition of Dr. Lloyd G. Reeds for his outstanding contributions to the Department of Geography during 35 years of service. Four prizes to be awarded: (a) one to a student who attains the highest cumulative average in an Honours B.A. program in Geography; (b) one to a student who attains the highest cumulative average in an Honours B.Sc. program in Geography; (c) one to a student who attains the highest cumulative average in a three-level B.A. program in Geography or B.Sc. program in Geoscience; and (d) one to the student who, in the judgment of the Department of Geography and Earth Sciences, has demonstrated outstanding achievement in GEO 4R06.
Value: $50 each (50033)

THE SHARON REEVES SCHOLARSHIP
Established in 1987 by Kevin W. Reeves (Class of '80) in memory of his wife, Sharon (Class of '79). To be awarded to a student entering Level III or IV of an Honours program in Music (Education) and who, in the judgment of the School of the Arts, has attained notable standing.
Value: $425 (30135 143)

THE RELIGIOUS STUDIES PRIZES
Established in 1982. Two prizes to be awarded to students who attain the highest cumulative average in a three- or four-level program in Religious Studies: (a) one to a student who has completed the program on a full-time basis, and (b) one to a student who has completed the program primarily on a part-time basis.
Value: $50 each (50045)

THE RELIGIOUS STUDIES HONOURS ESSAY PRIZE
Established in 1982. To be awarded to the student who, in the judgment of the Department of Religious Studies, has demonstrated outstanding achievement in RELIG ST 4J36.
Value: $50 (50044)

THE RETIRED TEACHERS OF ONTARIO HAMILTON/HALDIMAND DISTRICT PRIZE IN GERONTOLOGY
Established in 1987 by the Superannuated Teachers of Ontario, District 13. To be awarded to the student who attains the highest standing in GERONTOL 1A03.
Value: $200 (40047 163)

THE ELLA JULIA REYNOLDS SCHOLARSHIPS
Established in 1984 in memory of Ella Julia Reynolds of Hamilton. Two scholarships to be awarded on the basis of scholarship and character to students who have completed Level I and 30 to 75 units of the Honours English or the Honours English and History programs with a Sessional Average of at least 9.5. The recipients must not be holders of another scholarship.
Value: $1,000 each (30044)

THE GLADYS RICHARDS SCHOLARSHIP
Established in 2002 by bequest of Gladys Richards. Two scholarships to be awarded to a student who has completed at least Level II of a single Honours program in English or a Combined Honours English and History program who, in the judgment of the Department, has demonstrated outstanding academic achievement. Students may not hold another scholarship of equal or greater value.
Value: $2,000 each (30268)

THE JACK RICHARDSON MEMORIAL SCHOLARSHIP
Established in 2002 in memory of Jack Richardson by family, friends and colleagues. To be awarded to a part-time student who has completed at least Level II in an Honours Sociology program and who attains the highest cumulative average at the most recent review.
Value: $400 (30013)

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. Four scholarships to be awarded on the basis of scholarship (Sessional Average of at least 9.5) and character to: (a) two to students who have completed Engineering I, or Level I and 35 to 90 units of a program in Engineering, and (b) two to students who have completed Science I or Level I and 30 to 75 units of a program in Science.
Value: $2,000 each (30065 145)

THE ROSART PROPERTIES INC. SCHOLARSHIP
Established in 1988 by John D. and Dominic J. Rosart of Burlington. To be awarded to a student who has completed Level I and 60 to 75 units of an Honours program in Geography and who, in the judgment of the School of Geography and Earth Sciences, has attained high academic standing.
Value: $325 (30129 146)

THE ABRAHAM ROSENBERG MEMORIAL PRIZE
Established in 1986 by bequest of Abraham I. Rosenberg (Class of '34) of Hamilton and Kitchener. To be awarded to the graduating student who attains the highest cumulative average in the Honours Philosophy program.
Value: $25 (50095)

THE MORRIS AND SARAH ROSENHEAD MEMORIAL PRIZE
Established in 1986 by bequest of Sarah Rosenhead of Hamilton. To be awarded to the student who attains the highest standing in ENGLISH 1A03 and 1A13.
Value: $125 (40033 152)

THE ROTARY CLUB OF HAMILTON SCHOLARSHIP
Established in 1989.
Value: $575 (30168 263)

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. To be awarded to a student who, in the judgment of the Gerontology Program, has demonstrated high academic achievement and leadership in age-related community activities.
Value: $400 (40992 1130)

Students who wish to be considered for this award are encouraged to submit a resume to the McMaster Centre for Gerontological Studies by April 15th.

