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 DeGroote 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. For choosing your courses, please be carefully note all prerequisites, antirequisites, corequisites and cross-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, 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 108, L8S 4L8, ext. 24796; Fax: (905) 527-1105

Student Liaison
Associate Registrar (Liaison): Patricia Harris
Gilmour Hall, Room 102, L8S 4L8, ext. 22650; 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
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

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

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

Services for Students with Disabilities
Manager, Disability Services and University Advisor on Disability Issues: Tim Nolan
Learning Disabilities Coordinator (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
  - First Year Handbook
  - Level I Course Guide
    (Available from the Office of the Registrar)
  - Many academic departments offer informational 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 informational 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 Brendan
McMaster University Student Centre, Room 210, L8S 4S4, ext. 24151; Fax: (905) 529-3208; 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 approximately $248 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, Engineering Physics, Electrical Engineering, Mechanical Engineering, Mechatronics Engineering, Software Engineering and Software Engineering and Game Design.

Students may register in the Faculty of Engineering 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, and 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 Process Automation Technology program and degree completion programs in Manufacturing Technology, Civil Engineering Infrastructure Technology and Computing and Information Technology, each leading to a Bachelor of Technology Degree. They are offered in conjunction with Mohawk College.

The Faculty of Science 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, Linguistic Cognitive Science, 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 degree programs 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 of Arts.

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, Molecular Biology, Origins, Physical Science, Physics and Psychology.

The Faculty of Social Sciences offers B.A. programs in Anthropology, Economics, Geography, Geography 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 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 21,000 full-time students attend McMaster University, 2,300 of whom are pursuing advanced degrees offered through the School of Graduate Studies. In addition, over 3,800 part-time students are registered in the Fall/Winter session, from September to April, and 3,300 in the Spring/Summer session, from May to August. The University also provides courses in centres located outside Hamilton, for which full credit is granted.

Most of the 11,000 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 research and in the counseling of students.

The University's diverse academic programs are supported by state-of-the-art facilities, and even unique, faculties. The University Library is a member of the Association of Research Libraries and contains more than two million volumes and has 5,418 current print journal titles and 17,746 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. Facilities for programs in the Humanities 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 includes a nuclear reactor. There are four general purpose Supercomputers, 1,400 workstations, the 50WB/Windows XP Pro Operating System based PCs and a variety of Windows 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 14,000 students participate. The Interuniversity Athletic Program features 36 varsity sport opportunities. The department also offers a full range of instructional and outdoor education programs throughout the calendar year. The athletic facilities include a new athletics and recreation complex featuring one of the largest collegiate fitness centres in Canada, seven gymnasiums, a 50-metre swimming pool, a 400-metre outdoor track, a 200-metre indoor track, squash courts and indoor dining, outdoor education programs, the Royal Botanical Gardens at the western end of Lake Ontario. On-campus co-educational and single-sex residences are available for approximately 3,750 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 city by 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 2006-2007 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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<tbody>
<tr>
<td>FALL/WINTER SESSION</td>
<td>Term 1</td>
<td>7</td>
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<td>20</td>
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<td>Term 2</td>
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<td>3</td>
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<td>27</td>
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<td></td>
<td>Term 3</td>
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<tr>
<td>SPRING/SUMMER SESSION</td>
<td>Term 1</td>
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<td>30</td>
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<td></td>
<td>Term 2</td>
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<td></td>
<td>Term 3</td>
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<td></td>
<td>18</td>
<td>3</td>
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</tbody>
</table>

Convocations

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

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)

Friday, February 2, 2007
◆ Last day to change programs for Spring 2007 Convocations

Friday, February 2, 2007
◆ Last day to file a Graduation Information Card and declare a minor for Spring 2007 Convocations

Friday, May 18, 2007
◆ Health Sciences Convocation (excluding Nursing)

Monday, June 4 to Thursday, June 7, 2007
◆ Spring Convocations

Friday, July 20, 2007
◆ Last day to file a Graduation Information Card and declare a minor for Fall 2007 Convocations

Friday, November 16, 2007
◆ Fall 2007 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: 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 2006-2007

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

#### Fall/Winter Session 2006-2007

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration (All Levels)</td>
<td>To Be Announced</td>
<td>Thursday, September 7</td>
</tr>
<tr>
<td>Classes begin</td>
<td>Monday, September 18</td>
<td>Monday, September 18</td>
</tr>
<tr>
<td>Last day for registration and adding or dropping courses</td>
<td>Monday, October 9</td>
<td>Monday, October 9</td>
</tr>
<tr>
<td>Thanksgiving Day: No classes</td>
<td>Monday, November 28</td>
<td>Monday, October 9</td>
</tr>
<tr>
<td>Mid-term recess</td>
<td></td>
<td>Monday, February 19</td>
</tr>
<tr>
<td>Last day for cancelling courses, without failure by default</td>
<td>Friday, November 3</td>
<td>Monday, February 19</td>
</tr>
<tr>
<td>Good Friday; No classes</td>
<td></td>
<td>to Saturday, February 24</td>
</tr>
<tr>
<td>Test and Examination ban: No tests or examinations may be held</td>
<td>Tuesday, November 28</td>
<td>Friday, April 6</td>
</tr>
<tr>
<td>Mid-Session Tests (Level I)</td>
<td>to Tuesday, December 5</td>
<td>to Monday, April 9</td>
</tr>
<tr>
<td>Final Examinations</td>
<td>Monday, December 6</td>
<td>Thursday, April 5</td>
</tr>
<tr>
<td>Deferred Examinations</td>
<td>Wednesday, December 6</td>
<td>to Wednesday, December 20</td>
</tr>
<tr>
<td></td>
<td>to Wednesday, December 20</td>
<td>Tuesday, April 10</td>
</tr>
<tr>
<td></td>
<td>Monday, February 19</td>
<td>to Friday, April 27</td>
</tr>
<tr>
<td></td>
<td>to Thursday, February 22</td>
<td>Monday, June 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to Thursday, June 28</td>
</tr>
</tbody>
</table>

**Spring/Summer Session 2007**

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes begin</td>
<td>Term 2</td>
<td>Monday, April 30</td>
</tr>
<tr>
<td>Last day for registration and adding or dropping courses</td>
<td>Term 2</td>
<td>Monday, June 18</td>
</tr>
<tr>
<td>Victoria Day: No classes</td>
<td>Term 2</td>
<td>Friday, May 4</td>
</tr>
<tr>
<td>Last day for cancelling courses without failure by default</td>
<td>Term 2</td>
<td>Monday, April 30</td>
</tr>
<tr>
<td>Canada Day: No classes</td>
<td>Term 2</td>
<td>Friday, May 4</td>
</tr>
<tr>
<td>Classes end</td>
<td>Term 3</td>
<td>Monday, May 21</td>
</tr>
<tr>
<td>Examinations</td>
<td>Term 3</td>
<td>Monday, May 21</td>
</tr>
<tr>
<td>Deferred Examinations</td>
<td>Term 3</td>
<td>Thursday, June 28</td>
</tr>
<tr>
<td>December 2007 Examination period</td>
<td>Term 3</td>
<td>Monday, July 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monday, July 2</td>
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<tr>
<td></td>
<td></td>
<td>Friday, August 3</td>
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<td></td>
<td></td>
<td>Friday, August 3</td>
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<tr>
<td></td>
<td></td>
<td>During class time, as arranged by instructor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>December 2007 Examination period</td>
</tr>
</tbody>
</table>
McMaster University offers the following undergraduate degrees:

<table>
<thead>
<tr>
<th>FACULTY AND DEGREE</th>
<th>DURATION IN YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS &amp; SCIENCE PROGRAM</td>
<td></td>
</tr>
<tr>
<td>B. Arts Sc.</td>
<td>3</td>
</tr>
<tr>
<td>B. Arts Sc. (Honours)*</td>
<td>4</td>
</tr>
<tr>
<td>(*With the exception of the Combined Honours degrees in Biology and Physics which require five years of study.)</td>
<td></td>
</tr>
<tr>
<td>DEGREE OF SCHOOL OF BUSINESS</td>
<td></td>
</tr>
<tr>
<td>B.Com.</td>
<td>4</td>
</tr>
<tr>
<td>B.Com. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>FACULTY OF ENGINEERING</td>
<td></td>
</tr>
<tr>
<td>B. Eng</td>
<td>4</td>
</tr>
<tr>
<td>B. Eng, Mgt.</td>
<td>5</td>
</tr>
<tr>
<td>B. Eng, Society</td>
<td>5</td>
</tr>
<tr>
<td>B. Eng, Biosciences</td>
<td>5</td>
</tr>
<tr>
<td>B. Tech*</td>
<td>2 or 4</td>
</tr>
<tr>
<td>B. Tech</td>
<td>2 or 4</td>
</tr>
<tr>
<td>FACULTY OF HEALTH SCIENCES</td>
<td></td>
</tr>
<tr>
<td>B. H. Sc. (Midwifery)</td>
<td>4</td>
</tr>
<tr>
<td>B. H. Sc. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B. H. Sc. N</td>
<td>4</td>
</tr>
<tr>
<td>B. Sc. N (Diploma RN Stream)</td>
<td>2</td>
</tr>
<tr>
<td>B. Sc. N (Registered Practical Nurse Stream)</td>
<td>3</td>
</tr>
<tr>
<td>B. Sc. N (Nurse Practitioner Stream)</td>
<td>2</td>
</tr>
<tr>
<td>M.D. (Doctor of Medicine)</td>
<td>3</td>
</tr>
<tr>
<td>FACULTY OF HUMANITIES</td>
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<tr>
<td>B.A.</td>
<td>3</td>
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<tr>
<td>B.A. (Honours)</td>
<td>4</td>
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<tr>
<td>B.A. (Honours)</td>
<td>4</td>
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<tr>
<td>B.A./B.S.W.</td>
<td>4</td>
</tr>
<tr>
<td>B.S.W.</td>
<td>4</td>
</tr>
<tr>
<td>FACULTY OF SCIENCE</td>
<td></td>
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<tr>
<td>B.Sc.</td>
<td>3</td>
</tr>
<tr>
<td>B.Sc. (M.R.Sc.)</td>
<td>4</td>
</tr>
<tr>
<td>B.Sc. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.Sc. (Honours)</td>
<td>5</td>
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<tr>
<td>(These are Co-op programs.)</td>
<td></td>
</tr>
<tr>
<td>(*In these programs, an academic year extends beyond the regular Fall/Winter session.)</td>
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</tr>
<tr>
<td>FACULTY OF SOCIAL SCIENCES</td>
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<tr>
<td>B.A.</td>
<td>3</td>
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<tr>
<td>B.A. (Honours)</td>
<td>4</td>
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<tr>
<td>B.A. (Honours)</td>
<td>4</td>
</tr>
<tr>
<td>B.A./B.S.W.</td>
<td>2</td>
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<tr>
<td>B.S.W.</td>
<td>2</td>
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<tr>
<td>(+Follows completion of prior undergraduate degree)</td>
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</tbody>
</table>

**Second Undergraduate Degree**

Provision exists for a university graduate to take a second bachelor's degree. This program is normally shortened (except for the 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 requirements have been satisfied, and subject to enrollment 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, 1C03
- ART HIST | 1A03, 1A06
- ASTRON | 1A03, 1A06
- BIOLOGY | 1A03, 1AA3, 1A03
- CAYUGA | 1C03
- CHEM | 1A03, 1A06, 1F03
- CLASSICS | 1A03, 1B03, 1B03, 1L03, 1L03
- CMST | 1A03, 1B03
- COMP LIT | 1A03, 1A06
- COMP SCI | 1FC03, 1MA3, 1MD3, 1SA3, 1TA3
- CSSC | 1B03, 1B03
- ECON | 1B03, 1B03
- ENGLISH | 1A03, 1A06, 1B03, 1B03, 1C06
- ENVIR SC | 1A03, 1B03, 1G03
- FRENCH | 1A06, 1H03, 1H06
- GERMAN | 1A03, 1B03, 1B03
- GERONTOL | 1A03
- GREEK | 1A03, 1A06
- HTH SCI | 1A03
- HUST | 1A03
- HISPANIC | 1A03, 1A06, 1Z06, 1Z06
- HISTORY | 1A03, 1A06, 1B03, 1B03, 1C03, 1L03, 1L03
- INDIG ST | 1A03, 1A06
- INQUIRY | 1A03, 1A06
- INQUIRY | 1A03, 1A06
- ITALIAN | 1A03, 1A06, 1Z06, 1Z06
- JAPANESE | 1A03, 1A06
- KINESIOI | 1Y03, 1Y03
- LABR ST | 1A03, 1C03
- LATIN | 1A03, 1A06
- LINGUIST | 1A03, 1A06
- MATH | 1A03, 1A06, 1B03, 1C03, 1D03, 1F03, 1J03, 1L03
- MATL | 1A03, 1A06
- MED | 1A03, 1A06
- MOHAWK | 1A03, 1A06
- MUSIC | 1A03, 1A06
- MULAC | 1A03
- NJBWE | 1B03
- PEACE ST | 1A03, 1B03
- PHILOS | 1A03, 1B03, 1C03, 1D03, 1E03
- PHYSICS | 1B03, 1B03, 1B03, 1F03
- POLISH | 1A03
- POL SC | 1A03
- PSYCH | 1A03, 1A06
- RELIG ST | 1B06, 1D06, 1E03, 1E06
- SCIENCE | 1A03, 1A06
- SOC WORK | 1A06
- SOCIOL | 1A06
- STATS | 1A03, 1A06
- THTR & FLM | 1A03, 1A06
- WOMEN ST | 1A03, 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 are lists of upper-level courses available to students subject to enrolment limitations and the prerequisites as specified for each list. (Engineering students should refer to the website at 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, 2V03, 2W03, 2X03, 3Y03
GEO ............... 2HC3, 2HD3, 2HU3, 2QQ3, 3HR3
HTH SCI ............ 2A03, 2G03, 2J03, 3G03, 3I03, 4I03, 4J03
POLISH ............. 2A03
POL SCI .......... 2A06, 2B03, 2BB3, 2C03, 2DD3, 2H03, 2P03, 2Q03, 2S03, 2U03, 2V03
RELIG ST ......... 2B03, 2BB3, 2DD3, 2EE3, 2F03, 2GG3, 2H03, 2HH3, 2J03, 2LJ3, 2KK3, 2L03, 2MM3, 2P03, 2QQ3, 2SS3, 2U03, 2V03, 2VY3, 2WW3, 2YY3, 2Z03, 3A03, 3AA3, 3BB3, 3CC3, 3DD3, 3EE3, 3GG3, 3I03, 3K03, 3O03, 3P03, 3Q03, 3T03, 3U03, 3UU3, 3V03, 3W03, 3X03, 3Z03, 3ZZ3
SOC SCI .......... 2003, 2P03, 2Q03, 2R03
SOCIOLOG ................ 3K03

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

ANTHROP ......... 3203, 3Z03
ART HIST .......... 3P03
CLASSICS .......... 3EE3
COMP LIT .......... 4G03, 4J03
GEO ............... 3AA3, 3CC3, 3DD3, 3IJ3, 3NN3
GERMAN .......... 4G03 (Taught in English)
HEALTHST ......... 3203, 3E03, 3H03
HISTORY .......... 3EE3
KINESIO ......... 3DD3, 3F03, 3L03, 3M03, 3SS3, 3T03, 3Y03
4M03
POL SCI .......... 3A06, 3AA3, 3CC3, 3D03, 3E03, 3EE3, 3F03, 3FF3, 3GG3, 3H03, 3I03, 3JJ3, 3KK3, 3LL3, 3MM3, 3N03, 3NN3, 3P03, 3QQ3, 3R03, 3SS3, 3T03, 3U03, 3V03, 3Y03, 3YY3, 3Z03
RELIG ST .......... 3L03, 3S03
THTR&FLM ......... 4J03
### DEGREES BY PROGRAM

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<th>SUBJECT</th>
<th>BACHELOR'S DEGREE</th>
<th>HONOURS DEGREE</th>
<th>COMBINED HONOURS</th>
<th>PROFESSIONAL DEGREE</th>
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<td>Software Engineering and Game Design</td>
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<td>Theatre &amp; Film Studies</td>
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<td>Women's Studies</td>
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*This degree program is also available through a combination of evening and summer study. The rate of completion, however, will vary from program to program.*

*Additional information about the program options and co-op availability can be found in the University's official program guide.*

*The University also offers Thematic Areas of Study and a large number of Minors. 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., 1A63) can be interpreted as follows: the initial digit indicates the level of the course; the letter(s) in the middle identifies the specific courses within the Level; and the final digit(s) defines the number of units of credit associated with the course.

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

Full Load 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 is registered in at least 24 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.

Loan is a monetary advance 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 or 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 to remain in the program in 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 student at a particular educational institution.

Tuition is fees paid in consideration for enrolment 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 unit in length. Six-unit courses are usually two terms, or one session.

Weighted Average is calculated by multiplying the grade points assigned to each course by the number of units in each course, totalling 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.
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 an Ontario secondary school you must meet the following three requirements:

1. An Ontario Secondary School Diploma (OSSD) with acceptable standing;
   AND

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 admission average. You may submit certificates from a recognized conservatory of music in Grade 9 practical and Grade 3 theory.

NOTE: At the time of publication of this Calendar, the continuing review of the Grades 11 and 12 Mathematics curriculum had not yet been completed. Please consult McMaster's Prospective Students website with respect to any future changes to our Mathematics prerequisites.

Early Conditional Admission

Early conditional admission is granted annually to qualified applicants, depending on your academic standing at that time. McMaster normally begins making offers in early March. Early conditional admission is based on:

1. six appropriate intermediate Grade 12 U and M grades, OR

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

If you do not receive an offer 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 (For All Level I Programs) 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; OR

2. If you do not receive an OSSD; OR

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

4. If you do not respond to the Ontario Universities' Application Centre (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 website at registrar.mcmaster.ca/external/chs-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 2, 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 offer of admission unless special circumstances exist. Each case is evaluated on its own merits.

All requests for deferral of admission and foreseen should be made in writing to the Office of the Registrar at McMaster by September 1, 2006 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 105D application form to reactivate their application by no later than March 1st 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 SCIENCES (0027)
You are required to complete a mandatory Supplementary Application Form which must be submitted electronically via the web at www.mcmaster.ca/artsci/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 four additional U or M courses of which two must be at the U level.

BUSINESS (0725)
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 additional Grade 12 U or M courses 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 (0730)
The following are the minimum Grade 12 U and M requirements:

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 three additional U or M courses 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.

HEALTH SCIENCES (2276)
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 of 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 (0700)
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, French, other languages, History and Music) in addition to Requirement 1 above.

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 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. The School of the Arts verification and a Letter of Acceptance from the University guarantees a space in the program as long as the student qualifies as specified in the University accepts an offer of admission in recent years.

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

KINESIOLOGY (0308)
Students must apply for admission to Level 1. 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 Grade 12 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) Please see Level I Science courses for specific Ontario Secondary School prerequisites.

MATHEMATICS AND STATISTICS (0320)
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. Four additional U or M courses to total six credits

An average acceptable to the Faculty in the best six U or M courses (which must include the four U courses specified in points 1, 2 and 3 above) is required. Completion of a Supplementary Application is recommended for those students whose average is near the cut-off.

MEDICAL RADIATION SCIENCES (0345)
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 courses (which must include the four U courses specified in points 1, 2, 3 and 4 above)

Physics 12 U is strongly recommended.

MIDWIFERY (6501)
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.

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)
ADMISSION REQUIREMENTS

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 to mid 80's has been required for an offer of admission.

➢ MUSIC

The academic requirements are the same as for Humanities 1. 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 in Grade 12 subjects as determined by the Royal Conservatory of Music)
2. Performance (approximately 20 minutes duration) of two or three varied pieces of your choice (approximately Grade 8 honours level), including at least one from the 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

NURSING CONSORTIUM (Conestoga) (6380)
NURSING CONSORTIUM (Mohawk) (6385)

Students interested in a McMaster (B.Sc.N) 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 about the Mohawk and Conestoga sites refer to the Collaborative B.Sc.N. (O) 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 into the program.

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

1. English
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 (Biology is preferred). In 2006/07 Biology U and Chemistry U will be required.
4. Two additional U or M courses to total six credits

Two 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 80s has been required for an offer of admission at the McMaster site and at least 70% for the Conestoga and Mohawk sites.

➢ SCIENCE

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 subjects (which must include the four U courses specified in points 1, 2, and 3 above).

In recent years, an average in the low 80s 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

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 Territories

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 acceptable 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 acceptable Grade 12 courses, including two of English 40S or both English 40S and French 40S.

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

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 12.

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

Quebec
Grade 12 Diploma with six acceptable Grade 12 academic subjects numbered 60-85, including English OR Year 1 CEGEP with twelve appropriate academic courses, including two English/anglais 60-. Students with Year 1 or II CEGEP who have achieved the DEC will be considered for advanced credit in their chosen program. The Cote de Rendement (R Score) will be used for admission consideration.

Saskatchewan
Grade 12 high school diploma with five acceptable Grade 12 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 Specific 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 final 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.
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**C. International Baccalaureate Diploma**

Applicants who have completed the International Baccalaureate Diploma will be considered for admission to Level 1, 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 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 successfully complete a secondary school diploma with a minimum overall average of at least 86% 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. Admission is competitive and many programs will require grades/averages above the minimum 80% for admission consideration. 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 the balance of subjects at the Ordinary Level;
2. Advanced Level subjects appropriate for their 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/adreg.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 or equivalent from another recognized academic jurisdiction may be considered for their program of choice provided they present the appropriate prerequisite courses on official transcripts 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 honours) 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 GPAs listed below are based on a 4-point scale of grading.

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

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.)

6. Kinesiology

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

7. Midwifery

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

8. Music

   1. Completion of a three-year diploma program in Music from Mohawk College.
   2. A GPA of 3.0 of better. (Audition will be waived and, depending on grades received, applicants may receive up to 40 units of advanced credit.)

9. 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.

   OH

   1. Completion of an Ontario diploma in pre-health sciences.
   2. A GPA of 2.8 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.
ADMISSION REQUIREMENTS

1. Applicants from accredited post-secondary institutions with religious affiliation:
   a) Applicants from an accredited post-secondary institution with religious affiliation completing academic work towards a recognized undergraduate degree program will follow the same policy for admission and transfer credit as for university transfer applications. For details see the heading From Universities in this section of the Calendar.
   b) Applicants from an accredited post-secondary institution with religious affiliation completing academic work towards a diploma program will follow the same policy for admission and transfer credit as for applicants from Colleges of Applied Arts and Technology (CAATS). For details see the heading From Colleges of Applied Arts and Technology in this section of the Calendar.
   c) Applicants who did not previously complete the necessary minimum requirements for admission to the university will be considered for admission based on a minimum of one year of study in a diploma program at an accredited post-secondary institution with religious affiliation with an average of at least 3.2 (or 80%). A high school transcript will also be required. The completed academic work will serve as the basis of admission to the university. No transfer credit will be granted.

General Notes about Transfer Credit:
   i) Only the academic courses will be considered for transfer credit.
   ii) No credit will be granted for professional courses such as education, administration, pastoral studies, counselling or courses of a particular doctrinal or denominational belief.
   iii) Courses in religious studies may not be considered for transfer credit.
   iv) Applicants are required to present an official transcript from the post-secondary institution with religious affiliation and may be required to present copies of course descriptions (in English).

2. Applicants from non-accredited post-secondary institutions with religious affiliation:
   Applicants from a non-accredited post-secondary institution with religious affiliation will be considered for admission based on completion of a grade 12 high school diploma. Applicants will be required to meet the minimum requirements from high school. The course work completed at the post-secondary institution with religious affiliation will not be considered as a basis of admission or for transfer credit.

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 section 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 Kinesiology 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.

Once you have achieved academic eligibility for the B.Sc.N. program, you must apply to that program and participate in the regular admission process.

C. Senior Citizens

If you are 65 years of age or over, subject to meeting admission and prerequisite requirements, you may register without payment of tuition or other fees. The required full-time or part-time application fee must be paid and must accompany the appropriate application to the Ontario Universities' Application Centre (OUAC).

D. Visiting Students (Letter of Permission - For Credit At Another University)

If you are a student attending another university, you may apply to take McMaster courses for credit at your own institution. Please note, not all courses are available for credit outside McMaster and some are subject to enrolment limits.

You must initially apply through the Ontario Universities' Application Centre (OUAC) and send your Letter of Permission directly to McMaster. Subsequent requests to take courses on a Letter of Permission do not require an application. An updated Letter of Permission from your home institution is required for each new session.

E. Graduates of McMaster Certificate/Diploma Programs

If you have completed a certificate or diploma programs from McMaster, you may be granted advanced credit up to maximum specified by Undergraduate Council upon successful completion of the certificate/diploma program. Faculties will take into account the subject matter of both the certificate and degree programs. The credit will normally be applied against your elective courses. For more information concerning the amount of advanced credit granted, please refer to the Certificate and Diploma Programs section of this Calendar.

F. Post-Degree Students

If you are a university 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 enroll 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 4L9 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, 2006 outlining the reasons for the request.

Normally, decisions regarding deferral requests are not 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 (i.e. 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 86 and a minimum score of 20 on each of the four component parts of reading, listening, speaking, and writing on the TOEFL, or 237 on the computerized test (CBT); or 580 on the paper-based test (PBT) 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

How to Apply
1. Determine the appropriate application form and/or procedures. (See Categories of Admission below.)
2. Determine application deadline. (See Deadlines on following page.)
3. Refer to the Admission Requirements and specific Faculty sections of this Calendar for further information.
4. Complete and submit your application as directed.
5. Submit all required documentation to McMaster. (See Documents on following page.)
6. Once your application has been received, McMaster’s Admissions Office will send you an acknowledgement mailing.

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 Compass 101 on-line application at www.ouac.on.ca/101/. 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 www.ouac.on.ca/105D.

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 www.ouac.on.ca/105F.

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:
   ➢ 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 www.ouac.on.ca/105/. 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 Mohawk 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/crs-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 www.ouac.on.ca/105/ 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-part.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-part.htm. (If you wish to apply to other Ontario universities as well, use the OUAC 105 application to apply on-line at www.ouac.on.ca/105/.)

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 also 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 enrol 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 I 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 2006 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 I Programs ................................................... April 30
- Arts & Science Applications .......................................... February 10
- Supplementary Applications ........................................ February 10
- Level III Science Cooperative programs ......................... February 1
- Gerontology Applications ........................................... May 15
- Health Sciences (Honours) Applications ......................... February 10
- Supplementary Applications (Level I) ............................ February 10
- Supplementary Applications (Above Level I) .................... April 29
- Health Studies ........................................................... May 15
- Kinesthetics ............................................................... May 15
- Labour Studies ........................................................... May 15
- Medicine ................................................................. October 2
- Midwifery Applications .............................................. February 1
- Official Transcripts ..................................................... February 1
- Midwifery Application Forms** ..................................... February 1

- Supplementary Applications ................................. March 1
- All Others ........................................................... December 1
- Supplemental Applications*** ........................................ March 1
- Women's Studies .......................................................... April 15

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) 525-6600
www.mcaadm1.ca
www.maciq.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

Experience has shown that 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 Student 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 any time 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.