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. To be awarded to the student who has completed Level I and 60 to 75 units of any Honours Classics or Honours History program, including at least 12 units of Ancient History and Archaeology, and who, in the judgment of a committee of the two Departments, shows outstanding achievement and promise. The purpose of the scholarship is to enable the winner to travel and study abroad during the summer after the final Winter Session, 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.
Value: $2,000 (30204 304)

Travel Scholarship applications are due February 15th.

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. To be awarded to the student who has completed Level I and 60 to 75 units and who, in the judgment of the Department of History, attains notable standing in an Honours program in History.
Value: $175 for books (30045 245)

THE NOEL SANDUSKY MEMORIAL PRIZE
Established in 1984 by family and friends in memory of Noel Sandusky. To be awarded to a student who has completed Level I and 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.
Value: $150 for books (40705 359)

THE HILDA SAVAGE MEMORIAL SCHOLARSHIP
Established in 1986 by bequest of Bertha Savage.
Value: $500 (30166)
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**THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY**
Established in 1983 in memory of Larry P. Sayers (Class of '82) by his friends. 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.

*Value: $275 (40030 149)*

**THE DR. SINA SAZGAR MEMORIAL SCHOLARSHIP**
Established in 1999 in memory of Dr. Sina Sazgar (Hon. B.Sc. '93), a young, exceptionally gifted and caring medical doctor who tragically passed away on October 26, 1993. 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.

*Value: $1,000 (30293 976)*

**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. To be awarded to a student who, in the judgment of the School of the Arts, has demonstrated academic excellence in Music.

*Value: $950 (30216 324)*

**THE SCIENCE ALUMNI SCHOLARSHIPS**
Established in 2001 by the Faculty of Science through the generosity of its alumni and friends. A variable number of scholarships to be awarded to students entering a Level III program in Science who, in the judgment of the Faculty of Science, have demonstrated outstanding academic achievement and leadership.

*Value: $500 each (30327 1539)*

**THE SHEILA SCOTT SCHOLARSHIP FOR BRANDON HALL**
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

*Value: $750 (30202)*

**THE SHEILA SCOTT SCHOLARSHIP IN ENGLISH**
Established in 1963 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. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours English program, and who attains the highest Sessional Average.

*Value: $475 (30136 150)*

**THE SHEILA SCOTT SCHOLARSHIP FOR WALLINGFORD HALL**
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.

*Value: $750 (30158)*

**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. 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.

*Value: $500 each (40097 151)*

**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. To be awarded to a student in Level III or IV 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 IV of the Nursing Program.

*Value: $250 (40105 246)*

**THE MARGARET A. SERVICE BOOK PRIZE**
Established in 1989 by friends, colleagues and former students in memory of Margaret A. Service. To be awarded to the student who upon completion of Level I attains the highest average in BIOLOGY 1A03 and 1A33.

*Value: $120 for books (40059 277)*

**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. To be awarded to a student who is enrolled in a program in Philosophy, and has, in the judgment of the Department of Philosophy, attained notable standing. Preference will be given to a student travelling and studying abroad during the summer before the final Fall/Winter session, but the scholarship could also be used to fund the final year of study at McMaster.

*Value: $725 (30225 365)*

**Travel Scholarship applications are due February 15th.**

**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. To be awarded to a student who, in the judgment of the Department of Modern Languages and Linguistics, has achieved notable standing in a Russian language course.

*Value: $375 (30189 255)*

**THE SHELL CANADA PRIZES IN ENGINEERING AND MANAGEMENT**
Established in 1963. 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.

*Value: $300 each (50049 154)*

**THE SHELL CANADA SCHOLARSHIPS IN ENGINEERING AND MANAGEMENT**
Established in 1983. Three scholarships to be awarded to students who have completed Level I and at least 110 units 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.

*Value: $1,100 each (30137 384)*

**THE SHENSTONE PRIZE**
Established in 1903 by J.N. Shenstone of Toronto, and continued by members of his family. To be awarded to the student who has completed Science I and who attains the highest average in any four of the Level I courses in Chemistry, Physics and Biology.