Faculties are authorized to use discretion in special situations by taking into account past practice, the spirit of the regulations, and extraordinary circumstances. Students who believe their situation warrants 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 is available online on the web site of the Office of the Registrar at the following URL: http://registrar.mcmaster.ca/gettingregistered/. You are responsible for ensuring that your registration information is complete, and that your course selections meet the requirements of your degree. Counselling 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. Canceled courses will be shown on your transcript with the notation CAN (Canceled). 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 not 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.
**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;
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:

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

**Minimum Requirements to Continue at the University**

All students must maintain a Cumulative Average (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, Science I, Nursing I, or 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, but will be placed on academic probation. You may be on academic probation only once during your University career. 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 irregular 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.

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 (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 3.5 to 5.9, you may remain in the program, but will be placed on program probation for one reviewing period. You may be on a one-year probation only once.

If your CA is 3.5 to 5.4, you must transfer to another program for which you qualify, or register in the Art & Science Program as an irregular student for one reviewing period. During that period you cannot take Arts & Science Program courses. After 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. After one reviewing period, you will be required to place yourself for program outside the Arts & Science Program. 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 I see Program Notes under the heading Programs in the School of Business section of this Calendar. If you are not admitted to Commerce I 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, you may still remain in the School of Business as an irregular student for one reviewing period. During that period you 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. After one reviewing period, you will be required to place yourself for 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 admission to Commerce II or readmission to Business I. The purpose of the probation period is to make yourself eligible for admission to 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.

**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. If your CA is 3.5 to 5.9, you may remain in the 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 3.0 to 3.4, you may transfer to the B.Com. program. If your CA is less than 3.0, you may not continue at the University. Regardless of your CA, you may receive more than six units of failure in a 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 non-elective Engineering courses with a minimum CA of 4.0.

In Level II and above, you must maintain a CA of at least 4.0, with no failures, to continue in an Engineering program. If your CA is 3.5 to 3.9, you are permitted to continue in the program with an academic probation period of two failures from your last review, and you must not be placed on program probation at the last review. You will be placed on program probation if your CA is 3.0 to 3.4, with two failures from your last review, and you were not placed on probation at the last review. You will be placed on program probation if your CA is 3.0 to 3.4 with more than two failures from your last review.

Upon satisfactory completion of the B.Com. program, you must have a CA of at least 6.0 to continue in the Honours B.Com. 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 HEALTH SCIENCES

- **Honours B.A. Programs; B. Mus. Program:** If your CA is 3.5 to 3.9, you may participate in a non-Kinesiology program for which you qualify or if your CA is less than 3.5, you may register in the Honours B.A. program. During this time, you will be given the opportunity to complete Kinesiology courses in an attempt to qualify for admission to the Honours programs in Kinesiology. If you fail to meet these admission requirements but your CA is 3.0 to 3.4, you may continue in the Honours Kinesiology 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.

> FACULTIES OF HUMANITIES AND SOCIAL SCIENCES

- **Honours B.Sc. Programs:** You must have a CA of at least 6.0 to continue in the Honours B.Sc. 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.

- **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 6.0 including an average of at least 6.0 in KINES 100, 1003, 1004, and KINES 200. 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 program probation only once. If, at a subsequent review, your C.A. 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.

- **B.A. Programs:** 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 SCIENCE

- **Honours B.Sc. Programs:** You must have a CA of at least 6.0 to continue in a 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 3.4, 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 complete all the course requirements prescribed by the Medical Radiation Sciences Committee by the end of Term 2 of Level II and have a CA of at least 5.0. You may not complete this program if you meet the admission requirements for the program. If admitted, you must meet the admission requirements for the program. If admitted, you must complete at least 30 units beyond the first degree, including all Honours requirements specified for the program.

Reinstatement

If you are ineligible to continue at the university (i.e., the result of your last grade 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 Medical Radiation Sciences program which is a three-level program 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 Level I, 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.)

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 or 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.

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 program requirements. (Admission to a second B.Eng. degree is not possible if your first degree is in Engineering.)

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 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. Students may not appeal the decision of the Faculty office. Supportive 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. 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 the examination except in the 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 the 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:
- be a part of a process of continuous or periodic assessment throughout the term; and
- be held in the normally scheduled class or lab slot; and
- 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 the Calendar.
- For further information, please see Petitions for Deferred Examinations in this section of the Calendar or refer to the web site at: http://registrar.mcmaster.ca/internal/examt/deferexam.htm

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.

- 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>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-</td>
<td>10</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>C+</td>
<td>6</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>6</td>
<td>48</td>
</tr>
<tr>
<td>B+</td>
<td>9</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>153</strong></td>
<td></td>
</tr>
</tbody>
</table>

To calculate Average: 153 / 18 = 8.5

◆ Since September 1982, the grading scale has been:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Equivalent Grade Point</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>B+</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>75-76</td>
</tr>
<tr>
<td>C+</td>
<td>7</td>
<td>70-72</td>
</tr>
<tr>
<td>C</td>
<td>6</td>
<td>67-69</td>
</tr>
<tr>
<td>D+</td>
<td>5</td>
<td>63-66</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>60-55</td>
</tr>
<tr>
<td>D-</td>
<td>3</td>
<td>55-50</td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>50-50</td>
</tr>
</tbody>
</table>

6. UNDERGRADUATE ACADEMIC AWARDS

The Fall/Winter Sessional Averages will be used 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.

- 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 of the Associate Dean by March 1 for Spring Convocation, and by September 1 for Fall Convocation. If permission is granted, you must complete a Graduation Information Card online at http://registrar.mcmaster.ca/internal/convocation/ 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. Current fees for faxes and courier 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, enrolment 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 0T6.

Collection of Personal Information

Under the authority of the McMaster University Act, 1976, and by applying to McMaster or by enrolling in a program at the University, students expressly acknowledge and agree that the collection, retention, use and disclosure of relevant personal information is necessary for McMaster University to:

• establish a record of the student’s performance in programs and courses;
• to assist the University in the academic and financial administration of its affairs;
• to provide the basis for awards and government funding; and
• to establish the student’s status as a member of relevant student governmental organizations.

Similarly, and in compliance with McMaster University’s access to information and protection of privacy policies and Canadian and Ontario privacy laws, the University provides personal information to:

• the Canadian and Ontario government for the purposes of reporting purposes; and
• to appropriate student government organizations for the purposes of allowing such organizations to communicate with its membership and providing student government-related services consistent with the enrolment by a student at the University. By applying and/or enrolling at McMaster University the student expressly consents to this collection, retention, use and disclosure of such personal information in this manner. Questions regarding the collection or use of personal information should be directed to the University Secretary, Gilmour Hall, Room 210, McMaster University.
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.ca/policy.

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-fraud
- 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 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 Secretary, 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:

- Scholars practice intellectual honesty in the process of acquiring and extending knowledge. They do this by improving scholarly competence, and by exercising critical thinking and self-discipline.
- Scholars show respect for and courtesy to others in free discussions on academic topics and recognize the right to free inquiry and opinion.
- Scholars adhere to ethical requirements in their research.
- Scholars acknowledge the work of others by providing appropriate references in papers, essays and the like, and by declaring the contributions of co-workers. Scholars do not take credit that is not earned.
- Scholars strive to ensure that others are 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 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 procedures described in the Student Appeal 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.

If 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, applicants may ask for a 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/thesis 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 tuition deposits are required, but students will be assessed for any unwarranted loss or breakage, fee ($2.76 per unit), to a maximum of $82.80.


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>
<th>Visa Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>137.77 per unit</td>
<td>415.00 per unit</td>
</tr>
<tr>
<td>Business and Commerce</td>
<td>150.88</td>
<td>415.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>162.76</td>
<td>516.80</td>
</tr>
<tr>
<td>Eng. Mgt. II, IV</td>
<td>164.85</td>
<td>566.59</td>
</tr>
<tr>
<td>Eng. Mgt. III, V</td>
<td>162.76</td>
<td>518.80</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>137.77</td>
<td>415.00</td>
</tr>
<tr>
<td>(Honours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>137.77</td>
<td>365.00</td>
</tr>
<tr>
<td>Kinesiology and Social Sciences</td>
<td>137.77</td>
<td>365.00</td>
</tr>
<tr>
<td>Medical Radiation</td>
<td>137.77</td>
<td>415.00</td>
</tr>
<tr>
<td>Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>137.77</td>
<td>415.00</td>
</tr>
<tr>
<td>Science</td>
<td>137.77</td>
<td>415.00</td>
</tr>
</tbody>
</table>

Supplementary Fees

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

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics and Recreation Activity Fee</td>
<td>$4.28</td>
</tr>
<tr>
<td>Administrative Services Fee</td>
<td>1.00</td>
</tr>
<tr>
<td>McMaster Association of Part-Time Students Fees: Organization Fee</td>
<td>$5.00</td>
</tr>
<tr>
<td>Total Charge per unit</td>
<td>$10.28</td>
</tr>
<tr>
<td>Nursing Students Add:</td>
<td></td>
</tr>
<tr>
<td>Learning Resource Fee</td>
<td>$7.55</td>
</tr>
<tr>
<td>Immunization Fee</td>
<td>$20.00</td>
</tr>
<tr>
<td>Respiratory Mask Fitting Fee</td>
<td>$18.00</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics &amp; Recreation Activity Fee</td>
<td>$66.30</td>
</tr>
<tr>
<td>Student Health Service</td>
<td>49.27</td>
</tr>
<tr>
<td>Ontario Public Interest Research Group (OIPRG)</td>
<td>$6.50</td>
</tr>
</tbody>
</table>

NOTE: If you do not wish to support the work of McMaster OIPRG you can claim a full refund by bringing your student card to the OIPRG Office within three weeks after the completion of the drop and add period.

McMaster Student Union Fees:

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Organization Fee</td>
<td>$102.49</td>
</tr>
<tr>
<td>Health Plan Premium*</td>
<td>45.00</td>
</tr>
<tr>
<td>Dental Plan Premium*</td>
<td>95.00</td>
</tr>
<tr>
<td>H.S.R. Bus Pass</td>
<td>67.93</td>
</tr>
<tr>
<td>WUSC Student Refugee Fee</td>
<td>1.27</td>
</tr>
<tr>
<td>Ancillary Fee for CFMU-FM</td>
<td>15.04</td>
</tr>
<tr>
<td>Ancillary Fee for MARMOR Yearbook</td>
<td>7.83</td>
</tr>
<tr>
<td>Incite Publication</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Sub Total $487.45

*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.

And Faculty Specific Society/Support Fees as Follows:

<table>
<thead>
<tr>
<th>Society/Support</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>26.00</td>
</tr>
<tr>
<td>Bachelor of Health Sciences (Honours)</td>
<td>26.00</td>
</tr>
<tr>
<td>Commerce</td>
<td>184.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>132.00</td>
</tr>
<tr>
<td>Humanities</td>
<td>15.28</td>
</tr>
<tr>
<td>Medical Radiation Science Collaborative Fee</td>
<td>80.00</td>
</tr>
<tr>
<td>Nursing</td>
<td>206.34</td>
</tr>
<tr>
<td>Science</td>
<td>35.00</td>
</tr>
<tr>
<td>Social Sciences/Kinesiology</td>
<td>50.00</td>
</tr>
</tbody>
</table>

Canadian Citizens and Landed Immigrant Students

(Examples of fees for full academic load.)

<table>
<thead>
<tr>
<th>Supplementary</th>
<th>Fee</th>
<th>Total Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Science</td>
<td>4,133.10</td>
<td>803.75</td>
</tr>
<tr>
<td>Business and Commerce</td>
<td>4,526.40</td>
<td>959.75</td>
</tr>
<tr>
<td>Engineering and Eng. Mgt. III, V</td>
<td>5,371.08</td>
<td>907.75</td>
</tr>
<tr>
<td>Eng. Mgt. II, IV</td>
<td>4,945.50</td>
<td>907.75</td>
</tr>
<tr>
<td>Health Sciences (Honours)</td>
<td>4,133.10</td>
<td>801.75</td>
</tr>
<tr>
<td>Humanities</td>
<td>4,133.10</td>
<td>791.03</td>
</tr>
<tr>
<td>Kinesiology and Social Sciences</td>
<td>4,133.10</td>
<td>825.75</td>
</tr>
<tr>
<td>Medical Radiation</td>
<td>4,133.10</td>
<td>890.75</td>
</tr>
<tr>
<td>Medicine I</td>
<td>14,445.00</td>
<td>605.54</td>
</tr>
<tr>
<td>Medicine II, III</td>
<td>14,445.00</td>
<td>605.54</td>
</tr>
<tr>
<td>Midwifery</td>
<td>4,234.48</td>
<td>263.57</td>
</tr>
<tr>
<td>Nursing</td>
<td>4,133.10</td>
<td>962.09</td>
</tr>
<tr>
<td>Science</td>
<td>4,133.10</td>
<td>810.75</td>
</tr>
</tbody>
</table>

You will be assessed extra fees for units taken over your program maximum load.
I, (Examples of fees for full academic load.)

-tuition and supplementary fees., which you are registering, you may register without this Calendar for details.

withdrawing from a course may do so without penalty UP to five

tuition fee. For any degree course, written permission

must be obtained

if you will be aged 65 or over during the academic session for

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.

### Student Health Services Fees

The supplementary student health services fee of $49.27 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. The McMaster Students Union Dental Plan Premium fee of $95.00 provides a dental plan for all full-time undergraduates students enrolled in 18 units or more.

For details concerning coverage, contact the McMaster Students Union Office at ext. 21000 or visit their website at http://www.msu.mcmaster.ca/health.

**NOTE:** Students who can prove comparable coverage may opt out of the McMaster Students Union Health Plan and/or Dental 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 2005-2006.

**RESIDENCES**

- **Traditional Residences**
  - Single: $4,265.00, $2,433.00
  - Double/Triple: $3,975.00, $2,288.00
  - Quad: $3,750.00, $2,175.00
  - Bunk and Loft Apartment: $3,220.00, $1,910.00
  - Bates Apartment Room Suite: $4,720.00, $2,660.00
  - Mary E. Keyes Suite Room: $4,935.00, $2,768.00

**MEAL PLANS**

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

If 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 2005-2006.

**Group A Full Meal Plan**

*(Available to all residence students)*

<table>
<thead>
<tr>
<th>Meal Plan Type</th>
<th>Full Payment</th>
<th>Installment Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>$2,300.00</td>
<td>$1,150.00</td>
</tr>
<tr>
<td>Small</td>
<td>$2,525.00</td>
<td>$1,263.00</td>
</tr>
<tr>
<td>Regular</td>
<td>$2,725.00</td>
<td>$1,363.00</td>
</tr>
<tr>
<td>Large</td>
<td>$2,925.00</td>
<td>$1,463.00</td>
</tr>
<tr>
<td>X-Large</td>
<td>$3,125.00</td>
<td>$1,563.00</td>
</tr>
</tbody>
</table>

**Group B Reduced Meal Plan**

*(Available to Bates and Mary E. Keyes Residence students only)*

<table>
<thead>
<tr>
<th>Meal Plan Type</th>
<th>Full Payment</th>
<th>Installment Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>$1,650.00</td>
<td>$825.00</td>
</tr>
<tr>
<td>Small</td>
<td>$1,875.00</td>
<td>$938.00</td>
</tr>
<tr>
<td>Regular</td>
<td>$2,075.00</td>
<td>$1,038.00</td>
</tr>
<tr>
<td>Large</td>
<td>$2,275.00</td>
<td>$1,138.00</td>
</tr>
<tr>
<td>X-Large</td>
<td>$2,475.00</td>
<td>$1,238.00</td>
</tr>
</tbody>
</table>

For more information on meal plans visit our web page at http://hospitality.mcmaster.ca or contact Mac Express, Commons Building, Room 101, telephone (905) 525 9140, ext. 27448, email express@mcmaster.ca.

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

### Summer Residence

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

For further information, contact Conference Services, McKay Residence, Room 124, telephone (905) 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 website at http://www.mcmaster.ca/cms/finance/student contains valuable information about your fees, various payment options and important deadlines dates. You will find a "SOLAR Registration Video" which walks you through the online registration process. We also include step-by-step instructions for 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, 15.32% annually at the end of each month on the outstanding balance.

Checks will 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 with all privileges suspended. Fees to the date of withdrawal will be assessed. If you wish to re-register within the same academic session, you will also be assessed a $100.00 re-statement 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 and their record of coursework will be deleted from the system.

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

Refunds

If you are forced, by illness or other personal reasons, to withdraw from courses, you will be charged a partial fee for Courses dropped until the end of the drop and add period.

MISCELLANEOUS FEES

The following fees were in effect for the 2005-2006 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 for 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/Education Credit Certificate .................... No fee
- Certification of Fee Payment ............................................. No fee
- Meal Plan Withdrawal Fee ................................................ 50.00
- Fine for Meal Card Misuse .................................................. 25.00
- Returned Cheque Charge (NSF, Stopped Payment)
  - First Occurrence ......................................................... 32.00
  - Each Subsequent Occurrence (Additional) ......................... 10.00
- Late Payment Agreement Fee ............................................. 50.00
- Late Payment Fee ............................................................ 32.00
- Payment Agreement Default Fee ........................................ 32.00
- Deferment Fee ............................................................... 32.00
- Default Fee Monthly Payment Plan ..................................... 32.00
- Reinstatement Fee ........................................................... 100.00
- Locker Rental Small ......................................................... 20.00
- Locker Rental Wide .......................................................... 25.00
- Library Charges
  - Overdue Recalled Books (per day) .................................... 2.00
  - Overdue Reserve Material (per hour) ............................... 2.00
  - Replacement Cost, plus Fine: up to $100.00...................... 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 I 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 $337.05 in 2006) 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 plans available, and although the University does not specifically endorse any one of these plans, it has no objection to explanatory brochures and literature being posted on bulletin boards or distributed in appropriate places. If you are involved in laboratory or field work, you are particularly encouraged to investigate such coverage.

For information on student awards and financial aid, please refer to Undergraduate Academic Awards and Student Financial Aid sections of this Calendar.
The Arts & Science Program has been designed for students who wish to use their university years to further their intellectual growth through study of significant achievements in both arts and sciences and in practice of methods of inquiry. The program also allows for substantial specialization in a discipline or area through the use of electives. The philosophy of the Arts & Science Program can be expressed by quoting A.N. Whitehead: "What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it."

— The Aims of Education and Other Essays, 1929

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

1. To increase understanding of achievements and methods used in selected arts and science disciplines;
2. To increase skills in writing, speaking, and in critical and quantitative reasoning; and
3. To increase skills in the art of scholarly inquiry into issues of public concern.

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

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

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

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

The Arts & Science Program is governed by the General Academic Regulations of the University, (see the General Academic Regulations section in this Calendar) and the regulations described below.
### ARTS & SCIENCE PROGRAM

**B.Arts Sc. (Honours) (2027)**

**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, 2B06, 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

### ARTS & SCIENCE AND ANOTHER SUBJECT

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)
- Biology (Biodiversity Specialization) (2027812)
- 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)
- Gerontology (2027265)
- 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)
DeGROOTE SCHOOL OF BUSINESS
(FACULTY OF BUSINESS)

Dean of Business
Paul K. Bates

Associate Dean of Business, Academic
M. Head/B.Math., M.B.A., Ph.D.

Director, Undergraduate Programs
N. Bottis/B.A., Ph.D.

Manager, Undergraduate Programs/Commerce II Student Advisor
D. Ellis

Administrator, Business I Program/Business I Student Advisor
M. Olszarek/B.A. D.D. (On leave)
L. Hill (Acting)

Undergraduate Student Advisor, Levels III and IV
B. Pegg/B.A.

The School of Business offers two programs, each of which spans four levels of study. The Honours Commerce program, which leads to the Honours Bachelor of Commerce (Honours B.Com.) degree, allows substantial concentration in business subjects beyond the essential core of studies. The Commerce program, which leads to the Bachelor of Commerce (B.Com.) degree, contains essential grounding in business subjects and promotes the broadening of horizons through studies in Social Sciences, Humanities and Science. These programs are referred to collectively as the Commerce programs.

In addition, the School of Business and the Faculty of Engineering offer eight five-level joint programs for the Bachelor of Engineering and Management (B.Eng.Mgt.) degree. These programs provide a full course of study in Engineering and include a complete core of business subjects. Details concerning the B.Eng.Mgt. programs and their academic regulations are given in the Faculty of Engineering section of this Calendar.

A student who transfers to another Faculty participates in the Committee of Instruction and offers courses for programs in Labour Studies which are described in the Faculty of Social Sciences section of this Calendar.

THE COMMERCE PROGRAMS

In Level I, a student who wishes to pursue either of the Commerce programs establishes a foundation in behavioural science, computer science, economics and mathematics, and also undertakes elective work. While this course of study is prescribed in Business I, a student who establishes a similar background in the Level I program of another Faculty may be considered for admission to Level II (Commerce II). Such a student should consult the Academic Programs Office in the School of Business.

A student must gain admission to Commerce II in order to proceed towards the Honours B.Com. or B.Com. degrees. In Level II a wide range of business subjects including accounting, finance, marketing, human resources, and management information systems are introduced and further course work in economics is required. Elective work is taken from non-Commerce courses.

While the same core of required Commerce courses is completed in Level II, the Commerce programs diverge at Level III. In the Honours Commerce program, about two-thirds of the work is in Commerce courses, with the remainder of the load coming from electives outside the Faculty. In the Commerce program the work is approximately evenly divided between Commerce and non-Commerce courses.

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 relationship. 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 Business I, however, when a later Calendar expands the menu options, students may choose from those additional courses as well. The menu for 2006-2007 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 1G03, 3F03, 3F04, 3J03, 3K03, 4C04.

All Religious Studies courses

ECON 2C03: Asian-Pacific Economies
ECON 2F03: The Political Economy of Development
ECON 2L03: Peace, Human Security and Economic Development
ECON 3H03: International Monetary Economics
ECON 3H13: International Trade
ECON 3I03: Economic History of the United States
ECON 3L03: History of Economic Theory
ECON 3T03: Topics in Economic Development
ENGLISH 1B03: Cultural Studies and Visual Culture
ENGLISH 1B03: Cultural Studies and Consumer Culture
ENGLISH 2B03: Contemporary Canadian Fiction
ENGLISH 2F03: Studies in American Literature
ENGLISH 2J03: Contemporary Popular Culture
ENGLISH 3BB3: The Cyborg in Fiction and 'Critical Theory
ENGLISH 3D03: Science Fiction
ENGLISH 3EE3: African American Fiction
ENGLISH 3Y05: Children's Literature
ENGLISH 4AG3*: Geography of the Human Environment (if not completed as part of the Business I requirement)

GEO 1H03: Geography of the Human Environment
GEO 1HU3: Urban Economic Geography
GEO 3HJ3: Geography of Japan
GEO 3HR3: Geography of a Selected World Region
GEO 3HZ3: Urban Social Geography
KINESIOL 3S3: Body, Mind, Spirit
SOCIOL 2E06: Racial and Ethnic Group Relations
SOCIOL 3Z03: Ethnic Relations

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 required 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 take, as part-time students, Level III and IV Commerce courses (not previously taken, to a maximum of 18 units), excluding COMMERCE 4A03*, 4A13*, 4A13* (See Continuing Students in the Admission Requirements section of the Calendar).
*These courses are available as ACC 500, ACC 501, ACC 502, through the School of Business, subject to sufficient enrolments and availability of teaching faculty. Other than those graduates specified above, Commerce courses are not open to Continuing Students.

SECOND UNDERGRADUATE DEGREE

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

CREDIT TOWARDS PROFESSIONAL DESIGNATIONS

Educational requirements toward a variety of professional designations can be met in varying degrees within the Commerce programs and the Engineering and Management programs. The professional accounting designations C.A., C.M.A. and C.G.A. are awarded by the Institute of Chartered Accountants of Ontario, the Society of Management Accountants of Ontario and the Certified General Accountants Association of Ontario, respectively, while the designation C.H.R.P. is awarded by the Human Resources Professionals Association of Ontario.

Further opportunities for meeting educational requirements for professional designations are available to students in all Commerce and Engineering and Management programs. Additional course work may be taken while in the program. Further units of credit may also be taken after graduation (see Continuing Students above). Information concerning credit towards these professional designations can be obtained from the Academic Programs Office in the School of Business.

MINOR

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

ACADEMIC REGULATIONS

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 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.

CHANGE OF PROGRAM

A student may transfer between Commerce programs prior to entering Level IV, provided that, after consultation with the Academic Programs Office of the School of Business, it has been determined that the academic requirements of the new Program have been met, and an acceptable revised Program of study can be established. This revised Program of study must be approved by the Academic Programs Office.

Students in good standing in the Engineering and Management Program may transfer to a Commerce Program with the permission of the Academic Programs Office. The conditions for eligibility for entrance to the Commerce Programs are the same as for students registered in the School of Business.

WORKLOAD

In Business I, a full-time student must complete a 30-unit load in each Fall/Winter session. Advance credit and credit earned during the Spring/Summer session may not be used to reduce this load requirement. Such reductions will be applied as late as possible in a student's Program. A part-time student in Business I is permitted to take a maximum of 18 units in any Fall/Winter session.

Students who wish to take more courses than recommended for a single Level of their program may do so only if their Sessional 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 by up to six additional units in order to become eligible to graduate.

DEFERRED EXAMINATIONS

See the heading Deferred Examinations under Examinations in the General Academic Regulations section of the Calendar for application procedures.

Students who are in a precarious position with respect to achieving the minimum C.A. or otherwise meeting the Commerce Program requirements for continuation in the Program will not necessarily be permitted to undertake further work before clearing deferred examinations.

REPEATED COURSES

Any failed course must be repeated if it is a required course for the Program, or must be replaced if it is not required. The grades for both the failed course and its repetition or replacement, as appropriate, will be included in the calculation of a student's CA. Voluntary repetitions of non-Commerce courses in which passing grades have been previously attained are designated as Extra courses. (See the Glossary section of this Calendar.)

LEVEL I COURSES

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

LEVEL OF REGISTRATION

A student is required to register in the lowest level for which more than six units of work is incomplete. Work of the next higher level may be undertaken only when necessary to fill a Program load. Courses must be taken in the sequence specified by the School of Business.

READEMISSION

A student in Level II, III or IV of a Commerce Program, who becomes ineligible to continue in the School of Business, may apply for readmission to the Commerce Program in a subsequent calendar year up to a maximum of five years following the year in which the student becomes ineligible to continue. Readmission is not guaranteed.

Application for readmission must be made in writing to the Undergraduate Admissions Policy and Reviewing Committee by June 30 for entry in September. This application should explain why the applicant would expect to succeed in the Program if readmitted. Forms for this purpose may be obtained from the Academic Programs Office in the DeGroote School of Business, Room 104.

A student who is readmitted after having become ineligible to continue in a Commerce Program must repeat all the courses of the level at which he/she became ineligible to continue unless specific course exemptions or credits are granted. The earliest possible session for readmission is the session starting in September of the year following the year in which the student became ineligible to continue.