*Value: $200 (30138)*

**THE GERALD AND Verna Simpson Memorial Scholarship**
Established in 1957 by the children in memory of their parents. To be awarded to the student who has completed Level I and 30 to 45 units of the Honours Physics program with the highest Sessional Average.

*Value: $450 (30059 150)*

**THE RICHARD SLOBODIN PRIZE**
Established in 1982 in honour of Professor Richard Slobodin for his outstanding contributions to the Department of Anthropology. To be awarded to the graduating full-time student in an Honours Anthropology program who, in the judgment of the Department, has demonstrated outstanding academic achievement.

*Value: $50 (50046)*

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Anthropology by April 15th.

**THE PATRICIA L. SMYE MEMORIAL PRIZES**
Established in 1972 by the Patricia Smye Memorial Fund Committee. Two scholarships to be awarded to students who have completed Level I and 30 to 45 units and who attain the highest Sessional Average: (a) one in the three-level English program and (b) one in the three-level Psychology B.A. program.

*Value: $375 each (30118)*

**THE SOCIAL WORK PRIZE**
Established in 1982. To be awarded to the student who attains the highest grade in SOC WORK 2A06.

*Value: $50 (40050)*

**THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARDS**
Established in 1961. Three plaques to be awarded: (a) one to a Chemical Engineering graduand, (b) one to an Honours Biochemistry or Honours Biochemistry and Chemistry graduand, and (c) one to an Honours Chemistry graduand, who have attained the highest Cumulative Average (at least 9.5) and have completed the program in the normal number of years.

*Value: Plaque (50060 369)*

**THE SOCIETY OF MANAGEMENT ACCOUNTANTS OF ONTARIO SCHOLARSHIP**
Established in 1983. To be awarded to the student who has completed Level I and 60 to 75 units of a program in Commerce and who obtains the highest Sessional Average and in that Session attains a grade of at least A in COMMERCE 9A83.

*Value: $500 (30140 158)*

**THE SOCIOLOGY PRIZES**
Established in 1962. Two prizes to be awarded to students with the highest Cumulative Averages: (a) one to a student who has completed the three-level program in Sociology on a full-time basis; and (b) one to a student who has completed a program in Sociology primarily on a part-time basis.

*Value: $50 each (50051)*
THE SOMERVILLE SCHOLARSHIPS
Established in 1966 by bequest of William L. Somerville, architect of the McMaster University buildings of 1930.
Value: $800 (30169 159)
The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrates financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Student Financial Aid section of this Calendar.

THE SONS OF ITALY OF ONTARIO SCHOLARSHIP
Established in 1971 by the Order Sons of Italy of Ontario. To be awarded to a student who has completed at least 30 units beyond Level I in a program in the Department of Modern Languages and Linguistics and who, in the judgment of the department, has attained notable standing in at least six units of Italian courses above Level I.
Value: $500 (30141 160)

THE SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL SCHOLARSHIP
Established in 1973 by the South Ontario (formerly Niagara) Economic Development Council. Two scholarships to be awarded, normally one in each of the B.A. and B.Sc. programs, to the students who have completed Level I and 60 to 75 units of the Honours Geography program and who elect GEO 4R06 in their graduating session. Awards are based on scholarship and interest in undertaking studies relating to regional development and regional planning in the Niagara Peninsula.
Value: $2,000 each (30142 161)

THE ROBERT SOWERBY MEMORIAL SCHOLARSHIP
Established in 2002 by family, friends and colleagues, in memory of Dr. R. Sowerby, a professor of Mechanical Engineering. To be awarded to a student enrolled in the Bachelor of Technology program who, in the judgment of the Department of Mechanical Engineering, has demonstrated notable academic achievement.
Value: $500 (40108)

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 alumni who served as President of the McMaster Alumni Council in 1980, in recognition of her outstanding contribution to the University. To be awarded to the student who has completed Level I and at least 30 units 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.
Value: $1,150 (30217 323)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE SPORT COACHING PRIZE
Established in 1999 by Dr. McCullagh, a former faculty member of the School of Physical Education, Athletics and Recreation. To be awarded to a Level III or IV Kinesiology student who, in the judgment of the Department of Kinesiology, attains notable standing in one of KINESICOL 3M03, 4E33 or 4N03 and has demonstrated excellence in sport coaching.
Value: $500 (40112)

Students who wish to be considered for this award should pick up an application form from the Department of Kinesiology by April 1.

THE S.L. SQUARE SCHOLARSHIP
Established in 1938 by bequest of S.L. Squire of Toronto. Four awards to be made to students in any level I program who attain the highest standing in any of two of MATH 1A03, 1B03, 1H03, 1N11, and in other tests provided for this scholarship by the Department of Mathematics and Statistics.
Value: $425 each (39106)

The Clarence L. Starr Scholarship
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 (L.L.D., 1922). To be awarded to the student who has completed Nursing I and who attains the highest Sessional Average.
Value: $150 (30005)

THE ANNE STEIN MEMORIAL PRIZE
Established in 1971 by friends and colleagues of Anne Stein. To be awarded to the student who successfully completes SOC WORK 3D06 and attains the highest grade in SOC WORK 3D06 in the same session.
Value: $125 (60001)

THE ANNE STEIN MEMORIAL PRIZE
Established in 1971 by friends and colleagues of Anne Stein. To be awarded to the student who successfully completes SOC WORK 3D06 and attains the highest grade in SOC WORK 3D06 in the same session.
Value: $125 (40000)

THE LEONA ALBERTSON RYAN AND GORDON HENRY STEVENS MEMORIAL SCHOLARSHIP
Established in 1995 by Elaine Kellor in memory of Leona and Gordon Stevens. To be awarded to a student who has completed Level I and 30-75 units of an Honours program in Music or Art who, in the judgment of the Department of the Arts, has demonstrated outstanding achievement.
Value: $525 (30229 393)

THE MABEL STOAKEY SCHOLARSHIP
Established in 1959 by the Young Women’s Canadian Club of Toronto (now the Career Women’s Canadian Club of Toronto). To be awarded to a woman student who has completed Level I and 30 to 45 units of any program and who gives evidence of outstanding academic achievement and leadership.
Value: $450 (30170 108)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE STOBO SCHOLARSHIP
Established in 1957 by bequest of William Q. Stobo.
Value: $325 (30170)

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 1982 to 1995. To be awarded to the student who has completed Level I and 60 to 75 units of an Honours program in French and who, in the judgment of the Department of French, has achieved notable academic standing.
Value: $450 (30104 108)

THE MARK JOHN STOJIC SCHOLARSHIPS
Established in 1997 by bequest of Mark John Stojic. Two scholarships to be awarded to students who have completed Level III of a Materials Science and Engineering program, who in the judgment of the Department of Materials Science and Engineering, demonstrate outstanding academic achievement.
Value: $1,600 each (30242 760)

THE SWISS MINISTER TO CANADA BOOK PRIZES
Established in 1950. To be awarded from time to time to in-course students for proficiency in French, German, or Italian.
Value: Book (40051)

THE JUANITA LEBARRE SYMINGTON SCHOLARSHIP
Established in 1981 by The Women’s Association of Hamilton in memory of Juanita LeBarre Symington. To be awarded to the student entering the graduating session of the Honours Art program with the highest Sessional Average. The recipient must be from the Hamilton-Wentworth Region.
Value: $750 (30092 169)

THE DR. ANDREW SZENDROVITS MEMORIAL SCHOLARSHIP
Established in 1996 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. To be awarded to the student enrolled in a Commerce program who achieves the highest average in the operations/management core courses (COMM 3Q33 and 3Q53) taken in the same session.
Value: $450 (30265 1251)

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). 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.
Value: $100 (40029 171)

THE THEATRE & FILM STUDIES BOOK PRIZE
Established in 1974 by Professor Ronald W. Vince. To be awarded to the student who attains the highest standing in THTRFLM 1A03 and 1B03.
Value: Book (40014 055)

THE HUGH R. THOMPSON MEMORIAL PRIZE
Established in 1960 in memory of Dr. Hugh R. Thompson. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in the School of Geography and Earth Sciences with the highest Sessional Average.
Value: $250 (30009)

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. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Computer Science, Honours Computer Science and Mathematics, Honours Computer Science and Statistics, Honours Mathematics or Honours Statistics program, and who attains a High Sessional Average.
Value: $300 (30040)
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. Two prizes to be awarded: (a) one to the student who attains the highest standing in GERMAN 1200 and (b) one to the student who attains the highest standing in RUSSIAN 3A3.
Value: $50 each for books (40035 266)