Former Commerce students who have not been registered in a Commerce Program within the past five years, including those who were in good standing at the time of their most recent registration, must apply for readmission through the Office of the Registrar.
SCHOOL OF BUSINESS

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 successfully completed, 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 their academic situation have been resolved. They 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 Undergraduate Admissions Policy and Programs Office, in the DeGroote School of Business, Room 104.

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 DeGroote School of Business, Room 104.

COMMERCE 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 securing positions will be required to register in COMMERCE 3In0, 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 COMMERCE 3In0, 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 Resource Centre, DeGroote School of Business, 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, the Netherlands, 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 DeGroote School of Business, Room 228.

Additional information may be found under International Study in the General Academic Regulations section of this Calendar. Information concerning student exchanges can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Centre for Student Development, International Student Services. Inquiries can be directed to the office at:

CENTRE FOR STUDENT DEVELOPMENT
INTERNATIONAL STUDENT SERVICES
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 courses.
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 meet 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 1B05, COMMERCE 1E03 or 1S03, COMP SCI 1BA3, MATH 1A03 or 1M03; and one of ANTHROP 1A03, GEO 1HS3, PSYCH 1A03 or SOCIO1 1A06). For students without Grade 12 Advanced Functions and Introductory Calculus U (or equivalent) 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 equivalent) or whose credit in same is older than five years must take STAT 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 COMMERCE 1E03 or 1S03, and one of ANTHROP 1A03, GEO 1HS3, PSYCH 1A03 or SOCIO1 1A06 as part of the degree requirements. Academic requirements for admission of transfer students will be more demanding than those for Business I students.
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

3-6 units from ANTHR 1A03, GEO 1HS3, PSYCH 1A03, SOCIOI 1A06

3 units

COMP SCI 1BA3

6 units

from ECON 1A06, 1B03, 1BB3

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 U or equivalent and whose credit in same is older than five years)

0-3 units

STATS 1G03 (for those without Grade 12 Mathematics of Data Management U or equivalent and 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 I

Requirements
Level II: 30 Units

24 units

COMMERCE 2AA3, 2AB3, 2BA3, 2FA3, 2MA3, 2QA3, 2QB3, 2SC3

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 2SB3 or Level III or IV Commerce courses.

9 units

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

Commerce (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 2SB3, 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. Enrolment in each of the Commerce courses comprising the Business minor, (excluding students registered in Engineering and Management, Commerce and Labour Studies) 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, KINESIOI 3L03 will be accepted as a substitute for COMMERCE 2BA3; ECON 2B03, STAT 1C03, 2MB3, 3J04, 3N03 or 3Y03 will be accepted as a substitute for COMMERCE 2QA3, ECON 2B03 will be accepted as a substitute for COMMERCE 2FA3.

Requirements

24 units total

6 units

ECON 1A06 or 1B03 and 1BB3

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 30 students in total to the Minor in Finance and the Minor in Accounting and Financial Management Services 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 1BB3.
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.
5. For the purposes of this Minor, STAT 1G03, 2MB3, 3JO4, 3N03 or 3Y03 will be accepted as a substitute for ECON 2B03.

Requirements

33 units total

6 units

from ECON 1A06, 1BB3, 1BB3

3 units

from ECON 2G03 (see Note 4 above.)

6 units

ECON 2B03, 2H03 (see Note 4 above.)

9 units

COMMERCE 2AA3, 2MA3 or ECON 2(03), 3FA3

9 units

from COMMERCE 3FB3, 3PC3, 4FA3, 4FD3, 4FE3, 4FF3, 4FG3, 4FH3, 4FJ3, 4FK3, 4FL3, 4FX3

Minor in Accounting and Financial Management Services

The School of Business will admit a maximum of 30 students in total to the Minor in Accounting and Financial Management Services and the Minor in Finance 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 1BB3.
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 Accounting courses.
5. For the purposes of this Minor, STAT 1C03, 2MB3, 3JO4, 3N03 or 3Y03 will be accepted as a substitute for ECON 2B03.

Requirements

33 units total

6 units

from ECON 1A06, 1B03, 1B03

3 units

from ECON 2G03 (see Note 4 above.)

6 units

ECON 2B03, 2H03 (see Note 4 above.)

12 units

COMMERCE 2AA3, 2AB3, 2BA3, 3AC3

6 units

from COMMERCE 4AA3, 4AC3, 4AD3
Dean of Engineering
M. Elbestawi/B.Sc., M.Eng., Ph.D., P.Eng.
Associate Dean of Engineering
Director of Engineering
S. Masten, B.S., M.S.E., Ph.D., P.E.
Academic Assistant to the Associate Dean
J. Zywina

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

All programs have limitations on enrollment. 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 Engineering and Bioengineering, Electrical and Biomedical Engineering, Mechatronics 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 major requirement for admission to the qualification Professional Engineer. The B.Eng., B.Eng.Biosciences, 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, Engineering Graphics, Introduction to Professional Engineering and Design, Computation and complementary studies electives. The specialized programs are entered at Level II. Students interested in the Engineering and Management programs must take ECON 1B03 as one of their 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: Elective courses are broadening courses, with subject matter that deals with central issues, methodologies and thought processes of the humanities and social sciences. In addition to ENGINEER 4A03, or equivalent, 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 1 (http://www.eng.mcmaster.ca/ electives/electvs.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.

Composites 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 enroll 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 Term 2 of their next-to-last level of undergraduate studies.

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

ENGINEER 1E00, 1E01, 3EB0 and 4E00, or
ENGINEER 1F00, 2E00, 4E40, or
ENGINEER 1E00 and 4EB0, or
ENGINEER 1E00 and 4EC0

Engineering Co-op Fees

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, 4E40 and 4EB0, 4EC0 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 of this Calendar. Information concerning student exchanges can also be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Centre for Student Development: International Student Services.

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 I

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 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 work load 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/engineering1/

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 section 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 enrolment; 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, admission to a B.Eng.Mgt. program requires the completion of ECEN 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), 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 3Q03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (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 1EEO, 2EEO, 3EEO and 4EEO, or
   • ENGINEER 1EEO, 2EEO and 4EAO, or
   • ENGINEER 1EEO and 4EBO, or
   • ENGINEER 1EEO and 4E0C

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: 39 UNITS
29 units CHEM ENG 3D03, 3E04, 3G04, 3K04, 3L02, 3M04, 3Q04, 3P04
9 units 3-6 units from CHEM 2E03; or both CHEM 2OA3 and 2OB3
3-6 units from BIOCHEM 2EE3, CHEM ENG 3Q03, 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 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 3C03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), or 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 1EE0, 2EE0, 2EAO and 3E0C, or
   • ENGINEER 1EE0, 2E0 and 4EAO, or
   • ENGINEER 1EE0 and 4EBO, or
   • ENGINEER 1EE0 and 4BA3

LEVEL II: 36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
3 units COMMERCE 2AA3
6 units ENG 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, 3Q04
3 units approved complementary studies electives (above Level I)
9 units COMMERCE 2AB3, 2FA3, 2MA3
1 unit ENGN MGT 3AA1

LEVEL IV: 35-39 UNITS
4 units CHEM ENG 3P04
3 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
12 units COMMERCE 3B03, 3F03, 3M03, 3Q03
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
3 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03, 3M03, 4T03, ENGINEER 4U03
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, 3P03
5 units ENGN MGT 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 2B03
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 3C03, 4B03, 4C03, 4L02 (PMM laboratories completed), 4W04 (with approved PMM project), or 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 1EE0, 2EE0, 2EAO and 3E0C, or
   • ENGINEER 1EE0, 2E0 and 4EAO, or
   • ENGINEER 1EE0 and 4EBO, or
   • ENGINEER 1EE0 and 4BA3

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: 33-36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
6 units ENGSOCTY 2X03, 2Y03
6 units MATH 2M06
3-5 units Engineering and Society focus electives

LEVEL III: 32-38 UNITS
17 units CHEM ENG 3D03, 3K04, 3L02, 3M04, 3Q03
3 units CHEM 2A03
3-6 units CHEM 2E03; or both CHEM 2OA3 and 2OB3
3 units ENGSOCTY 3Y03
3 units STATS 3N03 or 3Y03
3-5 units Engineering and Society focus electives

LEVEL IV: 36-40 UNITS
12 units CHEM ENG 3E03, 3G04, 3P04
6 units from CHEM ENG 4K03, 4M03, 4T03, 4X03, ENGINEER 4U03
6 units ENGSOCTY 3X03, 3Z03
6 units from BIOCHEM 2EE3, CHEM ENG 3Q03, CHEM 3I03, 3M03, 4T03, ENGINEER 2003
3-5 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 ENGSQCT 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 (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 1E00, 2E00, 3E00 and 4E00, or
• ENGINEER 1E00, 2E00 and 4E0A, or
• ENGINEER 1E00 and 4E0B, or
• ENGINEER 1E00 and 4E0C

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 4F04.

LEVEL II: 36 UNITS
15 units CHEM ENG 2A04, 2D04, 2F04, 2G03
3 units CHEM 1AA3
3 units BIOLOGY 1A03
6 units HTH SCI 2L03, 2L13
2 units MATH 2M06
3 units STATS 3N03

LEVEL III: 37-40 UNITS
24 units BIOLOGY 2EE3, CHEM ENG 3D03, 3G04, 3K04, 3L02, 3M04, 3O04
3 units CHEM 2A03
3-6 units CHEM 2E03 or both CHEM 2O03 and 2O03
3 units BIOCHEM 2E03
3 units approved complementary studies electives (above Level I)

LEVEL IV: 37-38 UNITS
19 units CHEM ENG 3BK3, 3BM3, 3E04, 3P04, 4L02, 4L13
3 units BIOCHEM 3G03
3 units from ENGINEER 4A03, 4H03
6 units from CHEM 3I03, CHEM ENG 3Q03, MATLS 1M03 (or ENGINEER 2H03)
3 units approved complementary studies electives (above Level I)
3-4 units Level III or IV technical electives from approved list or permission of the Department of Chemical Engineering

LEVEL V: 36-39 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 I)
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

Civil Engineering Co-op (B.Eng.)

Structural/Geotechnical Engineering Stream

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

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

Structural/Geotechnical Engineering Stream

Civil Engineering Technical Electives

NOTE
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, 3E00 and 4E00, or
• ENGINEER 1E00, 2E00 and 4E0A, or
• ENGINEER 1E00 and 4E0B, or
• ENGINEER 1E00 and 4E0C

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 4F04.

LEVEL II: 37 UNITS
24 units CIV ENG 2A02, 2C04, 2E03, 2L03, 2J04, 2N04, 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 3F03, 3S03
W/E Stream: CIV ENG 3L03, 3U03

LEVEL IV: 34-36 UNITS
3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives (above Level I)
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.)

Structural/Geotechnical Engineering Stream

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

Structural/Geotechnical Engineering Stream

Civil Engineering Technical Electives
Civil Engineering and Society (B.Eng.Society)

**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 (WE 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, 3EE0 and 4EE0, or
   - ENGINEER 1EE0 and 2EE0, and 4EE0, or
   - ENGINEER 1EE0 and 4EE0, or
   - ENGINEER 1EE0 and 4EE0.

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 project courses: CIV ENG 4C04 or 4F04.

5. A minimum of 18 units of focus elective courses is required for the program. (This does not include the six units of complementary studies elective in Level I.)

**LEVEL II: 39 UNITS**

17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2O04
6 units COMMERC 2AA3, 2MA3
3 units ECON 2X03
4 units ENGINEER 2P04
6 units MATH 2M06
3 units S/G Stream: ENGINEER 2C03
WE Stream: CHEM ENG 2B03

**LEVEL III: 39 UNITS**

19 units CIV ENG 2E03, 2Q04, 3A03, 3B03, 3G03, 3M03
9 units COMMERC 2AB3, 2BA3, 2FA3
3 units ENGN 1BB3
4 units STATS 3J04
3 units approved complementary studies electives (above Level I)
1 unit ENGN MGT 3AA1

**LEVEL IV: 35 UNITS (2006-2007 ONLY)**

19 units CIV ENG 3A03, 3B03, 3C03, 3I04, 3K03, 3P03
12 units COMMERC 3BC3, 3FA3, 3MC3, 4QA3
3 units Commerce electives selected from Level III and IV
Commerce or COMMERC 2QB3
1 unit ENGN MGT 4A01

**LEVEL IV: 35 UNITS (EFFECTIVE 2007-2008)**

13 units CIV ENG 3C03, 3J04, 3K03, 3P03
12 units COMMERC 3BC3, 3FA3, 3MC3, 4QA3
3 units Commerce electives selected from Level III and IV
Commerce or COMMERC 2QB3
1 unit ENGN MGT 4A01
6 units S/G Stream: CIV ENG 3R03, 3S03
WE Stream: CIV ENG 3LO3, 3U03

**LEVEL V: 36-37 UNITS**

3 units COMMERC 4PA3
3 units Commerce electives selected from Level III and IV
Commerce or COMMERC 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
WE Stream: from approved list of Level III and IV Civil Engineering technical electives

**Computer Engineering (B.Eng.)**

**Computer Engineering Co-op (B.Eng.)**

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**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, 3EE0 and 4EE0, or
- ENGINEER 1EE0, 2EE0 and 4EE0, or
- ENGINEER 1EE0 and 4EE0, or
- ENGINEER 1EE0 and 4EC0.

**LEVEL II: 39 UNITS**

17 units CIV ENG 2A02, 2C04, 2I03, 2J04, 2O04
4 units ENGINEER 2P04
6 units MATH 2M06
6 units ENGSCTY 2X03, 2Y03
3 units Engineering and Society focus electives
3 units S/G Stream: ENGINEER 2C03
WE Stream: CHEM ENG 2B03

**LEVEL III: 32-35 UNITS**

19 units CIV ENG 3A03, 3B03, 3C03, 3J04, 3K03, 3P03
3 units ENGSCTY 3Z03
6-9 units Engineering and Society focus electives

**LEVEL IV: 31-34 UNITS (EFFECTIVE 2007-2008)**

13 units CIV ENG 3C03, 3J04, 3K03, 3P03
6 units ENGSCTY 3X03, 3Z03
6-9 units Engineering and Society focus electives
6 units S/G Stream: CIV ENG 3H03, 3S03
WE Stream: CIV ENG 3LO3, 3U03

**LEVEL V: 36-37 UNITS**

3 units ENGINEER 4B03
6 units ENGSCTY 4X03, 4Z03
6-9 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
WE Stream: from approved list of Level III and IV Civil Engineering technical electives
As well as completing the academic requirements as specified in Level III, Commerce electives selected from 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, 3EE0 and 4EE0, or
- ENGINEER 1E00, 2E00 and 4E00, or
- ENGINEER 1E00 and 4E00, or
- ENGINEER 1EE0 and 4E00

**LEVEL II: 38 UNITS**

3 units COMMERCE 2AA3
8 units COMP ENG 2SH4, 2SH4
6 units ECON 1BB3, 2X03
12 units ELEC ENG 2CI5, 2CJ4, 2FH3
2 units ENGN MGT 2AA2
4 units MATH 2P04
3 units approved complementary studies electives (above Level I)

**LEVEL III: 36 UNITS (2006-2007 ONLY)**

12 units COMMERCE 2AB3, 2AB3, 2AA3, 2MA3
17 units ELEC ENG 2E15, 3F14, 3TP4, 3TP4
4 units COMP ENG 2DP4
1 unit ENGN MGT 3AA1
3 units MATH 3K03
3 units approved complementary studies electives (above Level I)

**LEVEL III: 37 UNITS (EFFECTIVE 2007-2008)**

12 units COMMERCE 2AB3, 2AB3, 2AA3, 2MA3
13 units ELEC ENG 2E15, 3TP4, 3TP4
8 units COMP ENG 2DI4, 2DP4
1 unit ENGN MGT 3AA1
3 units MATH 3K03

**LEVEL IV: 39 UNITS (2006-2007 ONLY)**

9 units COMMERCE 3BC3, 3FA3, 3MC3
8 units COMP ENG 3DO4, 3DR4
12 units ELEC ENG 3EJ4, 3TO4, 3TR4
1 unit ENGN MGT 4A01
3 units STATS 3Y03
3 units from ENGINEER 4A03, 4H03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

**LEVEL IV: 39 UNITS (EFFECTIVE 2007-2008)**

8 units ELEC ENG 3EJ4, 3TR4
8 units COMP ENG 3DO4, 3DR4
4 units SFWR ENG 3K04
9 units COMMERCE 3BC3, 3FA3, 3MC3
3 units STATS 3Y03
1 unit ENGN MGT 4A01
3 units from ENGINEER 4A03, 4H03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

**LEVEL IV: 37 UNITS (2006-2007 ONLY)**

6 units COMMERCE 4P03, 4Q03
24 units COMP ENG 3SK3, 4DK4, 4DL4, 4DM4, 4DN4, 4DO4, 4O15
4 units ENGN MGT 4A01, 5BO3
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

**LEVEL V: 39 UNITS (2007-2008 ONLY)**

6 units COMMERCE 4PA3, 4QA3
24 units COMP ENG 3SK3, 4DK4, 4DM4, 4DN4, 4DO4, 4O15
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

**LEVEL V: 39 UNITS (EFFECTIVE 2008-2009)**

6 units COMMERCE 4PA3, 4QA3
24 units COMP ENG 3SK3, 4DK4, 4DM4, 4DN4, 4DO4, 4O15
3 units SFWR ENG 3SH3
3 units ENGN MGT 5B03
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 1E00, 2E00 and 4E00, or
- ENGINEER 1E00 and 4E00, or
- ENGINEER 1EE0 and 4E00

**LEVEL II: 37 UNITS**

12 units COMMERCE 2AB3, 2AB3, 2AA3, 2MA3
17 units ELEC ENG 2E15, 3F14, 3TP4, 3TP4
6 units ENGSOCITY 3Y03
3 units MATH 3K03
4 units SFWR ENG 3K04
6 units Engineering and Society focus electives


7 units COMMERCE 2P04, 3SK3
13 units ELEC ENG 2E15, 3F14, 3TP4
6 units ENGSOCITY 3Y03, 3Z03
3 units MATH 3K03
4 units SFWR ENG 3K04
6 units Engineering and Society focus electives

**LEVEL III: 39 UNITS (EFFECTIVE 2007-2008)**

7 units COMMERCE 2P04, 3SK3
9 units ELEC ENG 2E15, 3TP4
6 units ENGSOCITY 3Y03, 3Z03
3 units MATH 3K03
4 units SFWR ENG 3K04
6 units Engineering and Society focus electives

**LEVEL IV: 35 UNITS (EFFECTIVE 2007-2008)**

8 units COMMERCE 3DQ4, 3DR4
12 units ELEC ENG 3EJ4, 3TR4
3 units ENGINEER 4B03
6 units ENGSOCITY 3X03, 3Z03
6 units Engineering and Society focus electives

**LEVEL IV: 35 UNITS (2006-2007 ONLY)**

8 units COMP ENG 3DQ4, 3DR4
12 units ELEC ENG 3EJ4, 3TO4, 3TR4
3 units ENGINEER 4B03
6 units ENGSOCITY 3X03, 3Z03
6 units Engineering and Society focus electives

**LEVEL IV: 32-35 UNITS (EFFECTIVE 2007-2008)**

8 units COMMERCE 3DO4, 3DR4
12 units ELEC ENG 3EJ4, 3TO4, 3TR4
3 units ENGINEER 4B03
3 units ENGSOCITY 3X03
6-9 units Engineering and Society focus electives


21 units COMMERCE 4DK4, 4DL4, 4DM4, 4DN4, 4DO4, 4O15
6 units ENGSOCITY 4X03, 4Z03
3-6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV
LEVEL V: 36-37 UNITS (EFFECTIVE 2007-2008)
21 units COMP ENG 4DK4, 4DM4, 4DN4, 4DS4, 4O15
6 units ENGSOCTY 4X03, 4Z03
3 units SFWR ENG 3SH3
3 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

Electrical Engineering (B.Eng.)  {4170}

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 1EE0, 2EE0, 3EE0 and 4EE0, or
* ENGINEER 1EE0, 2EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EC0

LEVEL II: 37 UNITS
25 units ELEC ENG 2CI5, 2CJ4, 2DI4, 2EI5, 2FH3, 2SI4
4 units COMP ENG 2SI4
8 units MATH 2P04, 2Q04

LEVEL III: 34 UNITS (2006-2007 ONLY)
7 units COMP ENG 2DP4, 3SK3
24 units ELEC ENG 3EJ4, 3F14, 3P14, 3TP4, 3TQ4, 3TR4
3 units MATH 3K03

LEVEL III: 37 UNITS (EFFECTIVE 2007-2008)
7 units COMP ENG 2DP4, 3SK3
24 units ELEC ENG 3EJ4, 3F14, 3P14, 3TP4, 3TQ4, 3TR4
3 units MATH 3K03
3 units approved complementary studies electives (above Level I)

LEVEL IV: 36-39 UNITS (2006-2007 ONLY)
5 units ELEC ENG 4015
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PL4, 4TK4
3 units ENGINEER 4B03
6-8 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV
3-4 units technical electives from Level III and IV of the Faculty of Engineering
3 units from ENGINEER 4A03, 4H03

5 units ELEC ENG 4015
3 units ENGINEER 4B03
4 units SFWR ENG 3M04
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4DS4, 4TL4, ELEC ENG 4BD4, 4BE4, 4CL4, 4FJ4, 4PL4, 4TK4
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV
3-4 units technical electives from Level III or IV of the Faculty of Engineering
3 units from ENGINEER 4A03, 4H03

Electrical and Biomedical Engineering (B.Eng.)  {4171}

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 1EE0, 2EE0, 3EE0 and 4EE0, or
* ENGINEER 1EE0, 2EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS
18 units ELEC ENG 2CI5, 2CJ4, 2EI5, 2SI4
4 units COMP ENG 2SH4
8 units MATH 2P04, 2Q04
3 units BIOLOGY 1AD3
3 units CHEM 1AA3
3 units approved complementary studies electives (above Level I)

LEVEL III: 40 UNITS
17 units ELEC ENG 2FH3, 3BA3, 3BB3, 3EJ4, 3TP4
4 units from COMP ENG 2DI4, ELEC ENG 2DI4
4 units COMP ENG 2DP4
3 units MATH 3K03
3 units CHEM 2A03, 2B03
6 units HTH SCI 2L03, 2L3

9 units COMP ENG 2DP4, 4TL4
27 units ELEC ENG 3TQ4, 3TR4, 4BC3, 4BD4, 4BE4, 4BF3, 4B15
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

LEVEL IV: 37 UNITS (EFFECTIVE 2007-2008)
4 units COMP ENG 4TL4
27 units ELEC ENG 3TQ4, 3TR4, 4BC3, 4BD4, 4BE4, 4BF3, 4B15
3 units from ENGINEER 4A03, 4H03
3 units ENGINEER 4B03

Management (B.Eng.Mgt.)  {4170325}

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 1EE0, 2EE0, 3EE0 and 4EE0, or
* ENGINEER 1EE0, 2EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EE0, or
* ENGINEER 1EE0 and 4EC0

LEVEL II: 39 UNITS
3 units COMMERCE 2AA3
6 units ECON 1BB3, 2X03
4 units COMP ENG 2SH4
16 units ELEC ENG 2CI5, 2CJ4, 2FH3, 2SI4
2 units ENGMGT 2A02
8 units MATH 2P04, 2Q04

LEVEL III: 40 UNITS (2006-2007 ONLY)
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
7 units COMP ENG 2DP4, 3K3
17 units ELEC ENG 2EI5, 3FI4, 3TP4, 3TQ4
1 unit ENGMGT 3AA1
3 units MATH 3K03

LEVEL III: 40 UNITS (EFFECTIVE 2007-2008)
12 units COMMERCE 2AB3, 2BA3, 2FA3, 2MA3
7 units COMP ENG 2DP4, 3K3
17 units ELEC ENG 2DI4, 2EI5, 3TP4, 3TQ4
1 unit ENGMGT 3AA1
3 units MATH 3K03

LEVEL IV: 39 UNITS (2006-2007 ONLY)
9 units COMMERCE 3BC3, 3FA3, 3MC3
4 units COMP ENG 2DP4
16 units ELEC ENG 3EJ4, 3P14, 3TQ4, 3TR4
3 units from ENGINEER 4A03, 4H03
1 unit ENGMGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3
LEVEL IV: 39 UNITS (2007-2008 ONLY)
9 units COMMERCE 3BC3, 3FA3, 3MC3
4 units COMP ENG 2DP4
12 units ELEC ENG 3EJ4, 3P14, 3TR4
3 units SFWR ENG 3M04
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3

LEVEL IV: 39 UNITS (EFFECTIVE 2008-2009)
9 units COMMERCE 3BC3, 3FA3, 3MC3
16 units ELEC ENG 3EJ4, 3FK4, 3P14, 3TR4
4 units SFWR ENG 3M04
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
3 units STATS 3Y03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3

LEVEL V: 37 UNITS (2006-2007 ONLY)
6 units COMMERCE 4PA3, 4QA3
5 units ELEC ENG 4O15
4 units ENGN MGT 4A01, 5P03
3 units COMP ENG 3SK3
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4B03, 4BE4, 4CL4, 4FL4, 4PL4, 4TK4
5 units ELEC ENG 4O15
3 units ENGN MGT 5B03
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3
3-4 units optional technical electives (from Level III and IV of the Faculty of Engineering)

6 units COMMERCE 4PA3, 4QA3
3 units COMP ENG 3SK3
16 units from COMP ENG 4DK4, 4DM4, 4DS4, 4TL4, ELEC ENG 4B04, 4BE4, 4CL4, 4FL4, 4PL4, 4TK4
5 units ELEC ENG 4O15
3 units ENGN MGT 5B03
3 units approved complementary studies electives (above Level I)
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B3
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 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 1E00, 2E00, 3E00 and 4E00, or
   - ENGINEER 1E00, 2E00 and 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

LEVEL II: 38 UNITS
4 units COMP ENG 2SH4
17 units ELEC ENG 2C15, 2CJ4, 2D14, 2S14
8 units ENGSOCY 2X03, 2Y03
8 units MATH 2P04, 2Q04
3 units Engineering and Society focus electives

LEVEL III: 35-41 UNITS
7 units COMP ENG 2DP4, 3SK3
12 units ELEC ENG 2E15, 2F03, 3TQ4
6 units ENGSOCY 3Y03, 3Z03
3 units MATH 3K03
4 units SFWR ENG 3M04
3-9 units Engineering and Society focus electives

LEVEL IV: 36 UNITS (2006-2007 ONLY)
20 units ELEC ENG 3EJ4, 3FK4, 3P14, 3TQ4, 3TR4
4 units COMP ENG 2DP4
3 units ENGSOCY 3X03
6 units Engineering and Society focus electives

LEVEL V: 35 UNITS (EFFECTIVE 2007-2008)
20 units ELEC ENG 3EJ4, 3FK4, 3P14, 3TQ4, 3TR4
3 units ENGSOCY 3X03
9 units Engineering and Society focus electives
3 units ENGINEER 4B03

LEVEL VI: 36-40 UNITS (2006-2007 ONLY)
5 units ELEC ENG 4O15
6 units ENGSOCY 4X03, 4Z03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4B04, 4BE4, 4CL4, 4FL4, 4PL4, 4TK4
6-9 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

LEVEL V: 36-37 UNITS (EFFECTIVE 2007-2008)
5 units ELEC ENG 4O15
6 units ENGSOCY 4X03, 4Z03
16 units from COMP ENG 4DK4, 4DL4, 4DM4, 4TL4, ELEC ENG 4B04, 4BE4, 4CL4, 4FL4, 4PL4, 4TK4
6 units Engineering and Society focus electives
3-4 units technical electives from an approved list of Computer Engineering or Electrical Engineering Level III or IV

Engineering Physics (B.Eng.)