THE TINNERMAN PALTIN ENGINEERED PRODUCTS SCHOLARSHIP IN MECHANICAL ENGINEERING
Established in 2001 by Tinnerman Paltin Engineered Products. To be awarded to a student entering Level II 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.
Value: $3,000 (30190 256)

THE CORELENE HELEN TOSTEIN SCHOLARSHIPS
Established in 1998 by bequest of Corelene Tostevin. Five awards to be granted to students who are registered in a Post-RN degree program and who, in the judgment of the School of Nursing, have demonstrated notable academic achievement.
Value: $250 each (40083 791)

THE JOHN TOTH MEMORIAL PRIZE
Established in 1983 in memory of John Toth by his friends. To be awarded to the student who attains the highest average in any six units of Level III or IV Latin courses.
Value: $30 (40028 176)

THE JOHN H. TRUEMAN PRIZE
Established in 1988 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University. To be awarded to the graduating student who demonstrates the most outstanding ability in medieval history.
Value: $250 (50067 367)

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. To be awarded to the student who has completed Level I and who, in the judgment of the Department of History, has achieved notable academic standing in medieval history.
Value: $250 (40104 179)

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. 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.
Value: $75 (40058 313)

THE UNIVERSITY PRIZES FOR SPECIAL ACHIEVEMENT
Established in 1973. Two prizes to be awarded in each Faculty and other academic units to students who exhibit exceptional skill or originality in a creative project (such as an essay, poem, sculpture, mathematical or scientific problem, engineering design) or a related series of such projects.
Value: $150 each (40052)

THE UNIVERSITY (SENATE) SCHOLARSHIPS
Made available from by authorization of the Board of Governors of the University.
Value: $800 each (30173)

THE UNIVERSITY SCHOLARSHIPS
Established in 1976. Twenty scholarships to be awarded to part-time students who have attained the highest Cumulative Average at the most recent review.
Value: $250 each (60003)

THE VALLEY CITY MANUFACTURING CO. LTD. SCHOLARSHIPS
Established in 1991 by the Valley City Manufacturing Co. Ltd. of Dundas, Ontario. Two scholarships to be awarded to the student enrolled in an Honours B.Sc. program: one to the student entering Level II and one to the student entering Level III who attain the highest Sessional Average. Recipients may not hold another scholarship of equal or greater value.
Value: $1,675 each (30205 227)

THE VAREY SCHOLARSHIP
Established in 1978 by J.C. Varey, Dundas, in memory of Albert E. Varey. To be awarded to a student in an Honours Program in Classics who, in the judgment of the Department of Classics has achieved notable academic standing.
Value: $275 (30151 182)

THE HARRY WAISGLASS BOOK PRIZE
Established in 1989 in honour of Harry Waiglass, the first Director of the Labour Studies Education Program at McMaster. 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.
Value: $50 for books (50024)

THE MELINDA WAISGLASS ACHIEVEMENT AWARD
Established in 1993 by the McMaster Studies Student Association and the Labour-Studies Program. To be awarded to a student who has completed Level I and 60-75 units of an Honours Program in Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.
Value: $750 (30197)

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY
Established in 1956 by the former students, colleagues and friends of Dr. F.W. Waters, Professor from 1935 to 1959. 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.
Value: $250 (60008 782)

THE MARK WATSON MEMORIAL PRIZE IN HISTORY
Established in 1987 by friends in the Department of History in memory of Mark Watson (Class of '55). To be awarded to a student graduating from a three-level program in History who, in the judgment of the Department of History, has displayed outstanding achievement consistently throughout the degree program.
Value: $100 (50035 183)

THE RALPH WEEKES SCHOLARSHIP
Established in 1994 by the Investors Group Financial Services to recognize the accomplishments of Ralph Weekes (Class of '73). 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.
Value: $800 (40073 360)

THE WEIZS FAMILY FOUNDATION SCHOLARSHIP
Established in 1982. To be awarded to the student who has completed Level I and 60 to 75 units of the Honours Commerce program and who attains the highest Sessional Average (at least 8.5).
Value: $1,500 (30152 184)

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. 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 spend some weeks of residence and study in a French-Canadian home during the summer vacation.
Value: $800 (30176)

Travel Scholarship applications are due February 15th.