Interdisciplinary Engineering Stream {4194}

Nuclear Engineering and Energy Systems Stream {4191}

Nano- and Micro-Devices Stream {4192}

Photonics Engineering Stream {4193}

Engineering Physics Co-op (B.Eng.)

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)
   - Nano- and Micro-Devices (M Stream)
   - Nuclear Engineering and Energy 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.

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 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

3. At least 18 units of focus elective courses are required for the program. (This does not include the six units of complementary studies elective in Level I.)

4. As well as completing the academic requirements as specified in this Calendar, students in a Co-op program must complete the following courses prior to graduation:
   - ENGINEER 1E00, 2E00, 3E00 and 4E00, or
   - ENGINEER 1E00 and 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

5. At least 18 units of focus elective courses are required for the program. (This does not include the six units of complementary studies elective in Level I.)

6. 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 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

7. At least 18 units of focus elective courses are required for the program. (This does not include the six units of complementary studies elective in Level I.)

8. 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 and 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0
LEVEL II: 39 UNITS
4 units ENGINEER 2P04
18 units ENG PHYS 2A04, 2E04, 2H04, 2S03, 2QM3
3 units MATH 2P04, 2Q04
6 units PHYSICS 2003
6 units approved complementary studies electives. (Three units must be above Level I.)

LEVEL III: 38-40 UNITS
8 units ENG PHYS 3F04, 3W04
9 units MATH 3C03, 3D03, 3Q03
6 units from PHYSICS 3B06, 3B3A, 3B3B
3 units approved complementary studies electives

12-14 units Stream specific:
I Stream ENG PHYS 3D03, 3E03, 3PN3; 3 units from ENG PHYS 3A03, 3E03, 3MD3
M Stream ENG PHYS 3E03, 3MD3, 3PN3; 3 units approved technical electives
N Stream CHEM ENG 2A04, 3C04, ENG PHYS 3D03, 3E03
P Stream ENG PHYS 3A03, 3E03, 3G03, 3PN3

10 units ENG PHYS 4A06, 4U04
3 units approved complementary studies electives

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; 11-13 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4ES3, 4L04, 4N03; 9-11 units of approved Level III or IV technical electives
P Stream ELECT ENG 3TR4; ENG PHYS 4K03, 4S04; ELEC ENG 3F14 or 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 4F03, 4MD4, 4Z03; 14-16 units of approved Level III or IV technical electives
N Stream ENG PHYS 4D03, 4ES3, 4L04, 4N03; 9-11 units of approved Level III or IV technical electives
P Stream ELECT ENG 3TR4; ENG PHYS 4K03, 4S04; ELEC ENG 3F14 or PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

Engineering Physics and Management (B.Eng.Mgt.)
Interdisciplinary Engineering Stream (4194325)
Nuclear Engineering and (4191325)
Energy Systems Stream
Nano- and Micro-Devices Stream (4192325)
Photonics Engineering Stream (4193325)

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

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 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 4EE0, or
   * ENGINEER 1EE0, 2E00, 3E00 and 4EE0, or
   * ENGINEER 1EE0 and 4E00, or
   * ENGINEER 1EE0 and 4E00

LEVEL II: 39 UNITS
6 units COMMERCE 2A03, 2MA3
3 units ENGN MGT 2AA2, 3AA1
4 units ENGINEER 2P04
15 units ENG PHYS 2A04, 2E04, 2H04, 2QM3
8 units MATH 2P04, 2Q04
3 units PHYSICS 2003

LEVEL III: 38 UNITS
9 units COMMERCE 2B03, 2B3A, 2F03
6 units ECON 1B03, 2X03
11 units ENG PHYS 2S03, 3F04, 3W04
6 units MATH 3C03, 3D03
6 units from PHYSICS 3B06, 3B3A, 3B3B

LEVEL IV: 38-40 UNITS
12 units COMMERCE 3BC3, 3F03, 3M03, 4A03
1 unit ENGN MGT 4A01
4 units ENG PHYS 4A04
3 units MATH 4A03
3 units approved complementary studies electives (above Level I)
3 units Commerce elective selected from Level III and IV Commerce or COMMERCE 2B03
12-14 units Stream specific:
I Stream ENG PHYS 3D03, 3E03, 3PN3; 3 units from ENG PHYS 3A03, 3E03, 3MD3
M Stream ENG PHYS 3E03, 3MD3, 3PN3; 3 units approved technical electives
N Stream CHEM ENG 2A04, 3C04, ENG PHYS 3D03, 3E03
P Stream ELECT ENG 3TR4; ENG PHYS 4K03, 4S04; ELEC ENG 3F14 or PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives

LEVEL V: 37-38 UNITS (2006-2007 ONLY)
3 units COMMERCE 4P03
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, 3PN3, 4D03, 4E03, 4F03, 4L04, 4S04, PHYSICS 4D06
6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B03

LEVEL V: 37-41 UNITS (EFFECTIVE 2007-2008)
3 units COMMERCE 4P03
3 units ENGN MGT 5B03
6 units ENG PHYS 4A06
3 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2B03
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, 4ES3, 4L04, 4N03; 9-11 units of approved Level III or IV technical electives
P Stream ELECT ENG 3TR4; ENG PHYS 4K03, 4S04; ELEC ENG 3F14 or PHYSICS 4B03; 10-12 units of approved Level III or IV technical electives
Energy Systems Stream Materials Engineering

Nuclear Engineering and Energy Systems Stream

Nano- and Micro-Devices Stream (4192535)

Photonics Engineering Stream (4193535)

Engineering Physics and Society Co-op (B.Eng/Society)

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)
   - Nano- 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 must complete one of the four streams offered in Engineering Physics. All students in Level V in 2005-2006 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 I.)

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 1E00, 2E00, 3E00 and 4E00, or
   - ENGINEER 1E00, 2E00 and 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

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, 2Q04
3 units PHYSICS 2D03
3 units Engineering and Society focus electives

LEVEL III: 35 UNITS

11 units ENG PHYS 2S03, 3F04, 3W04
3 units ENGSOCTY 3Y03
9 units MATH 3C03, 3D03, 4Q03
6 units from PHYSICS 3B06, 3B3, 3B3
6 units Engineering and Society focus electives

LEVEL IV: 34-36 UNITS

4 units ENG PHYS 4U04
6 units ENGSOCTY 3X03, 3Z03
3 units ENGINEER 4B03
9 units Engineering and Society focus electives

12-14 units Stream specific
   - I Stream ENG PHYS 3D03, 3E03, 3P3; 3 units from ENG PHYS 3A03, 3E03, 3D03
   - M Stream ENG PHYS 3E03, 3D03, 3P3; 3 units approved Level III or IV technical electives
   - N Stream CHEM ENG 2A04, 3Q04, ENG PHYS 3D03, 3E03
   - P Stream ENG PHYS 3A03, 3E03, 3G03, 3P3

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

3 units ENGINEER 4B03
6 units ENG PHYS 4A06
6 units ENGSOCTY 4X03, 4Z03
18-20 units approved Level III or IV technical electives, of which 10 units must be selected from the following courses: ENG PHYS 3G03, 3P3, 4D03, 4E03, 4F03, 4L04, 4P04, PHYSICS 4D08
3-6 units Engineering and Society focus electives.

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

6 units ENG PHYS 4A06
6 units ENGSOCTY 4X03, 4Z03
22-26 units Stream specific:
   - I Stream ENG PHYS 4L04, 4MD4, 4S04; 12-14 units approved Level III or IV technical electives
   - M Stream ENG PHYS 4F03, 4D04, 4Z03; 14-16 units approved Level III or IV technical electives
   - N Stream ENG PHYS 4D03, 4E03, 4L04, 4NE3; 9-11 units approved Level III or IV technical electives
   - P Stream ELEC ENG 3T04; ENG PHYS 4K03, 4S04; ELEC ENG 3F04 or PHYSICS 4B03; 10-12 units approved Level III or IV technical electives

Materials Engineering (B.Eng.)

Materials Engineering Co-op (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 Level 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 3Q03, MATLS 4P03
   - Electronic Materials: ENG PHYS 4E03, MATLS 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 1E00, 2E00, 3E00 and 4E00, or
   - ENGINEER 1E00, 2E00 and 4EA0, or
   - ENGINEER 1E00 and 4EB0, or
   - ENGINEER 1E00 and 4EC0

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

21 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3T04
3 units MATH 3I03
9-11 units from CHEM 2E03, CHEM ENG 3Q04, 3Q03, MATLS 3Q03, 4D03, 4P03
3 units approved complementary studies electives

LEVEL IV: (MATERIALS ENGINEERING STREAM) 36-37 UNITS

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 STATS 3Y03
3 units approved complementary studies electives

9-10 units approved Level III or IV technical electives, which must include CHEM ENG 3Q04 if not completed

Materials Engineering - 4318

Computational Materials Engineering Stream (B.Eng.)

Materials Engineering Co-op - Computational Materials Engineering Stream (B.Eng.)
LEVEL IV: 34 UNITS
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
8 units from MATLS 4A02, 4J04, 4L02
3 units from MATLS 3A03, 3N03 (whichever not completed at Level III)
4 units from MATLS 4K04, 4Z04
4 units CHEM ENG 3004
3 units from BIOCHEM 4Y03, CHEM ENG 3Q03, MATLS 4F03, 4H04, PHYSICS 3S03, 4S03
3 units approved complementary studies electives (above Level I)

Materials Engineering - Nanomaterials Stream (B.Eng)

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

LEVEL III: 36-37 UNITS
24 units MATLS 3B03, 3C04, 3E04, 3F03, 3M03, 3Q03, 3T04
3 units ENGINEER 3003
3 units STAT 3Y03
3-4 units from CHEM 2E03, CHEM ENG 3Q04, 3Q03, 4Z03, MATLS 4D03, 4P03
3 units approved complementary studies electives

LEVEL IV: 36-37 UNITS
3 units from ENGINEER 4A03, 4H03
6 units ENGINEER 4B03, 4J03
11 units from MATLS 4A02, 4F03, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
3 units from MATLS 4G03, 4H03
6-7 units approved Level III or IV technical electives which must include CHEM ENG 3004 if not completed
3 units approved complementary studies electives (above Level I)

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

Materials 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 1E00, 2E00, 3E00 and 4E00, or
ENGINEER 1E00, 2E00 and 4E03, or
ENGINEER 1E00 and 4E00, or
ENGINEER 1E00 and 4E03

LEVEL II: 35 UNITS
2 units CHEM 2W02
3 units COMMERCE 2MA3
6 units ECON 1BB3, 2X03
2 units ENGINEER 2A02
3 units ENGINEER 2M06
6 units MATLS 2B03, 2D03, 2H04, 2X03

LEVEL III: 38 UNITS
4 units CHEM ENG 2A04
3 units CHEM 1A03
9 units COMMERC 2A32, 2BA3, 2FA3
1 unit ENGINEER 3A01
4 units ENGINEER 2P04
11 units MATLS 3C04, 3F03, 3T04
3 units ENGINEER 3A03
3 units STAT 3X03

LEVEL IV: (MATERIALS ENGINEERING STREAM) 36-37 UNITS
4 units from ENGINEER 4A03, 4H03
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units approved complementary studies electives (above Level I)

LEVEL V: (MATERIALS ENGINEERING STREAM) 36-37 UNITS
6 units COMMERCE 4PA3, 4QA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
8 units MATLS 4A02, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2Q03
6-7 units approved technical electives

Materials Engineering and Management - Computational Materials Engineering Stream (B.Eng.Mgt.)

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

LEVEL IV: 36 UNITS
4 units CHEM ENG 3004
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
10 units from MATLS 3A03, 3N03
3 units approved complementary studies electives (above Level I)

LEVEL V: 36 UNITS
6 units COMMERCE 4PA3, 4QA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
8 units MATLS 4A02, 4J04, 4L02
3 units from MATLS 3A03, 3N03 (whichever not completed at Level IV)
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2Q03
3 units from BIOCHEM 4Y03, CHEM ENG 3Q03, MATLS 4F03, 4H03, PHYSICS 3S03, 4S03

Materials Engineering and Management - Nanomaterials Stream (B.Eng.Mgt.)

Materials Engineering and Management Co-op - Nanomaterials Stream (B.Eng.Mgt.)

LEVEL IV: 36 UNITS
4 units CHEM ENG 3004
12 units COMMERCE 2A03, 3BC3, 3FA3, 3MC3
3 units from ENGINEER 4A03, 4H03
1 unit ENGN MGT 4A01
13 units from MATLS 3B03, 3E04, 3M03, 3Q03
3 units approved complementary studies electives (above Level I)

LEVEL V: 36-37 UNITS
6 units COMMERCE 4PA3, 4QA3
3 units ENGINEER 4J03
3 units ENGN MGT 5B03
11 units from MATLS 4A02, 4F03, 4J04, 4L02
4 units from MATLS 4K04, 4Z04
6 units Commerce selected from Level III and IV Commerce or COMMERCE 2Q03
3-4 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)
Materials Engineering and Society (B.Eng.Society) {4315535}

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, 3EE0 and 4EE0, or
   - ENGINEER 1EE0 and 4EE0, or
   - ENGINEER 1EE0 and 4EC0

LEVEL II: 33-36 UNITS
2 units CHEM 2WWW2
3 units ENGINEER 2MM3
6 units ENGSOCTY 2X03, 2Y03
11 units MATLS 2B03, 2D04, 2X03, 2Y03
3 units MATH 2M06
3-6 units Engineering and Society focus electives

LEVEL III: 34-37 UNITS
4 units CHEM ENG 2A04
3 units CHEM 1AA3
4 units ENGINEER 2P04
3 units ENGSOCTY 3X06
11 units MATLS 3C04, 3F03, 3T04
3 units MATH 3I03
3 units STATS 3Y03
3-6 units Engineering and Society focus electives

LEVEL IV: (MATERIALS ENGINEERING STREAM) 32-36 UNITS
4 units CHEM ENG 3O04
6 units ENGSOCTY 3X03, 3Z03
13 units MATLS 3B03, 3D04, 3O03, 3P03, 3Q03
6-9 units Engineering and Society focus electives
3-6 units approved Level III or IV technical electives (MATLS 4G03, 4H03 are recommended if offered.)

LEVEL V: (MATERIALS ENGINEERING STREAM) 32-36 UNITS
6 units ENGINEER 4B03, 4J03
6 units ENGSOCTY 4X03, 4Z03
11 units MATLS 4A02, 4F03, 4J04, 4L02
4 units from MATLS 4K04, 4O04
2-3 units approved technical electives (MATLS 4G03, 4H03 are recommended if offered.)
3-6 units Engineering and Society focus electives

Materials Engineering and Society - Computational Materials Engineering Stream (B.Eng.Society) {4318535}

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, 4B03, 4E03, 4Q03, 4S03, 4Z03
- MECHANICS AND DESIGN: MECH ENG 4Q03; three of MATLS 4T03, MECH ENG 4B03, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03
- MANUFACTURING: MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4L03, 4T03, 4Z03
- THERMOFLUIDS AND ENERGY SYSTEMS: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4J03, 4L03, 4Q03, 4T03, 4J03
- APPROVED TECHNICAL ELECTIVES: any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4A03

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 4EE0, or
   - ENGINEER 1EE0 and 4EC0

LEVEL II: 36 UNITS
6 units MATH 2M06
27 units MECH ENG 2B03, 2C03, 2D03, 2F04, 2Q04, 2W04, 3A03, 3J03
3 units approved English literature (Term I)

LEVEL III: 36 UNITS
6 units ENGINEER 2MM3, 3N03
3 units MATLS 3M03
3 units MATH 3I03
21 units MECH ENG 3E05, 3F04, 3M02, 3Q04, 3R03, 4R03
3 units STATS 3Y03

Materials Engineering and Society Co-op - Nanomaterials Stream (B.Eng.Society) {4320535}

TOC
LEVEL IV: 35 UNITS
3 units ENGINEER 4B03
3 units from ENGINEER 4A03, 4H03
3 units approved complementary studies electives (above Level I)
11 units MECH ENG 4M06, 4P02, 4V03
15 units approved technical electives, including 6-12 units from required option courses. (See Note above.)

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

ADMISSION
See Admission to Level II Engineering Programs.

NOTES
1. Level V Mechanical Engineering and Management students must choose one of the following option areas and complete sufficient units of the required courses and technical electives.

PROGRAM OPTION COMPULSORY COURSES:

• GENERAL: two of MECH ENG 3D03, 4B03, 4E03, 4Q03, 4S03, 4T03

• MECHANICS AND DESIGN: MECH ENG 4Q03; three of MATLS 4T03, MECH ENG 4B03, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03

• MANUFACTURING: MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4T03, 4Z03

• THERMOFLUIDS AND ENERGY SYSTEMS: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03, 4U03

• APPROVED TECHNICAL ELECTIVES: any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3

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, 3E00 and 4E00, or
• ENGINEER 1E00 and 4E00, or
• ENGINEER 1E00 and 4E00

LEVEL II: 37 UNITS
9 units COMMERCE 2A3A, 2B3A, 2M3A
6 units ECON 1B03, 2X03
6 units MATH 2M06
14 units MECH ENG 2D03, 2P04, 2W04, 3C03
2 units ENGN GNT 2A2A

LEVEL III: 37 UNITS
3 units COMMERCE 2FA3
1 unit ENGN MGT 3A1A
3 units ENGINEER 2M3A
3 units MATH 3I03
24 units MECH ENG 2B03, 2C03, 2Q04, 3A03, 3F04, 3Q04, 3R03
3 units STATS 3Y03

LEVEL IV: 35 UNITS
12 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3
1 unit ENGN MGT 4A01
3 units MATLS 3M03
13 units MECH ENG 3E05, 3M02, 4R03, 4V03
6 units from required option courses or approved technical electives

LEVEL V: 35 UNITS
6 units COMMERCE 4PA3, 4QA3
6 units Commerce electives selected from Level III or IV Commerce or COMMERCE 2QB3
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.)

Mechatronics Engineering (B.Eng.) {4332}

Subject to approval by the Ministry of Training, Colleges and Universities, beginning in the 2006-2007 academic year, a B.Eng. program in Mechatronics Engineering will be offered.

ADMISSION
See Admission to Level II Engineering Programs.

LEVEL II: 34 UNITS
6 units MATH 2M06
6 units SFWR ENG 2MX3, 2S03
6 units MATH 3A04, 2E04
7 units ENGN MGT 2B03, 2P04
7 units ENGINEER 2MM3, 2P04

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. 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, 4B03, 4E03, 4Q03, 4S03, 4T03

• MECHANICS AND DESIGN: MECH ENG 4Q03; three of MATLS 4T03, MECH ENG 4B03, 4E03, 4H03, 4I03, 4K03, 4L03, 4T03, 4Z03

• MANUFACTURING: MECH ENG 4Q03; three of CHEM ENG 4X03, ENGINEER 4J03, MATLS 4T03, MECH ENG 4B03, 4D03, 4E03, 4H03, 4K03, 4L03, 4T03, 4Z03

• THERMOFLUIDS AND ENERGY SYSTEMS: MECH ENG 3D03, 4S03; two of CHEM ENG 4X03, MECH ENG 4I03, 4J03, 4Q03, 4T03, 4U03

• APPROVED TECHNICAL ELECTIVES: any of the required courses listed above, plus CHEM ENG 4T03, CIV ENG 3K03, COMMERCE 4QA3

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, 3E00 and 4E00, or
• ENGINEER 1E00 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: 33-36 UNITS
6 units ENGSOCCTY 2X03, 2Y03
6 units MATH 2M06
19 units MECH ENG 2C03, 2D03, 2P04, 2Q04, 2W04
3-6 units Engineering and Society focus electives

LEVEL III: 32-35 UNITS
3 units COMMERCE 3Y03
3 units ENGINEER 2MM3
3 units MATH 3I03
20 units MECH ENG 2B03, 3A03, 3C03, 3F04, 3P04, 3R03
3-6 units Engineering and Society focus electives

LEVEL IV: 34-37 UNITS
3 units ENGINEER 3N03
3 units MATLS 3M03
3 units STAT 3Y03
6 units ENGSOCCTY 3X03, 3Z03
13 units MECH ENG 3E05, 3M02, 4R03, 4V03
3 units from required option course or approved technical electives
3-6 units Engineering and Society focus electives

LEVEL V: 32-35 UNITS
6 units ENGSOCCTY 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.)
LEVEL III: 36 UNITS (EFFECTIVE 2007-2008)
16 units SFWR ENG 3DX3, 3F03, 3I03, 3K04, 3X03
8 units MECHTRON 3TA4, 3TB4
3 units SFWR ENG 3SH3
6 units ENGINEER 3K03, 3N03
3 units STATS 3N03

LEVEL IV: 36 UNITS (EFFECTIVE 2008-2009)
3 units SFWR ENG 4AA3
6 units MECHTRON 4TB6
6 units MECH ENG 4B03, 4K03
6 units ENGINEER 4A03, 4B03
6 units approved technical electives from list A
3 units approved technical electives from list B
3 units approved complementary studies electives (above Level I)

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 1E00, 2E00, 3E00 and 4EE0, or
• ENGINEER 1E00, 2E00, 3E00 and 4E00, or
• ENGINEER 1E00 and 4E00, or
• ENGINEER 1E00 and 4E00

LEVEL II: 37 UNITS
6 units MATH 2M06
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03
3 units from STATS 3N03, 3Y03
6 units approved complementary studies electives. (Three units must be above Level I)

LEVEL III: 38 UNITS
6 units ENGINEER 3K03, 4A03
32 units SFWR ENG 3A04, 3BB4, 3DX3, 3E03, 3F03, 3GA3, 3I03, 3RA3, 3S03, 3X03

LEVEL IV: 33 UNITS (2006-2007 ONLY)
3 units ENGINEER 4B03
21 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4O03
6 units from SFWR ENG 4F03, 4J03, 4TE3
3 units approved technical electives

LEVEL IV: 33 UNITS (EFFECTIVE 2007-2008)
3 units ENGINEER 4B03
24 units SFWR ENG 4AA3, 4C03, 4D03, 4E03, 4G06, 4O03, 4TE3
6 units from SFWR ENG 4F03, 4J03, 4TE3

Software Engineering and Society Co-op (B.Eng.Society){4517535}

Software Engineering and Management (B.Eng.Mgt.)
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 1E00, 2E00, 3E00 and 4EE0, or
• ENGINEER 1E00, 2E00 and 4E00, or
• ENGINEER 1E00 and 4E00, or
• ENGINEER 1E00 and 4E00

LEVEL II: 39 UNITS
6 units COMMERCE 2AA3, 2MA3
3 units ECON 1B03
2 units ENGN MGT 2AA2
6 units MATH 2M06
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03

LEVEL III: 36 UNITS
6 units COMMERCE 2BA3, 2FA3
1 unit ENGN MGT 3AA1
3 units ENGINEER 3K03
29 units SFWR ENG 3A04, 3BB4, 3DX3, 3E03, 3F03, 3GA3, 3RA3, 3S03, 3X03

LEVEL IV: 37 UNITS
15 units COMMERCE 2AB3, 3BC3, 3FA3, 3MC3, 4QA3
3 units ECON 2X03
1 unit ENGN MGT 4A01
9 units SFWR ENG 4AA3, 4D03, 4M03
3 units from STATS 3N03, 3Y03
3 units from SFWR ENG 4F03, 4J03, 4TE3
3 units approved complementary studies electives (above Level I)

LEVEL V: 33 UNITS (2006-2007 ONLY)
3 units COMMERCE 4PA3
3 units from ENGINEER 4A03, 4H03
3 units ENGN MGT 5B03
12 units SFWR ENG 4C03, 4E03, 4G06
3 units from SFWR ENG 4F03, 4J03, 4TE3
6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

LEVEL V: 33 UNITS (EFFECTIVE 2007-2008)
3 units COMMERCE 4PA3
3 units from ENGINEER 4A03, 4H03
3 units ENGN MGT 5B03
15 units SFWR ENG 4C03, 4E03, 4G06, 4O03
3 units from SFWR ENG 4F03, 4J03, 4TE3
6 units Commerce electives selected from Level III and IV Commerce or COMMERCE 2QB3

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 courses prior to graduation:
   • ENGINEER 1E00, 2E00, 3E00 and 4EE0, or
   • ENGINEER 1E00, 2E00 and 4E00, or
   • ENGINEER 1E00 and 4E00, or
   • ENGINEER 1E00 and 4E00

LEVEL II: 37 UNITS
6 units ENGSOCYT 2X03, 2Y03
6 units MATH 2M06
22 units SFWR ENG 2AA4, 2C03, 2DA3, 2DM3, 2FA3, 2MX3, 2S03
3 units Engineering and Society focus electives

LEVEL III: 35-38 UNITS
3 units ENGSOCYT 3Y03
29 units SFWR ENG 3A04, 3BB4, 3DX3, 3E03, 3F03, 3GA3, 3RA3, 3S03, 3X03
3-6 units Engineering and Society focus electives

LEVEL IV: 30-33 UNITS (2006-2007 ONLY)
6 units ENGINEER 3K03, 4B03
6 units ENGSOCYT 3X03, 3Z03
3 units SFWR ENG 4AA3
3 units from STATS 3N03, 3Y03
3 units approved Science electives
3 units approved technical electives
6-9 units Engineering and Society focus electives
DEGREE COMPLETION PROGRAMS

Three degree-completion programs will be offered, starting in the fall of 2006:

1. Manufacturing Technology - conversion of the existing joint McMaster-Mohawk Bachelor of Technology program;
2. Civil Engineering Infrastructure Technology (for Civil Engineering and Architectural Technology diploma graduates); and
3. Computing and Information Technology (for Software Engineering and Network Engineering and Security Analyst diploma graduates).

Detailed information regarding the curriculum for the degree completion programs will be available in the PDF version of the 2006-2007 Undergraduate Calendar at the following url: http://registrar.mcmaster.ca/calendar/year2006 later in the Spring of 2006.

ADMISSION REQUIREMENTS

The degree completion programs will accept students who have diplomas in related technologies from Mohawk College or similar diploma programs at other Ontario Colleges. While many students will be accepted immediately after having completed a diploma program, preference will be given to individuals who have had significant technological employment experience after completing a diploma. Applicants with educational backgrounds equivalent to those completing Ontario college diplomas, e.g. overseas technology diploma or degree graduates, will be considered on an individual basis.

The integrated program in Process Automation Technology will accept students directly from high school using the following admission requirements:

- OSSD, or equivalent, including:
  1. English Grade 12U; and
  2. Five other Grade 12U/M credits (Physics, Chemistry and Mathematics are strongly recommended).

Mature applicants will be considered on an individual basis. For 2006, students applying to enter the integrated program in Process Automation Technology will apply to Mohawk College and will enroll in the first year program (semesters one and two) at Mohawk College. Those who successfully complete the first year program (with a grade of over 60% in each of the courses) will be transferred to McMaster University for the remainder of their program. The admissions process for 2007 onwards will be determined as part of the preparation of the Automotive and Vehicle Technology and Biotechnology programs, which are both to be implemented in 2007.

Students currently in the Bachelor of Technology Degree Program in Manufacturing Engineering Technology should contact the School of Technology for advice on course selection and continuation in the degree program.
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.

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<tr>
<th>Program</th>
<th>Deadline</th>
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<td>Bachelor of Health Sciences (Honours) (B.H.Sc. Honours)</td>
<td>February 10</td>
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<tr>
<td>Medicine (MD)</td>
<td>Registration with OMSAS</td>
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<td>Final admission deadline</td>
<td>October 2</td>
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<tr>
<td>Midwifery (B.H.Sc.)</td>
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<td>Nursing (B.Sc.N.)</td>
<td>Applicants directly from Ontario Secondary Schools</td>
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<td>Diploma Registered Nurses</td>
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<td>Transfers from other degree Nursing programs</td>
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<td>McMaster Site</td>
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<tr>
<td>Child Life Studies Diploma, Program</td>
<td>July 1</td>
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<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 any time during the academic year, until continuation in the course is reviewed.

INFORMATION AND ACADEMIC COUNSELLING

In certain programs, a faculty member is selected for each student in the September of entry to a degree program and provides advice on evaluations, electives and other educational needs throughout the program. In the MD program, the advisor is 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 advisory role for B.Sc.N. students is fulfilled by the Coordinator of Studies (Nursing). Students are also encouraged to consult individual faculty members regarding career planning.

TRANSPORTATION

Students are responsible for expenses involved in transporting themselves to community agencies, making home visits, or in connection with clinical study.

LICENCE 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 established 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, at times of acute and chronic illness and potentially traumatic or life-changing events.

Competencies include: written and oral communication, 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 personal qualifications 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. 22795 or by email at fenni@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 experi-ence 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 resolving clinical problems. The goal is to enable health workers to more effectively carry out the mandate of their professional designations. Single 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 included in training) in the professional 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 professional and those in social work 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 (including Application 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 Environmental Health at (905) 525-9140, ext 27559. Applicants will be notified of admissions decisions in July. Further information is available on our web site (http://www.mcmaster.ca/mieh).

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 and safety field, relevant experience within the area 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. 22793 or emailing Jean Bodnar at bodnarj@mcmaster.ca. Further information can be obtained on our web site (http://www.fhs.mcmaster.ca/ohsenv).
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 Ext. 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 interdisciplinary program in which students take responsibility for their learning and in which there is recognition that both the knowledge and skill sets developed by students are integral parts of preparing for either further study or entry into the workforce. The principles of independent learning and an emphasis on both content and process are central to the provision of education within the Faculty of Health Sciences, and are reflected in this program. In addition, this program reflects the established tradition within the Faculty of understanding health from biological, behavioural and population-based perspectives. The program will draw on individuals from within the Faculty of Health Sciences and the larger university community to provide students with exposure to basic and applied researchers as well as health care practitioners, enabling students to learn about and experience the study of health from these various perspectives. The program will utilize both a small group, inquiry-based format as well as traditional lecture, lab, and tutorial based teaching formats to provide students with a solid knowledge base in health related sciences as well as the skills necessary to critically evaluate and synthesize health related information.

The program is designed to emphasize flexibility, recognizing that students may use this program to prepare for a variety of post graduate options including graduate work in medical sciences, professional schools and entry into the workforce. Beyond the first year students may select to focus on one perspective of health and develop relative expertise in this area, while other students may find that their needs are better met by pursuing a broader based program of study through their senior years. The program begins in Level I and leads to the degree Bachelor of Health Sciences (Honours) upon successful completion of Level IV. The four-level program offers opportunity for specialization through electives and through individual study or thesis courses. 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 that uses appropriate educational resources, and to obtain and synthesize the information needed to solve that problem.
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 should 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 2005-2006. Please note that the admission policy may be reviewed annually and the admission requirements may be changed in future years. As indicated 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 10. 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 10, 2006 (for September 2006 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 Ontario Secondary School
Applicants from other provinces should contact the Ontario Universities' Application Centre (OUAC) for an application package for admission consideration. Please refer to the OUAC address above. Applicants must also have their official transcripts forwarded to 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 10, 2006 (for September 2006 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/oua 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 during early March to early April and a mandatory Supplementary Application by April 28th.

Applicants from other post-secondary institutions 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 28th. 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 midterm grades 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-term 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. If this course is unavailable, a course equivalent to Grade 12 Mathematics Data Management U is acceptable.

Transfer Applicants

Transfer 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 B-) will be required for admission.

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

3 units HTH SCI 2A03
3 units HTH SCI 2E03
3 units HTH SCI 2F03
3 units HTH SCI 2FF3
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 3GG3
3 units HTH SCI 3H03
18 units Electives

LEVEL IV: 30 UNITS

6-9 units HTH SCI 4A09 or 4B06
3 units HTH SCI 4X03 (See Note above.)
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 MUGSAI 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
- Ron and Gina Fraser Bursary

There are many other bursaries provided through the central 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. 22766.

Academic Regulations

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.

In addition to the regulations in the General Academic Regulations section of this Calendar, the following Program regulations apply.

MINOR

A minor is an option available to a student enrolled in a four- or five- level program. A minor consists of a minimum of 24 units in the minor subject. No more than six of these units can be at Level I, unless otherwise stated in the specific requirements of the minor. A student is responsible for registering for courses to be applied towards a minor using elective units only. In the case of cross-listed courses, students must ensure that they register in the appropriate subject for the minor designation. Those who have the necessary requirements may apply for recognition of that minor when they graduate. If recognition for a minor is granted, this recognition will be recorded on the student's transcript. Minors cannot be revoked once approved. Students may return for a second degree in the subject in which they have obtained a minor, but only at the Honours level. For further information please refer to Minors in the General Academic Regulations section in this Calendar.

CONTINUATION IN THE PROGRAM

Students must have a CA of 6.0 to continue in the program. If a CA of 5.5 to 5.9 is obtained, a student may remain in the program but will be placed on program probation for one reviewing period. A student may be on program probation only once. If a CA of 5.5 to 5.4 is obtained, a student must transfer to another program for which he/she qualifies, or register in the B.H.Sc. (Honours) Program as an irregular student for one reviewing period. During that period a student cannot take B.H.Sc. (Honours) Program courses. At the end of that period a student may apply for readmission to the B.H.Sc. (Honours) Program.
If a CA of 3.0 to 3.4 is obtained, a student will be placed on academic probation. A student may continue in the program for one reviewing period as an irregular student but cannot take B.H.Sc. (Honours) Program courses. The purpose of this period is to prepare a student for a program outside the B.H.Sc. (Honours) Program. A student may be on academic probation only once. If a CA of less than 3.0 is obtained, a student may not continue at the University.

**WORKLOAD**

Students who wish to take more courses than recommended for a single level of their program may do so if their CA on completion of the previous session is at least 7.0. Students registered in the final level of the program are permitted to overload by up to six additional units in order to become eligible to graduate.

**LETTERS OF PERMISSION**

Students enrolled in the B.H.Sc. (Honours) Program may apply to the Office of the Assistant Dean to take courses at another university on a Letter of Permission. Request for Letter of Permission Forms are available from the B.H.Sc. web site at http://www.mcmaster.ca/bhsc/pdf_files/permission_form.pdf. Students must achieve a grade of at least C- to receive credit and must forward the transcript from the other university directly to the Assistant Dean (MDCL-3308). If a grade of C- or better is attained, the designation reads COM indicating complete, or NC indicating not complete if less than a C-grade is attained.

Courses taken at another university cannot be used to satisfy the University’s minimum residence requirements, will not be included in the calculation of the Cumulative or Sessional Averages, and therefore cannot be used to raise standing. Students may take up to six units of courses towards a Minor on a Letter of Permission.

Students must be in good standing to be eligible to take courses on a Letter of Permission.

**LEVEL OF REGISTRATION**

A student with six or more units incomplete at any level may proceed to the next level of the program only with the permission of the B.H.Sc. (Honours) Program Office.

**REINSTATEMENT TO THE B.H.SC. (HONOURS) PROGRAM**

A student who may Not Continue at the University may apply for reinstatement. Students seeking reinstatement should complete the Reinstatement Request Form available at the Office of the Registrar (Gilmour Hall, Room 108). The completed form and the $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 explain the reasons for the student’s inadequate performance, corroborated by two letters of support, and should also include relevant documentary evidence such as, for example, a physician’s letter documenting an illness that may have impacted upon the student’s prior academic performance. Reinstatement cases will be carefully screened and the evidence considered will include the student’s academic performance before and following admission to McMaster, as well as the nature of the reasons cited in the letter, the letters of support and the accompanying documentation. Reinstatement is not guaranteed.

If students are reinstated to the University, their Cumulative Average will be reset to 0.0 on zero units, although students may, at the discretion of the Faculty, retain credit for prior work. Following reinstatement, students will be on academic probation and must continue a unit of work after reinstatement to be eligible for graduation with Distinction or other recognition based on the Cumulative Average. If 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 MUGS1 on the working day following each time you drop or add courses and seek academic counselling 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, 146 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 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 subspecialties), Laboratory Medicine (and subspecialties), Obstetrics and Gynecology, Pediatrics (and subspecialties), Psychiatry, Radiology, and Surgery (and subspecialties).

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 interdisciplinary in nature and is for experienced health professionals who wish advanced preparation as clinicians.

**The Undergraduate Medical Program**

The three-year program in Medicine uses a problem-based approach to learning that should apply throughout the physician’s career. The components have been organized in sequential blocks with early exposure to patients and case management.

**UNDERGRADUATE MD PROGRAM GOALS**

The Undergraduate MD Program at McMaster University fosters a cooperative, supportive and respectful environment. The curriculum evolves continuously, responsive to the changing needs of Ontario society, nurturing the development of the following competencies at the time of graduation:
1. Medical expert - students will be able to apply scientific principles from human biology, behaviour and population health to the solution of health problems; they will have the ability to seek out new information and evaluate this information critically.

2. Communicator/ Collaborator - students will demonstrate effective communication skills, sensitive to the needs of patients and cognizant of the roles of other members of the health care team in delivering patient care.

3. Advocate/ Resource Manager - graduating students will be knowledgeable about the determinants of health and be proactive advocates for their individual patients and for healthy public policy within the context of the health care system.

4. Scholar/ Learner - students will be self-directed lifelong learners, whose exposure at McMaster to role models in research and care team work in small groups will enable 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 their environment and on others.

THE NEW COMPASS CURRICULUM

In September 2005, the Undergraduate MD Program at McMaster University inaugurated 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 cognitive psychology. The curriculum is designed with deliberate practice applied to each step of the curriculum based on the growth of important concepts learned previously. Tutorial problems are selected to illustrate these concepts in a clinical setting and when students are exploring tutorial problems, which remain the focus of learning, they will be directed towards asking questions of what and why and how as much as what is the diagnosis. The 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 which runs throughout the three years of the program. As in the Foundations tutorial-based curriculum, students will work in small groups throughout the Professional Competencies curriculum which interdigitates and remains connected to the Foundations curriculum throughout the pre-clerkship and on into the clerkship. The core competencies of the Professional Competencies curriculum are effective communication, lifelong learning, self-awareness and personal growth, moral reasoning, professional judgment, 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 includes inter-professional education and competency-based assessment using portfolios and learning plans. Some of the content areas 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.

The students are presented with a series 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 function 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 are required to select learning objectives from each tutorial case and negotiate how they will approach their learning tasks. They then acquire the knowledge and skills to meet the objectives of the Foundation in which they are working. They also learn to work as a team, helping and learning from peers. The study habits and sense of responsibility to self and others provide a basis for lifelong working and learning habits. 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 summary statement of student learning progress. The tutor prepares a written summary of the student’s 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.

In addition to the tutorial-based evaluation, the accumulation of medical knowledge is assessed at regular intervals by means of the Personal Progress Index. This is in a multiple-choice format. Results are given to the students for self-evaluation and, in summary form, to the student advisor. The Personal Progress Index is in addition to, and does not replace, tutorial- and performance-based 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 and in the Clerkship, and additionally by Objective Structured Clinical Evaluations (OSCEs) which are run on an annual basis. The Evaluation 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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Clerkship

Two-week vacation sometime in June/July

Elective

Clinical

SYN & LMC

Lectures

Orientation

Integration
MEDICAL FOUNDATION 1: The first three weeks of this block of curriculum 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 industrializing societies. 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 FOUNDATION 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 FOUNDATION 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 fertility and a number of issues in genetics related to reproduction.

MEDICAL FOUNDATION 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.

MEDICAL FOUNDATION 5: This covers the concepts of movement control and interacting and communicating, which includes the locomotor system, the nervous system and behavior. Aspects of human development will run through all of the five Medical Foundations.

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.

THE CLERKSHIP: While the Clerkship will be firmly linked to the pre-clerkship concept-based curriculum and will continue with 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 tutorial cases are now real patients or populations. The first three weeks of this block of curriculum time dedicated to full-time elective activities. 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.

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 as students 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 Authorizing Independent Practice are:

1. Certification by the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada.
2. Parts I and II of the Medical Council of Canada Qualifying Examination.
3. Canadian Citizenship or Landed Immigrant Status.

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.

IMMUNIZATION

The Ontario Public Hospitals Act requires that all persons working in a hospital setting meet certain criteria regarding surveillance for infectious diseases. In order for the requirement of the registration to be met, once students have been 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.
FACULTY OF HEALTH SCIENCES

Admission Policy for the Medical Program

The official admission policy and deadlines for the Undergraduate Medical Program for entry in late August 2007 shall be as published in the 2007 Ontario Medical School Information Booklet. This booklet is available through:

Ontario Medical School Application Service (OMSAS)
170 Research Lane,
Guelph, Ontario, N1G 5E2
(519) 823-1940
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 documentation must be provided by the specified deadlines. Applicants must follow the instructions precisely. All applicants should be aware that the Admissions Office is committed to the protection of personal information. Use of personal information is strictly limited to the appropriate handling of applications, record-keeping for those admitted to the program, and research intended to further the efficacy of Medical Education Program procedures. The Undergraduate Medical Program has the right to change the admission requirements at any time without notice.

ADMISSION AND REGISTRATION

Registration in the Undergraduate Medical Program implies acceptance by the student of the objectives of the program, and the methods which evaluate progress toward the achievement of those objectives. The following describes the regulations governing admission and registration in the Undergraduate Medical Program. Applicants applying for entry in 2007 must register their intention to apply with the Ontario Medical School Application Service (OMSAS) by September 15, 2006. The final application deadline is October 2, 2006. 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 to be associated 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 2006 are for the academic year commencing in April 2007. All 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, 2006. Final applications must be submitted by October 2, 2006, 4:30 p.m. EDT. Several hundred applicants will be invited for interviews in Hamilton in March or April. From this group, class 148 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, 2007.

FALSIFICATION OF ADMISSION INFORMATION

Applicants should understand that where it is discovered that any application information is false or misleading, or has been concealed or withheld, the application will be deemed to be invalid. This will result in its immediate rejection. If the applicant has already been admitted and registered as a student, withdrawal from the University may be required. The MD Admissions Committee will normally not allow the applicant to reapply to the Medical Program for seven (7) years.

ACADEMIC ELIGIBILITY REQUIREMENTS

Applicants must report on 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, programs 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 Graduating 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) or the Council of Ontario Universities (COU). The applicant must be able to demonstrate a high level of academic achievement consistently throughout their undergraduate career. A minimum of 15 full-courses, or 30 half-courses (three years) of Undergraduate university work from a recognized university is required. There is no requirement that applicants carry a full course load each term in their undergraduate program. Applicants must be able to show a minimum GPA of 3.0 on the OMSAS 4.0 scale. The OMSAS 4.0 scale meets the minimal criterion for consideration for admission, prospective applicants should be aware that given the rapidly rising level of competition for a limited number of positions, a significantly higher GPA would provide the applicant with a more reasonable chance of admission. Due to changes from year to year in the level of competitiveness, an exact figure in future years may differ. It is recommended that a GPA of at least 3.0 on the OMSAS 4.0 scale be included in the calculation of the grade point average.

b) By October 2, 2006, applicants must have achieved an overall simple average of at least 3.0 on the OMSAS 4.0 scale. It is required that applicants present evidence of geographical status in applicants 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.

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 2, 2006. 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 Autobiographic Sketch. Applicants may be asked to provide evidence of geographical status. In selecting applicants for interview, the bona fide place of residence will be based upon: 1) the province of Ontario; or 2) the rest of Canada and other countries. To qualify for Ontario status, an applicant must be a Canadian citizen or permanent resident by December 31, 2006, and have resided for at least three years in the province of Ontario since the age of 14 by the date of possible entry into the program.

TRANSCRIPT REQUIREMENTS AND TRANSCRIPT REQUEST FORMS (TRF)

All transcripts from Ontario universities must be ordered by OMSAS via the TRF. It is required that applicants request all other transcript materials prior to September 15, 2006 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 2, 2006. 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 2, 2006. 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, CEGETPs, 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 2006/2007 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 2, 2006. When undergraduate courses are in progress at the time of application and these are not reported on the transcript, applicants must submit a Registrar statement. This is particularly important to establish that the applicant will have satisfied the minimum academic requirement by June 2007. A similar rule applies to graduate work in progress by October 2, 2006.

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 that they are intending to apply to medical school. Applicants should arrange for this letter to be received at OMSAS by October 2, 2006.

CREDENTIALING OF NON-CANADIAN GRADES

Applicants, Canadian or non-Canadian, who have not met the minimum course number criterion utilizing their Canadian data and require inclusion of their international education data to meet the minimum course number criterion are required to have their foreign transcript assessed by World Education Services (WES). Credentialed assessment means converting foreign academic credentials into their Ontario educational equivalents. A course-by-course evaluation along with 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 2, 2006. Those requiring WES assessment must also ensure that transcripts are received by WES in time for their assessment to reach OMSAS by October 2, 2006.

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 provided by OMSAS.

Detailed instructions with regard to the length and format of responses to the Autobiographical Submission are provided 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 Autobiographic Sketch, otherwise the application will not proceed further in the admissions process.

Applicants whose first language is not English must satisfy by October 2, 2006, at least one of 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); or
2. Have attended an educational institution, where instruction was in English, for at least three years; or
3. Have resided for at least four years in an English-speaking country.

INTERVIEWS

Several hundred applicants will be invited to 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 expenses.

The interview process entitled the Multiple Mini Interview (MMI), is primarily composed of a series of ten-minute encounters over a two-hour period.

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 selection process. 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 2007.

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 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 admission 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 Medical Foundation 1. There is no provision for advanced standing or transfer into the program.

UNSUCCESSFUL APPLICANTS

Application files, including transcripts, from one year are not held over to another year. If an unsuccessful applicant wishes to reapply, a new application package, including supporting documentation must be submitted, using the OMSAS Application, 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 2005-2006, the academic fees (tuition and student supplementary fees) for a student in the McMaster Undergraduate Medical Program were:

| Year I | $15,050.54 |
| Year II | $15,050.54 |
| Year III | $15,050.54 |
In addition, the cost of books and diagnostic equipment for a Year 1 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:

- Adraches (Archie) Yian Moughalian Memorial Bursary
- Altman MD Branch Council Bursary
- Andrew Tatalla Memorial Bursary
- Burlington Medical Society Bursary
- Cholowsky Family Multiple Sclerosis Bursary
- Daniel and Natalie Strub Bursary
- Daniel Giannini Bursary
- Douglas Ian Brown Bursary
- Dr. Leo Celini Bursary
- Gail Henning Memorial Bursary
- Harold O. Stolberg Bursary
- Henry and Sylvia Wong Bursary
- J.W. Harry Butler Bursary
- Medical Student Opportunity Trust Bursary
- Michael G. DeGroote School of Medicine Bursary
- Ontario Medical Student Bursary
- Ragonetti Family Bursary
- Ripley Estate Bursary
- Ron and Gina Fraser Medical Bursary
- Ronald Pye Bursary
- Ruth Tomlinson Memorial Bursaries
- Schenkel Medical Assistance Fund
- Scotiabank Breast Cancer Scholarship
- Scotiabank McMaster Medical Scholarship
- Scotiabank Breast Cancer Scholarship
- UCO Werdera Humanitarian Memorial Bursary
- William A. Vanderburgh Estate Bursary

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 the fall each year. Information about each award, criteria 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 Mofat, Assistant 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, plus pay) throughout 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 the career opportunities in medicine in the Canadian Armed Forces may be obtained from local Canadian Forces Recruiting Centres. The funding is available to students within the first few months of medical school. Students are also responsible for their 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.

**B.H.SC. MIDWIFERY PROGRAM**

Web Address: http://www.fhs.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**

C. Ferrie

**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 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 assists in the development of the educational program in the field of midwifery.

Midwives’ expertise in the care of normal pregnancy and childbirth arises from their understanding of women’s health care in Ontario. Midwives’ expertise in the care of normal pregnancy and childbirth arises from their understanding of women’s health care in Ontario. Midwives’ expertise in the care of normal pregnancy and childbirth arises from their understanding of women’s health care in Ontario. Midwives’ expertise in the care of normal pregnancy and childbirth arises from their understanding of women’s health care in Ontario.
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

133 units total (Levels 1 to IV)

LEVEL I: 31 UNITS

6 units

6 units HTH SCI 1D06*

6 units HTH SCI 1C06

5 units WOMEN ST 1A03*, 1AA3* (or 1A06*)

4 units HTH SCI 3C04 (Term 2)

3 units MIDWIF 1D03 (Term 1)

3 units HTH SCI 1JS9 (Term 1)

3 units Electives from the Faculties of Health Sciences, Humanities, or Social Sciences (Term 2)*

LEVEL II: 30 UNITS (2006-2007 ONLY)

3 units HTH SCI 2M03 (Term 1)

15 units MIDWIF 2A03, 2E12 (Term 2)

3 units MIDWIF 2F03 (Term 1)

9 units Electives from the Faculties of Health Sciences, Humanities, Social Sciences (Term 1)*

LEVEL II: 30 UNITS (EFFECTIVE 2007-2008)

3 units HTH SCI 2M03 (Term 1)

15 units MIDWIF 2H15 (Term 2)

3 units MIDWIF 2F03 (Term 1)

3 units MIDWIF 2G03 (Term 1)

6 units Electives from the Faculties of Health Sciences, Humanities, Social Sciences (Term 1)*

LEVEL III: 42 UNITS

15 units MIDWIF 3G15 (Term 1)

9 units MIDWIF 3A09 (Term 2)

3 units MIDWIF 3F03* (Term 2)

15 units MIDWIF 3H15 (Term 3)

LEVEL IV: 30 UNITS

15 units MIDWIF 4A15 (Term 1)

15 units MIDWIF 4B15 (Term 2)

*Transfer credit may be available.

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 prior to application. All certified transcripts from 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 Ontario College Studies or equivalent must have full courses that are equivalent to the Grade 12 U or M courses 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 Admission 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 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 must be observed for those who take Grade 12 U or M courses 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 Métis, 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.

Applicants will also be required to apply to the Ontario Universities Application Centre (http://www.ouac.on.ca) and complete a Midwifery on-line application form 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.

### Transfer Credit
Students with previous university education may be eligible for transfer credits for non-clinical courses in Levels I and II. Transfer credits will be determined on an individual basis. 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 applicants with 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 a two-step selection procedure:

1. Assessment of academic eligibility
2. Admission interview — 80 applicants will be invited to Hamilton for an interview. The interview process will consist of nine to ten-minute interviews. Candidates must attend on the date and at the time specified.

Applicants must be successful at stage one to be considered for stage two.

Offers of admission will be made following the interview process. Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

### UNSUCCESSFUL APPLICANTS
Applicants are not held over from one year to another. If an unsuccessful applicant wishes to reapply to the Midwifery Education Program, a new application, including transcripts and supplementary materials must be submitted.

### APPLICATION FOR DEFERRAL 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 offered a place in the program. The application of deferral must be submitted in writing no later than August 1 of the year in which deferment is requested. If granted, registration may be deferred for one year only.

### APPLICATION DEADLINE
Submission of completed application forms to the Ontario Universities’ Application Centre and an on-line application to the program must be received by the University no later than February 1 of the year in which registration is expected. All certified transcripts from secondary and post secondary education previously attended must be forwarded to the Office of the Registrar and received by February 1. Applications received after February 1 will not be considered.

### Financial Information
In 2005-2006 the tuition fees for a student in the Midwifery Education Program were $4,234.48 for an eight month academic term. Supplementary fees are estimated at $250.00 per year. Financial assistance is available from the federal and provincial government through the Ontario Student Assistance Program (OSAP). Students intending to apply for OSAP may begin their application process to OSAP once they are notified about receiving an interview. The final status of an application can be confirmed with OSAP at a later date.

### 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 CA less than 6.0 in graded courses;
2. 2006-2007 Only: obtains a grade of less than 6.0 in HTH SCI 1D06; and a grade of less than 6.0 in MIDWIF 1D03; Effective 2007-2008: obtains a grade of less than 6.0 in HTH SCI 1D06; and a grade of less than 6.0 in MIDWIF 1D03 and 2G03;
3. obtains a grade of less than 6.0 in HTH SCI 1C06, 1J03, 2M03, 3C04 and MIDWIF 2F03, with the exception that a grade of D+ or D is acceptable in one of those courses;
4. receives an F grade in all graded courses and achieve a Pass/Satisfactory performance in all clinical courses at each review to continue in Good Standing in the program.

### Good Standing
A student is considered to be in Good Standing when all of the following criteria are met. The student must:

1. achieve a Cumulative Average (CA) of at least 6.0 in all graded courses;
2. 2006-2007 Only: achieve a minimum grade of C- in HTH SCI 1D06; and a minimum grade of B- in MIDWIF 1D03; Effective 2007-2008: achieve a minimum grade of C- in HTH SCI 1D06; and a minimum grade of B- in MIDWIF 1D03 and 2G03;
3. obtain a minimum grade of C- in HTH SCI 1C06, 1J03, 2M03, 3C04 and MIDWIF 2F03, for Midwifery Act of Ontario. Such removal will result in the student receiving an F grade and may result in dismissal from the Program.

### Academic Regulations

#### 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.

In addition to meeting the General Academic Regulations of the University, students enrolled in the Midwifery Education Program will be subject to the following program regulations.

The Midwifery Education 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 behavior that places patients or others at risk and/or violates the Midwifery Act of Ontario. Such removal will result in the student receiving an F grade and may result in dismissal from the Program.

### CONTINUATION IN THE PROGRAM

All courses (clinical and non-clinical) with the subject abbreviations MIDWIF and HTH SCI (as outlined in the Curriculum Plan) are required for the degree. Students are reviewed at the end of each term. Students must achieve a Cumulative Average (CA) of at least 6.0 in all graded courses and achieve a Pass/Satisfactory performance in all clinical courses at each review to continue in Good Standing in the program.