THE WHIDDEN HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session.
Value: $300 (30159)
THE R.M. WILES MEMORIAL BOOK PRIZE* Established in 1975 in memory of Professor Roy McKeen Wiles by his friends and colleagues. 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 1600-1800. Value: $250 for books (40044).

THE T. RUSSELL WILKINSON MEMORIAL SCHOLARSHIPS Established in 1968 by bequest of Mrs. T. Russell Wilkins (E.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). Two scholarships to be awarded to students entering the penultimate level of an Honours program in Arts & Science, Health Sciences or Science who have demonstrated outstanding academic achievement. In addition, the recipients 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. Value: $4,600 each (30178).

Travel Scholarship applications are due February 15th.

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 1953-1986. To be awarded to the student who has completed at least 30 units beyond Level I 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. Value: $450 (30191 279).

THE THOMAS E. WILLEY SCHOLARSHIP Established in memory of Dr. Thomas E. Willey in 1996 by his family, colleagues and friends. To be awarded to an undergraduate student who, in the judgment of the History and Modern Languages departments, has demonstrated excellence in German studies. Value: $375 (40082 772).

THE EMANUEL WILLIAMS SCHOLARSHIP IN PHYSICS Established in 1991 by Arabel M. Williams of Port Colborne as a memorial to her brother. To be awarded to the student who has completed Level I and 30 to 45 units of an Honours program in Physics with the highest Sessional Average. Value: $1,200 (30049).

THE WILSON FOUNDATION LEADERSHIP AWARDS Established in 2001 by The Wilson Foundation. Two scholarships to be awarded to students entering Level III of any program (Level IV for Engineering students registered in a five-year program) who, in the judgment of a Selection Committee, rank highest in scholarship, leadership and influence. These scholarships are to be held for up to two years provided the recipients maintain a Sessional Average of 3.6. Value: $15,000 each ($7,500 per year for two years) (30290 1546). Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE DAVID WINCH MEMORIAL SCHOLARSHIP Established in 2003 in memory of Professor David Winch by his family, friends and colleagues. To be awarded to a part-time student in the Faculty of Social Sciences who has completed at least Level II and who, in the judgment of the Faculty, has demonstrated notable academic achievement. Value: $425 (50012).

THE WOMEN'S ARTS ASSOCIATION SCHOLARSHIPS Established in 1969. Two scholarships to be awarded: (a) one to a student entering Level II and (b) one to a student who has completed Level I and 30 to 45 units of a program in Honours Art or Honours Art History with the highest Sessional Average. The recipients must be from the Hamilton-Wentworth Region. Value: $750 each (30153 185).

THE WOODSTOCK HALL RESIDENCE SCHOLARSHIP Awarded to the student who resides in the residence with the highest Sessional Average (at least 9.5) in an undergraduate program, with the exception of those in their graduating session. Value: $300 (30180).

THE IVOR WYNNE MEMORIAL PRIZE Established in 1971 in memory of Ivor Wynne, Dean of Students. To be awarded to a student who has completed Level III of the Kinesiology program and who attained the highest Cumulative Average. Value: $250 (30075 189).


THE GLADYS A. YOUNG SCHOLARSHIP Established in 1991 by T.G. Harvey in honour of his wife, Gladys (B.Sc. '37, M.Sc. '38), one of a group of researchers who commenced radio astronomy research with the National Research Council of Canada. To be awarded to the student who has completed Level I and 30 to 65 units of an Honours program in Mathematics or Physics with the highest Sessional Average. The recipient must not hold another scholarship of equal or greater value. Value: $1,600 (30206 303).

THE LILLIAN AND MANUEL ZACK SCHOLARSHIP Established in 1984 by Lillian and Manuel Zack (Class of '40) of Hamilton. To be awarded to a student who has completed Level I and 70 to 85 units of a program in Nursing and who, in the judgment of the School of Nursing, has demonstrated achievement, initiative, and commitment to gerontological nursing through clinical practice, term papers, research interest, or community activities and who pursues these interests in Level IV. Value: $1,600 (30101 190).

**IN-COURSE, GRADUAND AND SECOND DEGREE SCHOLARSHIPS AND PRIZES BY FACULTY**

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Please look at the listings in relevant Faculties if you are in a combined program.
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### UNDERGRADUATE AWARDS — AWARDS BY FACULTY

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### HEALTH SCIENCES

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