### GOODSTANDING

A student is considered to be in Good Standing when all of the following criteria are met. The student must:

1. achieve a Cumulative Average (CA) of at least 6.0 in all graded courses;
2. 2006-2007 Only: achieve a minimum grade of C- in HTH SCI 1D06; and a grade of less than 6.0 in MIDWIF 1D03; Effective 2007-2008: achieve a minimum grade of C- in HTH SCI 1D06; and a minimum grade of B- in MIDWIF 1D03 and 2G03;
3. obtain a minimum grade of C- in HTH SCI 1C06, 1J03, 2M03, 3C04 and MIDWIF 2F03, with the exception that a grade of D+ or D is acceptable in one of those courses;
4. achieve a Pass/Satisfactory performance in all clinical courses;
5. receive a passing grade (minimum D-) in graded courses other than those stated in 2. and 3. above.

### PROBATION

A student will be placed on probation if any of the following criteria is met. The student:

1. obtains a CA less than 6.0 in graded courses;
2. 2006-2007 Only: obtains a grade of less than 6.0 in HTH SCI 1D06; and a grade of less than 6.0 in MIDWIF 1D03; Effective 2007-2008: obtains a grade of less than 6.0 in HTH SCI 1D06; and a grade of less than 6.0 in MIDWIF 1D03 and 2G03;
3. obtains a grade of less than 6.0 in more than one of HTH SCI 1C06, 1J03, 2M03, 3C04 and MIDWIF 2F03;
4. receives an F or a Fail/Unsatisfactory in any clinical course;
5. fails any one course;
6. if a student receives a grade of D- in clinical courses with a higher minimum grade requirement (see items 2. and 3. under Good Standing above) when a course is repeated and receives an overall CA of 6.0 at the completion of a probation period. Failing remedial work for any student on probation must be approved 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. 2006-2007 Only: fails the second attempt at a course or receives a grade in the second attempt below C- for any of HTH SCI 1C06, 1D06, 1J03, 2M03, 3C04, MIDWIF 2F03 or B- for MIDWIF 1D03; Effective 2007-2008: fails the second attempt at a course or receives a grade in the second attempt below C- for any of HTH SCI 1C06, 1D06, 1J03, 2M03, 3C04, MIDWIF 2F03 or below B- for either of MIDWIF 1D03 or 2G03; 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 grade in any course throughout the program and achieve a CA of 95, 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 all of the following criteria are met. The student must:

1. 2006-2007 Only: 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 1D03; Effective 2007-2008: 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 1D03 or 2G03;
2. complete HTH SCI 1C06, 1J03, 2M03, 3C04, MIDWIF 2F03 with a minimum grade of C- with the exception of a D+ or D in one of those courses;
3. complete all clinical courses with a Pass/Satisfactory grade;
4. 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. The Midwifery Education Program monitors and documents students' clinical experience in order that students meet minimum practice requirements to be eligible for registration to practice. Graduation from the Midwifery Education Program does not guarantee registration with the College of Midwives of Ontario. All applicants to the College must meet additional registration requirements. New graduates are required to work in an established practice for their first year of registration. Regulatory requirements are subject to change from time to time.

THE SCHOOL OF NURSING

WEB ADDRESS: http://www.fhs.mcmaster.ca/nursing

Health Sciences Centre, Room 1M7
Ext. 22694

Assistant Dean, Undergraduate Nursing Education
Janet Landeen/B.Sc.N., M.Ed., Ph.D., R.N.
Program Administrator
A. Cholewa/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. In 1995, with the establishment of the Post-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 School of Nursing and Medicine became the Faculty of Health Sciences.

In 1982, the Post Diploma Stream of the B.Sc.N. Program was introduced. In 2000 the Post-Diploma Registered Practical Nurse Stream began. These categories of admission were created to provide Diploma Registered Nurses and Diploma Registered Practical 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 1995, is available to diploma-prepared nursing 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-1N10, (905) 525-9140, ext. 22983.

Information Sessions for high school students are hosted by the Student Union Office during the school year. For more details about these sessions or to register for a visit, 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 recent years, McMaster University, Mohawk College and Conestoga College have formed an educational consortium to offer the McMaster Nursing degree through the McMaster Mohawk Conestoga B.Sc.N. Program. 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. Program.

D. Strasser 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. Students 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-of-clinic practice experiences.

Evaluation by self, peers and faculty is part of an ongoing 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 multifactorial influences (internal and external) on their health status within an ethic of professional caring. Graduates will:

1. Provide nursing care reflective of primary health care principles.
2. Demonstrate sensitivity to diversity and recognize the influence this has on professional and personal meaning, clients' health and healing practices.
3. Demonstrate critical thinking to maintain and terminate therapeutic relationships with clients.
4. Demonstrate critical thinking in the assessment, planning and evaluation of patient care through the synthesis and application of validated knowledge and theories of nursing, the humanities, biological, psychological, social and public health sciences.
5. Identify the need for appropriate change, create a climate for adapting to change and self and others, and contribute to evaluating change.
6. 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.
7. Provide safe, ethical, competent care within established professional standards and guidelines.
8. 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.).
9. Demonstrate leadership and beginning competencies in managing a health care team, managing resources and coordinating health care.
10. Access and manage relevant information, required for professional practices, through the effective use of information technology.
11. 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.
12. Participate in developing and implementing strategies for advocacy and political and social action on behalf of and with clients, and the nursing profession.
13. Recognize, develop and maintain the personal characteristics associated with professionalism:
   a. awareness of competencies and limitations
   b. accountability for own actions
   c. commitment to the search for new knowledge
   d. advocacy for the voice of professional nursing
   e. commitment to self-directed, lifelong learning
   f. critical self-reflection and reflective practice.

Admission Policy and Procedure

ADMISSION POLICY
Enrollment in these programs is limited. Possession of the minimum admission requirements does not guarantee an offer of admission.

Application to the B.Sc.N. Program in the Faculty of Health Sciences implies acceptance of admission policies, procedures and the methods by which applicants are chosen for the program. The requirements for study leading to the completion of the B.Sc.N degree. The Basic (A) Stream and Collaborative Basic (D, S) 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 years if not already completed within the first four years of study.

The Post Diploma (E) Stream is available to Diploma Prepared Registered Practical Nurses only. Graduates of an approved Diploma Practical Nurse Program who are admitted are granted 30 units of advanced credit. Students may complete the program in three academic years 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 who submits false documentation will be withdrawn.

Detailed medical information, including a record of completion of required immunizations, will be required upon acceptance into all Streams of the B.Sc.N. program and the Ontario Primary Healthcare Nurse Practitioner Certificate 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. 22471 or TTY 905-528-4307.

ADMISSION PROCEDURE
Applicants from Ontario Secondary Schools (A) Stream
Applicants current or completing Grade 12 U or M courses apply through the Ontario Universities' Application Centre (OUAC). See address below.

Applicants With Qualifications Equivalent to the Heart and Stroke Foundation's Level C, Basic Rescuer (Targeted Responder).

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. 22471 or TTY 905-528-4307.

Applicants should contact the Ontario University's Application Centre (OUAC) for an application package and return it to them by May 1, to be considered for admission.

Applicants 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)
170 Research Lane,
Guelph, ON, N1G 5E2
http://www.ouac.on.ca

Applicants With Other Qualifications (A) and (B) Streams
Applicants apply online to the Ontario Universities' Application Centre (OUAC) at www.ouac.on.ca. They must download an application package from http://www.fhs.mcmaster.ca/nursing/ or contact the Admissions Coordinator (Nursing).

Applicants 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.ocas.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:
- six appropriate midterm/interim Grade 12 U or M course grades, or
- at least three final Grade 12 U or M course grades plus enrollment in the appropriate Grade 12 U or M courses. Offers based on interim grades will be conditional upon maintaining satisfactory performance on final grades.

II. 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 (Biology U is preferred);
4. Two additional Grade 12 U or M courses to total six.

Note: In 2007-2008, Biology U and Chemistry U will be required.

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 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 of 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 final decision is made after the interview.

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 with a University Degree or with University Degree Credits

Applicants normally should:
1. achieve a Cumulative Average of at least B- in all university degree courses taken. A minimum of 12 units or equivalents are required. These courses may be taken as a full-time or part-time student. University correspondence degree courses are accepted.
2. Apply online to OUAC at www.ouac.on.ca using Form 105D and pay the required fees by February 15;
3. submit the completed supplementary application and four copies of the response to the questionnaire provided in the application package and all 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 a Pre Health Sciences Program

Applicants who have successfully completed a pre health sciences program at an Ontario College of Applied Arts and Technology (CAAT) will be considered for admission to Level I of the B.Sc. N. program at all sites. Applicants who are currently registered in a pre health sciences program may be given a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program or does not meet the required admission cumulative average.

Applicants normally must:
1. complete a full pre health sciences program at any Ontario College of Applied Arts and Technology (CAAT) which is at least two semesters in length and includes at least one full (two semester) or two half courses in each of Biology, Chemistry, Mathematics and English. Applications will not be considered from applicants who possess credit in the required subjects;
2. achieve at least a 70% cumulative average in the pre health sciences program;
3. apply online to OUAC at www.ouac.on.ca using Form 105D and pay the required fees no later than February 15;
4. download the supplementary application package found at www.fhs.mcmaster.ca/nursing/ OR request a package from the Admissions Coordinator at (905) 525-9140 ext 22232;
5. submit the supplementary application, four copies of the response to the questionnaire and all transcripts to McMaster by February 15.

Note: Transfer credit will not be granted for any pre health sciences courses.

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 students must contact the Coordinator of Studies to determine if there is space for transfer applicants.

Applicants must:
1. have completed Level I of a B.Sci.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/education/undergrad/undergradadmissions.htm;
3. have a current letter of registration from the provincial board of nursing in good standing in that program;
4. 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 of 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 Letter of Registration from the College of Nurses of Ontario and pay the required fees no later than August 1;
2. have an Ontario diploma in nursing or the equivalent with a minimum overall average of 2.7 (8-)
3. apply online at www.ouac.on.ca using Form 105D to OUAC and pay 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 photostatic copy of the current College of Nurses of Ontario annual registration payment card and transcripts to McMaster by February 15;
FACULTY OF HEALTH SCIENCES

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 for (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 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 (Biology U is preferred.)
4. Two additional Grade 12 U or M courses to total six.

Note: In 2007-2008 Biology U and Chemistry U will be required.

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 University 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 106, McMaster University, Hamilton, ON L8S 4L8.

Applicants With a University Degree or With University Degree Credits
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 credits 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. apply to Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received by OCAS 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 applications from qualified applicants received by the equal consideration date (February 1) to fill the program.

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 a Pre Health Sciences Program
Applicants who have successfully completed a pre health sciences program at an Ontario College of Applied Arts and Technology (CAAT) will be considered for admission to Level I of the B.Sc.N. program at all sites. Applicants who are currently registered in a pre health sciences program may be given a conditional offer of admission based upon interim grades. The offer of admission will be withdrawn if the applicant does not complete the full program or does not meet the required admission cumulative average.

Applicants normally must:
1. complete a full pre health sciences program at any Ontario College of Applied Arts and Technology (CAAT) which is at least two semesters in length and includes at least one full (two semester) or two half courses in each of Biology, Chemistry, Mathematics and English. Applications will not be considered from applicants who possess credit only in the required subjects;
2. achieve at least a 70% cumulative average in the pre health sciences program;
3. apply to Ontario College Application Services (OCAS) along with the required fees by February 1. All applications must be received by OCAS 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 applications from qualified applicants received by the equal consideration date (February 1) to fill the program.

Note: Transfer credit will not be granted for any pre health sciences courses.

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.

Applicants should contact the appropriate site to determine if there is space for transfer applicants. 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.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm.

Note: Applicants do not complete the supplementary application form.

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.mcmaster.ca/nursing/education/undergrad/undergradadmissions.htm;
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.

IV. POST DIPLOMA PRACTICAL NURSE (E) STREAM

Selection is based upon academic qualifications and the rating on the 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 a diploma practical nurse program at the time of application normally must be eligible to write the College of Nurses of Ontario (CNO) practical nurse registration examinations no later than August of the year of application to the B.Sc.N. program.
Applicants normally must:

1. possess a current CNO annual registration payment card or be eligible to write and subsequently pass the Practical Nurses Registration Examinations;
2. have a diploma in practical nursing (two year program) from an Ontario College of Applied Arts and Technology or equivalent with a minimum overall average of 75% or higher;

Note: Potential applicants who possess a certificate in practical nursing should seek upgrading to diploma practical nurse at a College of Applied Arts and Technology or apply to a basic B.Sc.N. program (see admission criteria for Streams A and D);
3. complete Form 105D on-line at www.ouac.on.ca and pay the required fees no later than February 15;
4. submit the supplementary application form found at www.lhs.mcmaster.ca/nursing/ or request it from the Admissions Coordinator at (905) 525-9140 ext 22232;
5. submit four copies of the response to the questionnaire as outlined in the supplementary application package, a colour copy of the current CNO annual registration payment card and transcripts to McMaster by February 15.

Note: University degree courses completed prior to admission will be assessed for advanced credit by the Office of the Coordinator of Studies following admission to the program.

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. Counselling sessions will be available for part-time students after admission.

UNSUCCESSFUL APPLICANTS (A), (B) AND (E) 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 deferral should be in writing, 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

(6390)

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 admission is limited 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

(UNITS GRADED: 32)

12 units HTH SCI 1A03, 1B03, 1H06
8 units NURSING 1F04, 1G04
6 units PSYCH 1A03 and 1AA3
6 units Electives
1 course NURSING 1A00

LEVEL II: 30 UNITS

(UNITS GRADED: 24; UNITS PASS/FAIL: 6)

6 units HTH SCI 2H03, 2HH3
15 units NURSING 2L03, 2M03, 2N03, 2P03, 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, 4J07, 4K07
6 units Electives

TOTAL UNITS: 124

REGISTRATION TO PRACTICE 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 Canadian Registered Nurse Examination which is administered by the College of Nurses of Ontario (CNO). Application to write the examination is made through the Faculty of Health Sciences. The CNO requires all applicants for registration to provide a recent criminal record synopsis (CIPC check) as part of the RN registration process. If you have any questions related to the Regulated Health Professions Act, please contact the College of Nurses of Ontario directly at 1-800-387-5526.

DIPLOMA RN (B) STREAM

(6391)

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 curriculum is planned for five academic terms if taken on a full-time basis. If taken on a part-time basis, students are normally 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 chosen from courses designated as Level II or above. 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 II: 45 UNITS

(UNITS GRADED: 45)

TERMS 1 AND 2: 23 UNITS

21 units HTH SCI 1C07, 2C07, 3B03, 3C04
12 units NURSING 3M03, 3N03, 3T03, 3V03
1 course NURSING 1A00

SPRING TERM: 6 UNITS

6 units Electives

SUMMER TERM: 6 UNITS

6 units Electives

TOTAL UNITS: 121

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

FACULTY OF HEALTH SCIENCES

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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 that took effect in September 2001. All students are strongly encouraged to contact the Coordinator of Studies for individual counselling to decide upon their program of study. Students require a minimum of 121 units to graduate.

ONTARIO PRIMARY HEALTH CARE NURSE PRACTITIONER PROGRAM (C) STREAM

The Ontario Primary Health Care Nurse Practitioner Program (C) Stream is being phased out. The last entry into this program was in September 2004.

NURSE PRACTITIONER (C) STREAM

(6397)

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 4AA5, 4AB5, 4P03, 4R03, 4TA5, 4TB5
3 units Electives

SUMMER TERM: 13 UNITS

13 units NURSPRAC 4C13

EXTENDED CLASS OF REGISTRATION (RN/EC)

On successful completion of the Ontario 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

[6385]

MOHAWK SITE

[6386]

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

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 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.

REQUIREMENTS

LEVEL I: 32 UNITS

(UNITS GRADED: 32)

12 units HTH SCI 1AA1, 1BB3, 1H06
8 units NURSING 1FO4, 1GF4
6 units COLLAB 1A03 and 1B03 (Mohawk Site) or COLLAB 1C03 and 1D03 (Conestoga Site)
6 units Electives
1 course NURSING 1A00

LEVEL II: 30 UNITS

(UNITS GRADED: 24; UNITS PASS/FAIL: 6)

6 units HTH SCI 2H03, 2H93
15 units NURSING 2L03, 2M03, 2N03, 2F03, 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, 4J07, 4K07
6 units Electives

TOTAL UNITS: 123

REGISTRATION TO PRACTISE NURSING

On receiving the B.Sc.N. degree after successful completion of the (E) Stream of the B.Sc.N. program, graduates are eligible to write the Canadian Registered Nurse Examination (CRNE) which is administered by the College of Nurses of Ontario (CNO). Application to write the CRNE is made through the Faculty of Health.
Sciences. The CNO requires all applicants for registration to provide a recent criminal record synopsis (CIPC check) as part of the RN registration process. If you have any questions related to the Regulated Health Professions Act, please contact the College of Nurses of Ontario directly at 1-800-387-5526.

**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%. In cases where the minimum grade is not achieved, consideration may be given to university credit work completed following graduation which demonstrates equivalent academic ability;
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 ONAJ 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., RNOA, CPR) to McMaster by March 1.

Preference will be given for:

- 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 outpost nursing
- hands-on practical experience

**REQUIREMENTS**

**TERMS 1 AND 2: 26 UNITS**

(UNITS GRADED: 26)

<table>
<thead>
<tr>
<th>Units</th>
<th>Course</th>
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<tbody>
<tr>
<td>26</td>
<td>NURSPRAC 4A05, 4A06, 4F03, 4F04, 4T05, 4T06</td>
</tr>
<tr>
<td>1</td>
<td>NURSING 1A00</td>
</tr>
</tbody>
</table>

**SUMMER TERM: 13 UNITS**

(UNITS GRADED: 3; UNITS PASS/FAIL: 10)

<table>
<thead>
<tr>
<th>Units</th>
<th>Course</th>
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<tr>
<td>13</td>
<td>NURSPRAC 4C13</td>
</tr>
</tbody>
</table>

**TOTAL UNITS: 39**

**EXTENDED CLASS OF REGISTRATION (RN/EC)**

Upon successful completion of the Ontario Primary Health Care Nurse Practitioner Certificate 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 Nurse Practitioner network.

**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 1993. 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 for 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**

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<thead>
<tr>
<th>Units</th>
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<td>NURSING 4E00</td>
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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 recent, relevant 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 changes in their roles across the cancer consortium.

The program has been developed within the context of the existing post diploma stream. The McMaster model of Nurse and philosophy of student-centred and problem-based learning are maintained and provides 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.

**REQUIREMENTS**

(UNITS GRADED: 13; UNITS PASS/FAIL: 9)

<table>
<thead>
<tr>
<th>Units</th>
<th>Course</th>
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<tbody>
<tr>
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<td>HTH SCI 3D04</td>
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<td>3</td>
<td>NURSING 4G06</td>
</tr>
</tbody>
</table>

**TOTAL UNITS: 22**

Students who are subsequently admitted to the Post Diploma (B) Stream of the B.Sc.N. Program will be granted credit for these courses (or their equivalent) in the B.Sc.N. Program.

**PAEDIATRIC ONCOLOGY PROGRAM**

(6394)

In order to accommodate the educational needs of registered nurses working in paediatric oncology, a program has been developed within the context of the existing post-diploma stream. This program affirms the McMaster curriculum model of student-centred, problem-based or problem-focused teaching and learning, respect for the adult learner; a curriculum cognizant of and responsive to evolving nursing practice, a commitment to interprofessional approaches and a commitment to a strong scientific component.
Students enrolled in the program will be actively linked with one of the provincial tertiary paediatric haematology-oncology sites and maintain their clinical practice at that institution. The courses themselves will emphasize the existing literature and practice modalities in paediatric haematology-oncology and incorporate these into some of the present post-diploma baccalaureate courses.

**REQUIREMENTS**

**UNITS GRADED: 13; UNITS PASS/FAIL: 9**

- 3 units NURSING 3AA3
- 3 units NURSING 3P03
- 3 units NURSING 3Q03
- 3 units NURSING 3M3M
- 4 units HTH SCI 3C04
- 6 units NURSING 4N06

**TOTAL UNITS: 22**

Students who are subsequently admitted to the Post Diploma (B) Stream of the B.Sc.N. Program will be granted credit for these courses (or their equivalent) in the B.Sc.N. Program.

**Psychiatric-Mental Health Program**

This program has been established to provide registered nurses working with mental health patients the opportunity to develop enhanced knowledge and skills required to meet the challenges associated with their evolving roles.

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 skills relevant to assessment, communication, supportive care and collaborative practice.

**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 Psychiatric-Mental Health Nursing Certificate Program is based on recent, relevant psychiatric-mental health nursing experience and demonstrated commitment to the specialty area. Further information may be obtained through the Psychiatric-Mental Health Nursing Certificate Program Office.

**ACADEMIC REGULATIONS**

Students in the Psychiatric-Mental Health Nursing Certificate Program are subject to the General Academic Regulations of the University and the regulations of the B.Sc.N. Program.

**REQUIREMENTS**

- 3 units NURSING 3E03
- 3 units NURSING 3F03
- 3 units NURSING 3G03
- 3 units NURSING 3H03
- 4 units HTH SCI 3C04
- 6 units NURSING 4L06

**TOTAL UNITS: 22**

Students who are subsequently admitted to the Post Diploma (B) Stream of the B.Sc.N. Program will be granted credit for these courses (or their equivalent) in the B.Sc.N. Program.

**Academic Regulations**

**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.

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 un-safe 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 successfully achieved for attainment of a passing grade in the course.

**B.Sc.N. Program Academic Regulations**

**Basic (A), (D) and Post Diploma (B), (E) Streams**

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 one three-unit Level I Health Sciences courses (Basic (A) Stream) or in Level I Health Sciences course (Post Diploma (B) and (E) Streams) 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; or NURSING 2A04 and 2AA4.

The following courses are designated clinical courses:

- Basic (A) Stream: NURSING 2L03, 2P03, 3X04, 3Y04, 4J07, 4K07
- Diploma Registered Nurses (B) Stream: NURSING 4S06, 4T06
- Diploma Practical Nurses (E) Stream: NURSING 3X04, 4J07, 4K07

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 theoretical component as well as a grade of at least B- in the clinical component in each of NURSING 3A04, 3B04, 4C13, 4T05, 4T05B;
2. achieve a grade of B- in NURSING 4P04 or 4R03.

The following courses are designated clinical courses:

- NURSING 4A04, 4A05, 4C13, 4T05, 4T05B

**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 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 re-
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.

Only one Nurse Practitioner course may be repeated. If a grade of less than B- or unsatisfactory is obtained in the Nurse Practitioner course on the second attempt, the student may not continue in the program.

Collaborative B.Sc.N. Program (D) Stream
Mohawk and Conestoga Sites

In addition to meeting the General Academic Regulations of the University, (please refer to the General Academic Regulations section of the 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 of this Calendar 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 the Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk College.

Please see Medical Physics and Applied Radiation Sciences in the Faculty of Science section of this Calendar for admission requirements.
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 world 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 in 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 Communication Studies and Multimedia
- Department of English and Cultural Studies (English; Combined Honours in Cultural Studies and Critical Theory)
- Department of French
- Department of History
- Department of Linguistics and Languages (German, Hispanic Studies, Italian, Japanese, Polish, Russian)
- Department of Philosophy

In addition, the Faculty offers the following interdepartmental programs and one Interdisciplinary Minor:

- Combined Honours in Comparative Literature
- Combined Honours in German
- Combined Honours in Hispanic Studies
- Combined Honours in Italian
- Honours Linguistics
- Honours Linguistic Cognitive Science
- Honours Modern Languages and Linguistics
- 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**

**HUMANITIES I**

**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 1HU3, 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 a Level I 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 enrollment. 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 for entrance in September of the same calendar year. Only those students who contact the Office of the School of the Arts before January 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 space 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 OUAC 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 1**

<table>
<thead>
<tr>
<th>ART</th>
<th>1F03, 1FF3 (See Note 6 above.) Students in ART 1F03 and 1FF3 must also register in SCIENCE 1A00 when completing their registration.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART HIST</td>
<td>1A03, 1AA3</td>
</tr>
<tr>
<td>CLASSICS</td>
<td>1A03, 1B03, 1BB3, 1L03, 1LL3</td>
</tr>
<tr>
<td>CMST</td>
<td>1A03, 1B03</td>
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<tr>
<td>COMP LIT</td>
<td>1A03, 1AA3</td>
</tr>
<tr>
<td>CSCT</td>
<td>1B03, 1BB3</td>
</tr>
<tr>
<td>ENGLISH</td>
<td>1A03, 1AA3, 1B03, 1BB3, 1C06</td>
</tr>
<tr>
<td>FRENCH</td>
<td>1A06, 1N06, 1206</td>
</tr>
<tr>
<td>GREEK</td>
<td>1203, 1223</td>
</tr>
<tr>
<td>HISTORY</td>
<td>1A03, 1AA3, 1B03, 1BB3, 1L03, 1LL3</td>
</tr>
<tr>
<td>LATIN</td>
<td>1203, 1223</td>
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<tr>
<td>LINGUIST</td>
<td>1A03, 1AA3</td>
</tr>
<tr>
<td>MMEDIA</td>
<td>1A03, 1B03</td>
</tr>
<tr>
<td>MUSIC</td>
<td>1A03, 1AA3, 1CC3, 1D03, 1Y03, 1YY3</td>
</tr>
<tr>
<td>PEACE ST</td>
<td>1A03, 1B03</td>
</tr>
<tr>
<td>PHILOS</td>
<td>1A03, 1B03, 1C03, 1D03, 1E03</td>
</tr>
<tr>
<td>THTR&amp;FLM</td>
<td>1A03, 1B03</td>
</tr>
<tr>
<td>WOMEN ST</td>
<td>1A03, 1AA3</td>
</tr>
</tbody>
</table>
COURSE LIST

(Humanities courses available to Level I students. These courses do not provide entry into a Level II program)

SEMINAR
1B03, 1B53, 1Z06

HISPANIC
1A03, 1A03, T206, 2D03, 2D03

INQUIRY
1H03

ITALIAN
1A03, 1A03, 1Z06, 1Z26

JAPANESE
1Z26

POLISH
2A03, 2A0A

RUSSIAN
2A03, 2A0A

REQUIREMENTS:

Students admitted to Humanities I (0700) must complete 30 units as follows:

- 12 units from Course List 1 (should include six units in each of two subjects listed above)
- 18 units Electives, which may include courses from Course Lists 1 and 2

MUSIC

REQUIREMENTS

Students admitted to Music I (0370) must complete 33 units of work as follows:

- 21 units MUSIC 1C03, 1D03, 1E06, 1G03, 1Y03, 1YY3
- 12 units Electives

B. Degree Programs

Upon successful completion of Humanities I, a student may be admitted to a program of study leading toward a Bachelor of Arts degree. (Completion of Music I may lead to a Bachelor of Music or Bachelor of Arts degree.) There are three ways to complete a Bachelor's degree in the Faculty of Humanities.

SINGLE HONOURS PROGRAM

This involves three years of study, beyond Level I, concentrated in the work of a single discipline (e.g., History). After three years of Music study beyond Music I, students receive a B.Mus. degree.

COMBINED HONOURS PROGRAM

This involves three years of study, beyond Level I, concentrated in the work of two disciplines (e.g., English and Comparative Literature). In fact, a student can combine study in any two Humanities disciplines, or one Humanities discipline and a subject from another Faculty where appropriate (e.g., History and Political Science).

MINOR

A minor is an option available to a student enrolled in a four-level program. A minor consists of at least 18 units of Level II, III, or IV courses beyond the designated Level I course(s), using elective units only, that meet the requirements set out in the program description of that minor. A student is responsible for ensuring that the courses taken meet these requirements. When registering for courses to be applied towards a minor, in the case of cross-listed courses, students must ensure that they register in the appropriate subject for the minor designation.

There will be no minor in any Humanities discipline, or in any Humanities discipline and a subject from another Faculty where appropriate (e.g., History and Political Science).

SECOND LANGUAGE PROFICIENCY

Students embarking on Humanities programs should be aware that most graduate schools require, for admission, proficiency in at least one, and frequently two, languages other than English. In this Faculty, proficiency in at least one language other than English is regarded as an essential tool for students interested in Comparative Literature and Linguistics. Generally, proficiency in more than one language is a hallmark of highly-qualified Humanities graduates seeking the widest range of post-graduation academic and employment opportunities.

For students wishing to acquire a reading knowledge of French, a summer course, FRENCH 4R06 is offered in May-June. This course is intended to prepare current and incoming graduate students for the French proficiency test administered by some departments. Certain graduate programs recognize a passing mark in this course as fulfillment of the second language requirement.

PART-TIME STUDY

Students wishing to enter any program offered by the Faculty of Humanities and pursue a program on a part-time basis should consult the appropriate Departmental Counsellors before making their plans.

ACADEMIC REGULATIONS

STUDENT ACADEMIC RESPONSIBILITY

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

ADMISSION TO LEVEL II PROGRAMS

The dates for application may vary somewhat from year to year; however, the specific dates and information will be posted on campus and outlined in the campus newspaper. It is the student's responsibility to participate in these activities.

1. In February, a Majors Fair is held by departments in the Faculty of Humanities to discuss undergraduate programs, course offerings, career opportunities, etc.;

2. Mid-March to Mid-April, students seeking admission to a Level II program for the following Fall/Winter session, especially for a limited enrolment program such as Multimedia, must complete an application for admission to Level II through MUGSI. The application allows students to rank four program choices, and students will be notified of their eligibility for these choices on their grade reports in June.

TRANSFER TO THE FACULTY OF HUMANITIES

Students from other Faculties are able to transfer to degree programs offered by the Faculty of Humanities provided that they have obtained a Cumulative Average of at least 3.5 and have completed the necessary requirements for admission to a program.

REINSTATEMENT TO THE FACULTY OF HUMANITIES

A student who may not continue at the University may apply for reinstatement; however, reinstatement is not automatic or guaranteed. Students seeking reinstatement must complete the Reinstatement Request Form available at the Office of the Registrar (Gilmore Hall, Room 108) and the Faculty of Humanities (Chesster New Hall, Room 112). The completed form and the $50.00 fee must be submitted to the Office of the Registrar by June 30 for September entry and by November 15 for January entry.

The form should explain the reasons for the student's inadequate performance, corrobated by two Letters of Reference from qualified professionals or employers, and should include relevant documentary evidence, for example a letter from a physician outlining any medical condition that may have affected the student's academic performance or final grades. Reinstatement cases will be carefully screened and the evidence considered will include the student's academic performance before and after admission to McMaster, as well as the nature of the reasons cited in the application letter, the Letters of Reference, and the accompanying documentation.
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.

At any review for 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 permission(s) has been obtained, if required. They should review their personal degree audit each time they can enter 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 fee 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 Level of their program are permitted to overload by 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 credits. Courses taken at another university cannot be used to satisfy the University's minimum residence requirement, will not be included in the calculation of the averages at McMaster, and therefore cannot be used to raise standing. The transcript designation will read 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 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 approval, 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**

Information concerning student exchanges can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Centre for Student Development, International Student Services.

**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 due 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 McMaster University. In addition to paying tuition fees at the other institution, students must pay for work 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 Muhic-Day, the Career Services, Liaison and Study Abroad Coordinator, Chester New Hall, Room 102/A 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 counsel(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://sfa humanities.mcmaster.ca*

The School of the Arts offers programs in:

- Art
- Art History
- 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

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) an average of at least 7.0 in ART 1F03 and 1FF3 and (c) the successful completion of ART HIST 1A03 and 1AA3.

NOTES
1. 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, 2FF3, 2D03, 3E06, 4E12.
2. Students must achieve a minimum grade of B- in ART 3E06 before registering in ART 4E12.
3. Students wishing to obtain a Minor in Art History should note that six, and only six, units of Art History required in the Art 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, 2FF3, 2D03, 3E06, 4E12
9 units from ART 3F03, 3G03, 3H03, 3I03
6 units ART HIST 2D03, 2AA3
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) an average of at least 7.0 in ART 1F03 and 1FF3 and (c) the successful completion of ART HIST 1A03 and 1AA3.

NOTES
1. Students in Combined Honours Art must complete ART 2A03, 2AA3, 2B03, 2BB3, 2C03, 2CC3, 2FF3 before registering in Level III or IV Art courses.
2. 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.
3. 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, 2FF3, 2D03, 3E06, 4C06
6 units ART HIST 2D03, 3A03 (See Note 2 above.)
36 units Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
9 units Electives to total 120 units

Honours Art 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 ART HIST 1A03 and 1AA3.

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 completing HUMAN 3W03 or 4W03 and should consult with the Art History Counsellor for advice.

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, 2P03, 2Z03
9 units Level III Art History
12 units Levels III and IV Art History
6 units from ART HIST 4A03, 4B03, 4C03, 4E03, 4H03, 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
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 1AA3.

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, 2P03, 2Z03
6 units Level III Art History
3 units from ART HIST 4A03, 4B03, 4C03, 4E03, 4H03, 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

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 ART HIST 1A03 and 1AA3.

REQUIREMENTS
90 Units total (Levels 1 to III)
30 units from the Level I program completed prior to admission into the program
9 units ART HIST 2A03, 2B03, 2C03
6 units from ART HIST 2D03, 2P03, 2Z03
15 units Levels III and IV Art History
30 units Electives
PROGRAMS IN DRAMA
(SEE PROGRAMS IN THEATRE & FILM STUDIES)

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 (0370)

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 MUGS 1 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 3AA3, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3RC03, 3V03, 4K03, 4L03, 4M03, 4N03, 4O03, 4O3, 4P03, 4Q03, 4V03

COURSE LIST 2
MUSIC 3CM3, 3CT3, 3H03, 3Y03, 3YY3, 4C03, 4H03, 4I03, 4R03, 4Y03

COURSE LIST 3
MUSIC 2A03, 2F03, 2G03, 2I03, 3G03, 3J03, 3K03, 3L03, 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03, 4G03, 4J03, 4K03, 4V03

COURSE LIST 4
MUSIC 3E03, 3E06, 3S03, 4E03, 4E06, 4S03 (Lesson fees are charged to students taking these courses.)

REQUIREMENTS
123 units total (Levels I to IV)
33 units: Music I
24 units: MUSIC 2CC3, 2D03, 2E06, 2G03, 2H03, 2Y03, 2YY3
3 units: from MUSIC 2A03, 2F03, 2G03, 2I03, 2J03, 2T03, 3J03, 3U03
24 units: from Course Lists 1 and 2
9 units: from Course Lists 3 and 4
30 units: Electives

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 MUGS 1 in mid-March to be considered for admission.

ADMISSION
Completion of Music I and a Cumulative Average of at least 6.0.

COURSE LIST 1
All Level III and IV Music courses except MUSIC 3T03, 3U03, 3Z03

COURSE LIST 2
MUSIC 2A03, 2F03, 2G03, 2I03, 2J03, 2T03, 3T03, 3U03, 3Z03

REQUIREMENTS
120 units total (Levels I to IV)
33 units: Music I program
21 units: MUSIC 2CC3, 2D03, 2E06, 2H03, 2Y03, 2YY3
12 units: from Course List 1
6 units: from Course Lists 1 and 2
36 units: Courses specified for the other subject. (Combinations with Social Sciences may require more than 36 units.)
12 units: Electives to total 120 units

B.A. in Music

Students wishing to enter this program must complete an application for admission to Level II on MUGS 1 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
80 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 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 level), including at least one from the 20th century; 3. Ear test appropriate to the Grade 8 honours performance level; 4. Written exam 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.
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 theatre. 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, the School of the Arts recommends that the Diploma major plan their work to accommodate nine extra units.

- Students registered in Honours Theatre & Film will not be charged extra fees 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.

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.)
18 units Level III or IV Theatre & Film
6 units Level IV Theatre & Film courses including at least three units from THTR&FLM 4B03, 4C03, 4D03, 4E03, 4F03
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

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.

REQUIREMENTS

60 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, 2C03, 2D03, 2E03, 2F03 (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.Ars.Sc.; See Arts & Science Program)

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
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 3.5 including an average of at least 4.0 in THTR&FLM 1A03 and 1B03.

REQUIREMENTS

80 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, 2C03, 2D03, 2E03, 2F03 (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
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 MUGS 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 may substitute six units of Level II Greek; students with Grade 12 Latin U 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 2B03, 2C03, 2K03, 2L03, 2LL3, 2Z03, 3C03, 3CC3, 3E03, 3EE3, 3G03, 3H03, 3LL3, 3MM3, 3Q03, 3T03
6 units from CLASSICS 4B03, 4BB3, 4E03, 4T03
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 MUGS 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 1203 and II23 or in Latin 1203 and II23 (Students with Grade 12 Greek U may substitute six units of Level II Greek; students with Grade 12 Latin U 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 2B03, 2E03, 2H03, 3EE3, 3O3, 3T03
24 units Greek (including GREEK 1Z03 and II23 or 1206; if not completed in Level I)
24 units Latin (including LATIN 1Z03 and II23 or 1206; 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)

Students wishing to enter this program must complete an application for admission to Level II on MUGS 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 may substitute six units of Level II Greek; students with Grade 12 Latin U 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 2B03, 2C03, 2K03, 2L03, 2LL3, 2Z03, 3C03, 3CC3, 3E03, 3EE3, 3G03, 3H03, 3LL3, 3MM3, 3Q03, 3T03
6 units from CLASSICS 4B03, 4BB3, 4E03, 4T03
9 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

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 MUGS 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 1203 and II23 or in LATIN II23 and II23. (Students with Grade 12 Greek U may substitute six units of Level II Greek; students with Grade 12 Latin U 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 2B03, 2E03, 2H03, 3EE3, 3O3, 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 MUGS 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 may substitute six units of Level II Greek; students with Grade 12 Latin U may substitute six units of Level II Latin.)

NOTES

1. Students entering the program with GREEK 1Z23 or LATIN II23 who have not also completed a Level I Classics course are strongly encouraged to include CLASSICS 2L03, 2LL3 in their Level II program.
2. Students are encouraged to include at least six units of Greek or Latin in their program. GREEK 1Z03, II23 and LATIN 1Z03, II23, 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

See the Interdisciplinary Minors and Thematic Areas section of this Calendar.
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 1B03. 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.

   - 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.

2. It is strongly recommended that students in the Language and Social Life Stream take LINGUIST 1A03 and 1A03 in Level I or 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, 2U03, 2V03, 2W03, 3C03, 3D03, 3E03, 3V03, 3W03, 3Y03, 4D03, 4G03, 4H03, 4I03, 4J03, 4L03, 4R03, 4S03, 4T03, PSYCH 2C03, 2H03, 3U03, 3UU3

COURSE LIST 2 - CULTURAL STUDIES STREAM

- 3 units CMST 2BB3
- 3 units from CMST 4C03, 4M03
- 12 units from CMST 2F03, 2I03, 2M03, 2M03, 2N03, 2O03, 2P03, 2T03, 2X03, 2Y03, 3B03, 3C03, 3F03, 3P03, 3S03, 3T03, 3T07, 3U03, 3W03, 3X03, 3X03, 4F03

COURSE LIST 3 - PERFORMANCE STUDIES STREAM

- 6 units CMST 2G03, 4C03
- 6 units from CMST 2H03, 2P03, 2R03, 2R03, 2S03, 3U03
- 6 units from CMST 2F03, 2G03, 3H03, 3L03, 3M03; KINESIOL 3J03, 3T03

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:

   - 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 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.

   - 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. 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 4 - MASS COMMUNICATION STREAM

- 6 units CMST 2K03, 4E03
- 3 units from CMST 2L03, 2203
- 3 units from CMST 3C03, 3D03
- 6 units from CMST 2F03, 2L03, 2203, 3C03, 3D03, 3I03, 3K03, 3MM3, 4D03

REQUIREMENTS

120 units total (Level I to IV)

- 30 units from the Level I program completed prior to admission into the program
- 12 units CMST 2A03, 2B03, 2C03, 2D03
- 3 units from CMST 3K03, 3N03, 3Q03
- 3 units from CMST 4C03, 4N03, 4Q03
- 36 units from Course Lists (See Note 1 above.)
- 36 units Electives
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, 3G03, 3D03, 3E03, 3V03, 3W03, 3Y03, 4D03, 4G03, 4H03, 4J03, 4L03, 4R03, 4S03, 4T03
3 units from PSYCH 2G03, 2H03, 3J03, 3U03
Course List 2 - Cultural Studies Stream
3 units CMST 2BB3
3 units from CMST 4G03, 4M03
12 units from CMST 2F03, 2G03, 2H03, 2R03, 2S03, 2U03, 2V03, 2X03, 2Y03, 3BB3, 3CC3, 3F03, 3P03, 3SS3, 3T03, 3TT3, 3UU3, 3WW3, 3XX3, 4FF3

COURSE LIST 2 - PERFORMANCE STUDIES STREAM
6 units CMST 2G03, 4C03
6 units from CMST 2H03, 2P03, 2R03, 2RR3, 2S03, 3U03
6 units from CMST 2F03, 2G03, 3H03, 3L03, 3M03; KINESIO 3L03, 3T03

COURSE LIST 3 - 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, 3G03, 3D03, 3I03, 3K03, 3M03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
12 units CMST 2A03, 2B03, 2C03, 2D03
3 units from CMST 3K03, 3N03, 3Q03
3 units from CMST 4C03, 4N03, 4Q03
18 units from one of the Course Lists (See Note 1 above.)
36 units Courses specified for the other subject.
16 units Electives to total 120 units

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
Enrolment in this program is limited and highly competitive.
Selection is based on academic achievement in Level I Multimedia courses as well as prior 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 MMEDIA 1A03, 1B03.

NOTES
1. Applicants must have completed Level I (30 units including MMEDIA 1A03 and 1B03) by April of the year in which application is made.
2. Application for this program must be made by April 30. Please see Admission to Level II Programs under Academic Regulations in this section of the Calendar for information with regard to the application procedure.
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 MMEDIA 4A03 and 4B03 in the same academic year.

COURSE LIST 1
CMST 2T03, COMP SCI 1MA3, 2SC3, 3SE3; LINGUIST 4D03; MMEDIA 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 3C03, 3D03, 3E03, 3F03, 3G03, 3H03, 3I03, 3J03, 3K03, 3L03, 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 MMEDIA 2A03, 2B03, 3A03, 3B03, 4A03, 4B03
3 units from MMEDIA 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

COMPARATIVE LITERATURE
WEB ADDRESS: http://www.humanities.mcmaster.ca/~complit/

Honours Arts & Science and Comparative Literature
(B.Arts.Sc.; See Arts & Science Program)

Combined Honours in Comparative Literature and Another Subject

Comparative Literature is the study of literature from an international and interdisciplinary perspective. The Combined Honours Program allows students to pursue both Comparative Literature (taught in English) and another subject of their choosing.

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 COMP LIT 1A03 or 1A03; whichever of these two courses was not completed in Level I must be taken in Level II.

NOTES
1. Graduate programs in Comparative Literature require proficiency in a second language. Students who plan to pursue graduate studies in Comparative Literature are strongly encouraged to include a second language beyond the introductory level in their program.
2. Upon completion of 60 units of work and with the approval of the Director of Comparative Literature and of 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 Study Elsewhere Program.

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 COMP LIT 2A03, 2AA3, 2BB3, 2CC3, 2D03, 3B03, 3G03, 3H03, 3JJ3, 3K03, 3Q03, 3WW3
6 units from COMP LIT 4A03, 4D03, 4F03, 4G03, 4T03
15 units Levels II, III, IV Comparative Literature
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

Minor in Comparative Literature
24 units of Comparative Literature, of which no more than six units may be taken from Level I.

DEPARTMENT OF ENGLISH AND CULTURAL STUDIES
WEB ADDRESS: http://www.humanities.mcmaster.ca/~english/

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:

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<thead>
<tr>
<th>AREA</th>
<th>ENGLISH COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA 1</td>
<td>Early British Literature</td>
</tr>
<tr>
<td></td>
<td>2B06, 3C06, 3D06, 3K06, 3L06, 3V06</td>
</tr>
<tr>
<td>AREA 2</td>
<td>Later British Literature</td>
</tr>
<tr>
<td></td>
<td>2K06, 3G06, 3M06, 3N06</td>
</tr>
<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, 2MM3, 2P03, 3A03, 3AA3, 3J06, 3Q03, 3QQ3</td>
</tr>
</tbody>
</table>

Honours English (2200)

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 Levels II and/or III English
   - Level III 18 units of Levels II and/or III English
   - Level IV six units of Levels II and/or III English; 12 units of Level IV English seminars (No student may take more than 12 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)

- 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 Area 4 and ENGLISH 2D03, 3BB3, 3CC3, 3D03, 3DD3, 3EE3, 3H03, 3J03, 3K03, 3M03, 3S03, 3U03, 3V03
- 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 of Level I English.

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 4X03 should contact the faculty member chairing the CSCT 4X03 committee early in the first term.

3. Most graduate programs in Cultural Studies and 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 2D03, 2M03, 2MM3, 2P03, 3A03, 3AA3, 3CC3, 3D03, 3Q03, 3R06
FACULTY OF HUMANITIES

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 (1200)

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, 3BB3, 3CC3, 3DD3, 3EE3, 3H03, 3S03, 3U03, 3W03, 3X03, 3Y03
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.humanities.mcmaster.ca/~french

Honours Arts & Science and French
(B.Arts.Sc.; See Arts & Science Program)

PROGRAMS FOR STUDENTS ENTERING IN 2006-2007

The Department of French has an overall theme of Francophonie (the French-speaking world) and Diversity. This theme is reflected in the four areas of study, as follows:

<table>
<thead>
<tr>
<th>AREA</th>
<th>FRENCH COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistics, Translation and Literary Theory</td>
<td>2G03, 2H03, 3A03, 3CC3, 3GG3, 3H03, 4BB3, 4E03, 4H03, 4LL3, 4X03</td>
</tr>
<tr>
<td>African and Caribbean Literatures and Cultures</td>
<td>3Z03, 4LL3</td>
</tr>
<tr>
<td>Quebec and Franco-Canadian Literatures and Cultures</td>
<td>2E03, 3AA3, 3BB3, 4U03</td>
</tr>
<tr>
<td>Franco-European Literatures and Cultures</td>
<td>2F03, 2J03, 2JJ3, 2N03, 3K03, 3KK3, 3QQ3, 3SS3, 3W03, 4F03, 4Q03, 4J03, 4MM3, 4NN3, 4Q03, 4S03, 4W03, 4WW3, 4Y03</td>
</tr>
</tbody>
</table>

NOTE

Students planning to do graduate work in French literature are advised to take as many courses as possible from the Franco-European Literatures and Cultures Area.

Honours French (2233)

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.

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.

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
9 units FRENCH 2E03, 2F03, 2H03
3 units from FRENCH 3203, 4LL3
12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 4WW3; 4J03, 4S03
12 units Level II, III or IV French
6 units Level IV French
36 units Electives

Combined Honours in French 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 a grade of at least B- in FRENCH 1A06 or 2M06 or a grade of at least B+ in FRENCH 1N06.

NOTE

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.

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
9 units FRENCH 2E03, 2F03, 2H03
3 units from FRENCH 3203, 4LL3
12 units from FRENCH 2J03 or 2JJ3; 3K03 or 3KK3; 3Q03 or 3QQ3; 3W03 or 4WW3; 4J03, 4S03
12 units Level II, III or IV French
6 units Level IV French
36 units Electives

B.A. in French (1230)

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
9 units FRENCH 2B03, 2BB3, 3C03
12 units from FRENCH 2E03, 2F03, 2H03, 3Z03

PROGRAMS FOR STUDENTS WHO ENTERED PRIOR TO SEPTEMBER 2006

Honours French

PROGRAM A: LANGUAGE AND LITERATURE

For Students Who Entered Prior to September 2006

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, up to 15 units of Honours French may be replaced by courses of study at a French-language university.

COURSE LIST 1

FRENCH 4F03, 4103, 4LL3, 4MM3, 4N03, 4Q03, 4S03, 4U03, 4VO3, 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, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 4WW3
- 3 units from FRENCH 2E03, 3E03, 3A03, 3BB3, 3Z03, 4U03
- 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

For Students Who Entered Prior to September 2006

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, up to 15 units of Honours French may be replaced by courses of study at a French-language university.

COURSE LIST 1

FRENCH 3A03, 3AA3, 3BB3, 3K03, 3KK3, 3Q03, 3QQ3, 3SS3, 3W03, 4J03, 4S03, 4U03, 4X03, 4VO3, 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 2E03, 2BB3, 3C03, 4A03
- 9 units from Course List 1, including at least three units from Levels III or IV
- 6 units from FRENCH 2J03, 3H03
- 9 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

Combined Honours in French and Another Subject

PROGRAM A: LANGUAGE AND LITERATURE

For Students Who Entered Prior to September 2006

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.

COURSE LIST 1

FRENCH 4F03, 4103, 4LL3, 4MM3, 4N03, 4Q03, 4S03, 4U03, 4VO3, 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
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 4WW3
- 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 to total 120 units

For Students Who Entered Prior to September 2006

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, 2J03, 2JJ3, 3H03, 3Q03, 3QQ3, 3SS3, 3W03, 4J03, 4S03, 4U03, 4X03, 4VO3, 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
- 9 units from Course List 1, including at least three units from Levels III or IV
- 6 units from FRENCH 2J03, 3H03
- 9 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

B.A. in French

Program Options

For Students Who Entered Prior to September 2006

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, 2BB3, 3C03, 4F03
- 3 units from FRENCH 2J03, 2JJ3
- 3 units from FRENCH 2W03, 2WW3, 3W03, 4WW3
- 6 units from FRENCH 3A03, 3K03, 3KK3, 3QQ3, 3SS3
- 12 units Levels II, III or IV French
- 24 units Electives

Minor in French

Program Options

For Students Who Entered Prior to September 2006

REQUIREMENTS

24 units total

- 6 units from FRENCH 1A06, 1N06, 2M06
- 9 units FRENCH 2B03, 2BB3, 3C03
- 3 units from FRENCH 2E03, 2F03, 2G03, 2J03, 2JJ3, 2W03, 2W3, 3A03, 3BB3, 3K03, 3KK3, 3QQ3, 3W03, 4J03, 4S03, 4W03
- 6 units Levels II or III French, excluding FRENCH 2M06 and 2Z06
Honours Arts & Science and History  
(B.Arts.Sc.; See Arts & 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 (including Britain)  
  HISTORY 2CC3, 2DD3, 2EE3, 2FF3, 2HH3, 2II3, 2M03, 2M43, 2P03, 2Q03, 2R03, 2S03, 2U03, 2UU3, 3D03, 3F03, 3I03, 3JJ3, 3L03, 3PP3, 3QQ3, 3RR3, 3SS3, 3TO3, 3UU3, 3V03, 3VV3, 3Y03, 3Z03, 3Z23  

- Ancient and Non-Western World  
  HISTORY 2EE3, 2HH3, 2K03, 2L03, 2LL3, 2P03, 2UU3, 3AA3, 3B03, 3C03, 3CC3, 3DD3, 3E03, 3EE3, 3GG3, 3LL3, 3MM3  

- The Americas  
  HISTORY 2AA3, 2DD3, 2EE3, 2G03, 2P03, 2P06, 2R03, 2S03, 2T03, 2TT3, 3M03, 3I03, 3J03, 3K03, 3K33, 3L03, 3N03, 3NN3, 3O03, 3P03, 3UU3, 3V03, 3W03, 3WW3, 3Y03  

**Honours History**  
**(2290)**  
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 toward 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. The department recommends that students take one Level IV seminar in Level III and one Level IV seminar in Level IV.  
4. KINESIOI 3A01 (History of Physical Culture and Sports Medicine) may be taken as a substitute for three units of Level III History.  

**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.
Minor in Japanese Studies
24 units from JAPANESE 1Z06 and JAPAN ST 2P06 and 12 additional units of Japanese or Japanese Studies courses

DEPARTMENT OF LINGUISTICS
AND LANGUAGES

WEB ADDRESS: http://www.humanities.mcmaster.ca/-modlang

The Department of Linguistics and Languages offers B.A. Honours programs in:
** German
** Hispanic Studies
** Italian
** Linguistic Cognitive Science
** Linguistics
** Modern Languages and Linguistics

In addition, Minors are available, using electives only, in: German, Hispanic Studies, Italian, Japanese and Linguistics. Language courses in Polish and Russian are also offered by the Department.

Combined Honours in German
and Another Subject

The Combined Honours program in German and Another Subject is being phased out. No new registrants will be accepted after September 2006.

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 including GERMAN 1B03 and 1BB3, 1Z06; or 1Z03 and 1ZZ3 and a Cumulative Average of at least 6.0. A minimum grade of B- is required in GERMAN 1BB3, 1Z05; or 1ZZ3.

NOTES
1. It is highly recommended that students include HISTORY 2113 as an elective in this program.
2. Upon completion of 60 units and with the approval of the Department of Linguistics and Languages 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 Study Elsewhere Program.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Program completed prior to admission into the program
36 units Levels II, III or IV German
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 Hispanic Studies
and Another Subject

The Combined Honours program in Hispanic Studies and Another Subject is being phased out. No new registrants will be accepted after September 2006.

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 including HISPANIC 1A03 and 1A03; or 1Z06; or 1Z03 and 1ZZ3, and a Cumulative Average of at least 6.0. A minimum grade of B- is required in HISPANIC 1A03, 1Z06; or 1ZZ3.

NOTE
Upon completion of 60 units and with the approval of the Department of Linguistics and Languages 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 Study Elsewhere Program.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Program completed prior to admission into the program
12 units HISPANIC 2C03, 2L03, 2X03, 2X03
24 units Levels II, III or IV Hispanic
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 Italian
and Another Subject

The Combined Honours program in Italian and Another Subject is being phased out. No new registrants will be accepted after September 2006.

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 including ITALIAN 1A03 and 1A03; or 1Z06; or 1Z26 and a Cumulative Average of at least 6.0. A minimum grade of B- is required in ITALIAN 1A03, 1Z06 or 1Z26.

NOTE
Upon completion of 60 units and with the approval of the Department of Linguistics and Languages 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 Study Elsewhere Program.

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I Program completed prior to admission into the program
36 units Levels II, III or IV Italian
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 Linguistics (2312)

This program is designed for students who are concentrating on the scientific study of language (phonology, morphology, syntax, semantics, etc.).

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 1A03.

NOTES
1. In this program students are required to study at least two languages. The department has defined four language groups (see below) for this purpose and students must take at least six units from one language group of their choice, and 18 units of a language from another group. Please note that some languages begin at Level II. Students are advised that some of the languages listed below may not offer sufficient units to meet this requirement. Students should consult the Academic Counsellor in Linguistics in selecting their language of concentration.
   a) Romance Languages:
      French, Italian, Spanish
   b) Classical:
      Greek, Hebrew, Latin, Sanskrit
   c) Other Indo-European Languages:
      German, Polish, Russian
   d) Non Indo-European Languages:
      Cayuga, Japanese, Mohawk, Ojibwe

2. Upon completion of 60 units of work and with the approval of the Department of Linguistics and Languages 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.
FACULTY OF HUMANITIES

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All Linguistics courses beyond Level I; and all courses taught in a language other than English; CMST 1E03; MMEDIA 1A03, 2D03, 2F03, 3D03, 3E03, 4C03, PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03, 3U05

REQUIREMENTS

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, 3C03, 3F03, 4B03, 4G03

3 units from LINGUIST 4L03, 4L3C, 4XX3

6 units from LINGUIST 4D03, 4E03, 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 may not offer sufficient units to meet this requirement.

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. At some time during the program, students must meet a laboratory requirement by completing one course from Course List 1 below. Enrolment in Psychology Laboratory courses is limited.

4. Students taking French courses as a part of this program must complete 12 units of one language or six units of two different languages in order to fulfill this requirement.

5. Students who want to complete this program must decide which 12 units to include in Linguistics in selecting their language of concentration.

6. Some languages do not offer sufficient units to meet this requirement. Students should consult the Academic Counsellor in Linguistics in selecting their language of concentration.

COURSE LIST 1

All Linguistics courses beyond Level I; and all courses taught in a language other than English; CMST 3E03; MMEDIA 1A03, 2D03, 2F03, 3D03, 3E03, 4C03, PHILOS 2B03, 3F03, 4D03; PSYCH 2E03, 2H03, 3A03, 3U03, 3U05

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

15 units LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03

3 units from LINGUIST 2A03, 2AA3, 2E03, 2LL3

3 units from LINGUIST 4D03, 4L3C, 4XX3, 4Z03, 4Z23; PHILOS 2B03, 3F03

9 units PSYCH 1AA3, 3U03, 3U05

6 units from PSYCH 2D03, 2E03, 2F03, 2H03

3 units from PSYCH 2RA3, 2RR3, SOC SCI 2J03, STATS 1CC3

12 units from a language other than English (See Note 3 above)

3 units from Course List 1

30 units Electives

Honours Modern Languages (2363) and Linguistics

The Honours Modern Languages and Linguistics program is being phased out. No new registrants will be accepted after September 2006.

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 12 units covering two different languages, other than English. A minimum grade of B- is required in FRENCH or GERMANY 1A06, 1B06 or 1Z26 (see Note 2 below); GERMAN 1B03, 1D06 or 1Z23; HISPANIC 1A03, 1Z06 or 1Z23; ITALIAN 1A03, 1Z06 or 1Z26; JAPANESE 1Z06 or 1Z23.

1. When selecting electives, students may choose to focus on one of the following subfields though it is not necessary to do so. Students should speak with the Undergraduate Counsellor for Linguistics to determine which electives are most appropriate for their academic and professional objectives.

TEACHING ENGLISH AS A SECOND LANGUAGE

FRENCH 4E03; LINGUIST 2E03, 3P03, 3X03, 4B03, 4E03, 4F03, 4G03; MMEDIA 2D03, 3F03, 4B03, 4G03, 4P03; PHILOS 2B03, 3F03, 4D03; MMEDIA 1A03, 2D03, 3F03, 4B03, 4G03

SPEECH AND LANGUAGE PATHOLOGY PREPARATION

GERONTOL 2E03; MATH 1M03 or STATS 1A03, 1A06; STAT 1CC3; KINESIO 1Y03, 1Y13; LINGUIST 3B03, 3C03, 3X03, 4SL3; PSYCH 2AA3, 2E03, 2H03, 3A03

LANGUAGE AND SOCIAL LIFE

CMST 3C03, 3D03; FRENCH 3CC3, 4BB3, 4E03, 4F03, 4H03; LINGUIST 2AA3, 2LL3, 4D03, 4L3C, 4XX3, 4Z03, 4Z23; MMEDIA 2D03, 3F03, 4B03, 4G03, 4P03; PHILOS 2B03, 3F03, 4D03; PSYCH 2C03, 2D03, 2H03, 3A03, 3AA3, 3BN3, 3H03, 3I13, 3Q03, 3VV3, 4B33, 4Z03

REQUIREMENTS

120 units total (Levels I to IV)

30 units from the Level I program completed prior to admission into the program

15 units LINGUIST 2L03, 3A03, 3I03, 3I13, 3M03

3 units from LINGUIST 2A03, 2AA3, 2E03, 2LL3

3 units from LINGUIST 4D03, 4L3C, 4XX3, 4Z03, 4Z23; PHILOS 2B03, 3F03

9 units PSYCH 1AA3, 3U03, 3U05

6 units from PSYCH 2D03, 2E03, 2F03, 2H03

3 units from PSYCH 2RA3, 2RR3, SOC SCI 2J03, STATS 1CC3

12 units from a language other than English (See Note 3 above)

3 units from Course List 1

30 units Electives

Honours Linguistic Cognitive Science (2313)

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, 1AA3 and PSYCH 1A03.
NOTES
1. Students are strongly urged to complete LINGUIST 1A03 and 1A13 in their Level I program. If not, LINGUIST 1A03 and 1A13 must be included in Level II of their program.
2. Students entering the program with FRENCH 1206 must complete FRENCH 1A05 or 2206. In addition to the 18 units of French, beyond Level I.
3. Upon completion of 60 units and with the approval of the Department of Linguistics and Languages and of 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 Study 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, 4D03; 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
18 units from LINGUIST 2A03, 2A05, 3E03, 3X03, 4B03, 4D03, 4E03, 4H03, 4M03, 4N03, 4R03, 4S03, 4T03
18 units from a language other than English (above Level I)
18 units from a second language other than English (above Level I)
18 units from Course List 1
18 units Electives

Minors

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/~philos

Honours Arts & Science and Philosophy (B.Ars.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 and an average of at least 7.0 in PEACE ST 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 Study Elsewhere Program.

COURSE LIST 1
PEACE ST 2A03, 2G03, 2I03, 2L03, 2S03, 3A03, 3B03, 3E06, 3F03, 3I03, 3J03, 3KK03, 3L03, 3M03, 3MM3, 3N03, 3O03, 3RR03, 3VV03, 3W03, 3X03, 3Y03, 3Z03, 3CC03

REQUIREMENTS
120 units total (Levels I to IV)
30 units from the Level I program completed prior to admission into the program
3 units PEACE ST 2A03
3 units from ANTHROP 2X03, PEACE ST 3M03, RELIG ST 2H03, SOCIOI 3KK03
3 units from PEACE ST 4A03, 4B03, 4D03
9 units from Course List 1
9 units from Course List 2
9 units from Course Lists 1 and 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

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 ANTHROP 2X03, 3T03, ECON 2F03, 2L03, LABR ST 2A03, 2C03, 2D03, 3G03, PEACE ST 2A03, 2A30, 2B03, 2I03, 2L03, 3A03, 3B03, 3E06, 3F03, 3G03, 3I03, 3J03, 3KK03, 3L03, 3M03, 3MM3, 3N03, 3O03, 3RR03, 3VV03, 3W03, 3X03, 3Y03, 3Z03, 4A03, 4B03, 4C03, 4D03, POL SCI 3A03, 3KK03, 3O03, 3Y03, RELIG ST 2E03, 2H03, 2L03, 2M03, 3CC03

DEPARTMENT OF PHILOSOPHY

WEB ADDRESS: http://www.humanities.mcmaster.ca/~philos

Honours Arts & Science and Philosophy (B.Ars.Sc.; See Arts & Science Program)

Honours Philosophy [2420]

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, 2G06, 3A06, 3G03, 3O03, 4H03
3 units PHILOS 2D03
3 units Levels II, III or IV Philosophy
15 units Levels III or IV Philosophy
6 units Level IV Philosophy
36 units Electives
Combined Honours in Philosophy 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 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 2A06 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 HUMAN 2C03, PHILOS 2B03
15 units Levels III or 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.)

[2420050]

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 an average of at least 7.0 in BIOLOGY 1A03 and 1AA3 with a grade of at least B- and six units of Level I Mathematics. Students are cautioned to observe that CHEM 1AA3 is the normal prerequisite for BIOLOGY 2B03 and BIOLOGY 2C03, which are required courses in the program. Enrolment in this program is limited.

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 2X03, 2XX3, 2C03, 2R03, 2S03, 3A03, 3E03, 3X03
3 units from MATH 3EE3, 4A03
3 units from MATH 4B03, 4E03, 4X03
12 units Levels III or IV Mathematics, Statistics
12 units PHILOS 2A06, 2C06
3 units PHILOS 2B03
21 units Levels III or IV Philosophy
3 units Level IV Philosophy
9 units Electives

B.A. in Philosophy

[1420]

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 HUMAN 2C03, PHILOS 2B03
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.
FACULTY OF HUMANITIES

WOMEN'S STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/-womensst/

Honours Arts & Science and Women's Studies
(B.A.; 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 MUGS 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. Beginning in 2007-2008, admission to this program will be revised as follows: 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 WOMEN ST 1A03 and 1AA3.

2. Students who have not taken WOMEN ST 1A06 (or 1A03 and 1AA3) 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 those courses.

3. 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.

4. 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 RELIG ST 2SS3, SOCIOL 2Q03, WOMEN ST 2F03, 2FF3, 2H03, 2HH3, 2J03, 2K06, 2L03

6 units WOMEN ST 3A03, 3AA3

6 units from LABR ST 3E03, WOMEN ST 3B03, 3BB3, 3DD3, 3EO3, 3GO3, 3GG3, 3HO3, 3HH3, 3I03, 3IN3, 3GW3, 3Z03

6 units WOMEN ST 4A06

6 units from HISTORY 4106, KINESIO 4T03, SOC WORK 4R03, WOMEN ST 4B03, 4C03, 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 to total 120 units

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 (or 1A03 and 1AA3)

18 units Levels II or III Women's Studies courses as listed under Women's Studies in the Course Listings section of this Calendar
For Students Registered in Medical Radiation Sciences I:
7. As places in the Medical Radiation Sciences program are limited, admission is by selection, and possession of published minimum requirements does not guarantee admission.
8. The University reserves the right to grant admission to a limited number of students, and to refuse readmission to any student whose academic performance or general conduct has been unsatisfactory, or who has withdrawn from the program for a period in excess of one academic year.
9. If Grade 12 Physics U has not been completed with a grade of at least 60%, PHYSICS 1P03 must be completed in Term 1 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 1FC3
Introduction to Astronomy and Astrophysics

BIOLOGY 1A03
Cellular and Molecular Biology

BIOLOGY 1A03
Biodiversity, Evolution and Ecology

CHEM 1A03
Introductory Chemistry I

CHEM 1A03
Introductory Chemistry II

COMP SCI 1FC3
Mathematics for Computing

COMP SCI 1MA3
Computer Based Problem Solving

COMP SCI 1MD3
Introduction to Programming

COMP SCI 1SA3
Computing Fundamentals

ENVIR SC 1A03
Atmosphere and Hydrosphere

ENVIR SC 1B03
The Living Environment

ENVIR SC 1G03
Earth and the Environment

MATLS 1M03
Structure and Properties of Materials

MATH 1A03
Calculus for Science II

MATH 1B03
Linear Algebra I

MATH 1D03
Algebra and Geometry

MATH 1X03
Calculus for Math and Stats I

MATH 1XX3
Calculus for Math and Stats II

PHYSICS 1A03
Mechanics and Waves

PHYSICS 1B03
Introduction to Modern Physics A

PHYSICS 1B03
Introduction to Modern Physics B

PSYCH 1A03
Introduction to Experimental Psychology

PSYCH 1AA3
The Psychology of Intercultural 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 and wish to proceed to CHEM 1A03.

2 Students with little or no previous computer experience may substitute COMP SCI 1SA3 for COMP SCI 1MA3; however, students must achieve a grade of at least 60%.

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 who completed it with a grade of less than 60%.

SCIENCE I

REQUIREMENTS: 30 UNITS

3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3
6 units from BIOLOGY 1A03 (or 1AA3), CHEM 1A03, PHYSICS 1B03
12 units from the Science I Course List
6 units Electives
2 courses SCIENCE 1A00, 1B00

See Note 4 from Level I Program Notes.

MATHEMATICS AND STATISTICS I

REQUIREMENTS: 30 UNITS (2006-2007 ONLY)

9 units MATH 1C03, 1X03, 1XX3
3 units MATH 1EC3
0-3 units MATH 1D03 (if Grade 12 Geometry and Discrete Mathematics U is not completed)
3 units from the Science I Course List (see above)
12-15 units Electives
2 courses SCIENCE 1A00, 1B00
REQUIREMENTS: 30 UNITS (EFFECTIVE 2007-2008)
12 units MATH 1B03, 1C03, 1X03, 1XX3
3 units from the Science I Course List (see above)
15 units Electives
2 courses SCIENCE 1A00, 1B00

MEDICAL RADIATION SCIENCES

ENROLLMENT IN THIS PROGRAM IS LIMITED.

REQUIREMENTS: 30 UNITS
3 units BIOLOGY 1A03
3 units CHEM 1A03
6 units KINESIOL 1Y03, 1YY3
3 units MATH 1A03
9 units MEDRADSC 1A03, 1B03, 1C03
3 units STATS 1C03
3 units Electives
2 courses SCIENCE 1A00, 1B00

See Note 9 from Level I Program Notes.

B. Degree Programs

Honours B.Sc. Programs

A Cumulative Average of at least 6.0 is required for admis-
sion to most Honours B.Sc. Programs.

Most Departments or Schools offer 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 concentra-
tion of studies from one of the four areas of science: Geoscience, 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-intro-
duce Natural Science to students through various themes. This specialization may be combined with some B.Sc. Honours pro-
grams. 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 enrollment and admission is by sele-
cation. 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 regist-
ered in full-time studies during the academic terms of their 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.

Students enrolled in the Co-op programs must be registered in full-time studies during the academic terms of their program (24 units in a full-term, 12 units in a half-term) and will be charged per unit registered for registration in the fall of the academic year.

For further information, please consult the Associate Dean of Sci-
ce or Science Cooperative Education in the Faculty of Science.

INDUSTRIAL INTERNSHIPS

The Faculty of Science offers students the opportunity to partici-
pate in 12-16 month full-time paid work placements in industry that provide students with technical work experience related to their acade-
mic 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 prepara-
tion 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

Information concerning student exchanges can be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Centre for Student De-
velopment, International Student Services.

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 univer-
sities in 26 countries abroad.

A Third Year Study Elsewhere 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.

Students eligible to take part in this program, students are ex-
pected 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 bursa-
ries may be available.

Students interested in these opportunities should begin dis-
cussions 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 com-
piled 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 con-
ferred after departments have reviewed the students' academic achievement following their return and registration in their final year of study. The maximum credit available in this way is nor-
mally 30 units for the full year of study, equivalent to Level III. In certain cases, students may be recommended for the Deans' Honours Program in Level II, based on the work undertaken in the program.

Information concerning student exchanges can be found in the Academic Facilities, Student Services and Organizations sec-
ction of this Calendar under the heading Centre for Student De-
velopment, International Student Services.

MINORS

Within the Faculty of Science, minors are available to students regis-
tered 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 mi-
 nors which are excluded. Please see the Program Notes for indi-
 vidual 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 are offered by the Faculty of Science. However students are encouraged to pursue a four-year honours program if they qualify.

Students who successfully complete the first three levels of any Honours B.Sc. degree may request permission from the Office of the Associate Dean of Science to transfer to graduate with a three-level B.Sc. Science degree.

Three-level B.Sc. programs are offered in Geoscience, Life Science, Mathematical Science and Physical Science.

Students are advised to seek counselling to ensure that their course selections are appropriate. Students who identify a subject area of emphasis should seek counselling 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 keystones 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>BIOCHEM 4C03</td>
<td>Inquiry in Biochemistry</td>
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<tr>
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<td>Senior Thesis in Biochemistry and Molecular Biology</td>
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<tr>
<td>BIOCHEM 4P03</td>
<td>Research Project in Biochemistry and Molecular Biology</td>
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<td>BIOLOGY 4C09</td>
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<td>CHEM 4G06</td>
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<td>COMP SCI 4ZP6</td>
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<td>GEO 4CC3</td>
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<td>INQUIRY 3B03</td>
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<td>INQUIRY 4G3</td>
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<td>INQUIRY 4S3</td>
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<td>MATH 3Z03</td>
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<td>MATH 4K04</td>
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<td>MATH 3GP3</td>
<td>Geometric Ideas in Physics</td>
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<td>MATH 3TP3</td>
<td>Truth and Provability: Gödel’s Incompleteness Theorems</td>
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<tr>
<td>MOL BIOL 4R09</td>
<td>Senior Thesis</td>
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<td>ORIGINS 4A09</td>
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<tr>
<td>PSYCH 4J03</td>
<td>Inquiry in Psychology</td>
</tr>
</tbody>
</table>

Students who enrol 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 departmental offices, 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 pre-registration preferential ballot:
   - The Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 3Q03, 3Q03, 3Q03, 4Q03, 4Q03). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3B13, 3E03, 3L03, 3L03, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4F03, 4J03, 4P03, 4Y03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006.
   - Ballots can be obtained from the Psychology, Neuroscience and Behaviour 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 database, 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 on SOLAR (Student On-Line Academic Registration). 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. The student 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.

Students must meet the admission criteria for a Level II program according to the Calendar in effect when they are 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 must meet the admission criteria of 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 credited for admission to a second degree 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 II students must complete the required courses with the stated grades and a Cumulative Average of at least 3.5. Level II students must complete the required courses with the stated grades and a Cumulative Average of at least 6.0 is required for most Honours programs.

Students beyond Level I who wish to transfer to a Science Program must apply to transfer. Please refer to Transfers in this section of the Calendar.

LIMITED ENROLMENT PROGRAMS

Admission is limited for the following programs:

• All Co-op programs
• Honours Biochemistry (Molecular Biology Specialization)
• Honours Biochemistry (Biotechnology and Genetic Engineering Specialization)
• Honours Biochemistry (Computational and Physical Biochemistry Specialization)
• Honours Biology (Microbiology and Biotechnology Specialization)
• Honours Molecular Biology
• Honours Kinesiology
• Medical Radiation Sciences
• Origins Research Specialization

All of these programs except Medical Radiation Sciences and Honours Kinesiology require a thesis or project in Level IV. Resource limitations in providing a thesis or project supervisor for each student dictate that the number of students admitted must be limited. Admission to the program is by selection based on academic merit.

For further information please see Application to Level II Programs in this section of the Calendar.

CONTINUATION IN HONOURS B.SC. AND B.ESC. PROGRAMS

For information regarding requirements for continuing in Faculty of Science programs, please see the General Academic Regulations section in this Calendar.

REINSTATEMENT TO THE FACULTY OF SCIENCE

See Reinstatement in the General Academic Regulations section in this Calendar. Normally a student may not apply for one full academic year following the Result of Session of May Not Continue at the University.

READMISSION TO THE FACULTY OF SCIENCE

See Readmission in the Application Requirements section of this Calendar.

DEADLINES

The Faculty of Science will not consider applications for admission to a second degree or continuing studies, registration, deleting, cancelling, or adding of courses after the deadlines stated in this Calendar under Sessional Dates and Application Procedures sections, unless documentation showing good cause is submitted to the Associate Dean of Science.

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 program requirements of the 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 3.5. Beyond the January deadline date, second term courses may be cancelled. 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 6.0. 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.

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 for dropping and adding courses.

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 for 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 degrees, a Cumulative Average of at least 5.5 (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.fhs.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. The options currently available are:
   • Biochemistry Core
   • Molecular Biology Specialization
   • Biotechnology and Genetic Engineering Specialization
   • Computational and Physical Biochemistry Specialization

Admission to the specializations is limited. Selection is based on academic achievement but requires, as a minimum, completion of the requirements listed below for all Honours Biochemistry students.

2. The Honours Biochemistry 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 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 the Biochemistry Core electives. In addition to the courses specified for the Biochemistry Core, students may request permission from the Department to take three units from ASTRON 1F03, PHYSICS 1B03 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 specialisation 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 their option.

ADMISSION

Completion of the Science I requirements, including:

6 units MATH 1A03, 1AA3
6 units BIOLOGY 1A03, 1AA3
6 units CHEM 1A03, 1AA3
6 units PHYSICS 1B03
3 units from Science I Course List
6 units Level I electives
2 courses, SCIENCE 1A00, 1BB0

While STATS 1C03 is strongly recommended, students will also be considered for admission if they have completed MATH 1AA3 or STATS 1C03. Students with other backgrounds such as Health Sciences may also be admissible and are encouraged to contact the Chair of the Department of Biochemistry and Biomedical Sciences for further details.

MINIMUM AVERAGES/GRADES:

A Cumulative Average of 6.0 and a grade of C+ in each of four BIOLOGY 1A03, 1AA3, CHEM 1A03, 1AA3, and MATH 1A03.

NOTES

1. There are Level II (and III) prerequisites for many Level III (and IV) courses. The prerequisites should be considered when choosing Level II and III courses.

2. Students planning to apply for admission to a Biochemistry Co-op program must take BIOLOGY 2B03 in Level II.

3. A minor in Biology or Chemistry is not permitted in the Honours Biochemistry program.

4. Students are reminded that biochemical laboratory experience is highly valuable in many careers. The laboratory course BIOLOGY 2B03 is required for all Honours Biochemistry students not, by itself, be sufficient for many purposes. Consequently, students who are not taking a research project or thesis course should consider BIOCHEM 4L03.

5. Students who wish to enrol in the Computational and Physical Biochemistry Specialization in Level II, must complete PHYSICS 1B03 or 1BB3 by the end of Level II.

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.

FACULTY OF SCIENCE
Computational and Physical Biology Specialization

(Enrolment is limited. See Note 1 inHonours 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  (See Admission above.)

LEVEL II: 30 UNITS
18 units BIOCHEM 2B03, 2BB3, 2L06, BIOLOGY 2B03, CHEM 2R03
6 units from either CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3
6 units Electives
*BIOLOGY 2B03 must be completed by the end of Level III.

LEVEL III: 30 UNITS (2006-2007 ONLY)
6 units BIOCHEM 3D03, 3L03
6 units from Level III, IV courses
18 units Electives
If not completed: BIOCHEM 2B03, CHEM 2N03

LEVEL IV: 30 UNITS
6 units BIOCHEM 4E03, 4K03
3 units from BIOCHEM 4C03, 4L03
3 units from BIOCHEM 3H03, 3P03, 4H03, 4L03, 4Q03 (See Note 4 above.)
6 units Level III, IV Biochemistry, BIOLOGY 3003, 4V03, HTH SCI 3I03
6 units Level III, IV courses excluding Biochemistry
6 units Electives

Molecular Biology Specialization

(Enrolment is limited. See Note 1 in Honours Biochemistry above.)

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
18 units BIOCHEM 2B03, 2BB3, 2L06, BIOLOGY 2B03, CHEM 2R03
6 units from either CHEM 2OA3 and 2OB3; or CHEM 2BA3 and 2BB3
3 units Electives

LEVEL III: 30 UNITS (2006-2007 ONLY)
18 units BIOCHEM 3D03, 3L03, 3P03, BIOLOGY 2EE3, 3003, CHEM 3FF3 (See Note 6 above.)
6-7 units from Level III, IV Biochemistry, Biology, Chemistry, CHEM ENG 3K04, 3BK3
6 units Electives

LEVEL III: 30 UNITS (2007-2008)
18 units BIOCHEM 3D03, 3P03, BIOLOGY 2C03, 2EE3, CHEM 2N03, 3FF3 (See Note 6 above.)
3-4 units Level III, IV Biochemistry, Biology, Chemistry, CHEM ENG 3K04, 3BK3
3 units Level III, IV courses from the Faculty of Science
6 units Electives

LEVEL IV: 30 UNITS
15 units BIOCHEM 4E03, 4H03, 4K03, 4L03, BIOLOGY 3003
3-6 units from BIOCHEM 4B06, 4P03
3-7 units 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.
### Biotechnology and Genetic Engineering Specialization

#### 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 (2006-2007 ONLY)
12 units BIOCHEM 3D03, 3L03, BIOLOGY 2EE3, 3003
3 units Electives

#### TERM 1 (EFFECTIVE 2007-2008)
9 units BIOCHEM 3D03, BIOLOGY 2C03, 2EE3
3 units Electives

#### 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
18 units BIOCHEM 3P03, 4E03, 4H03, BIOLOGY 3003, CHEM 2N03, 3FF3 (See Note 6 above.)
3-6 units Levels III, IV Biochemistry, Biology, Chemistry
3 units Electives

#### SUMMER
Work Term

#### YEAR 5
15 units from Academic Level V, Term 2, and completion of the second eight-month work term, Term 1.

#### TERM 1
Work Term

### Molecular Biology Specialization

#### 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 (2006-2007 ONLY)
- 9 units BIOCHEM 3D03, 3L03, BIOLOGY 3003
- 3 units from Level III, IV Biochemistry, Biology, Chemistry
- 3 units Electives
  - Work Orientation Course

#### TERM 1 (EFFECTIVE 2007-2008)
- 6 units BIOCHEM 3D03, BIOLOGY 2C03
- 3 units Levels III, IV Biochemistry, Biology, Chemistry
- 6 units Electives
  - Work Orientation Course

#### YEAR 2 AND SUMMER
Work Term

#### YEAR 4
- 30 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
- 18 units BIOCHEM 3D03, 3P03, 4E03, BIOLOGY 3003, CHEM 2N03, 3FF3 (See Note 6 above.)
- 0-6 units BIOCHEM 4B06 (See Notes 6 and 7 above.)
- 3-9 units Levels III, IV Biochemistry, Biology, Chemistry (BIOCHEM 4EE3, 4S03 are recommended.)
- 3 units Electives

#### SUMMER
Work Term

#### YEAR 5
- 15 units from Academic Level V, Term 2, and completion of the second eight-month work term, Term 1.
Minor in Biochemistry

REQUIREMENTS
24 units total
6 units from CHEM 1A03, 1AA3
6 units from either CHEM 2A03 and 2B03 or CHEM 2BA3 and 2BB3
6 units from BIOCHEM 2B03, 2BB3, 2EE3, 3B03, 3BB3, 3D03, 3G03
6 units Levels III, IV Biochemistry

DEPARTMENT OF BIOLOGY
WEB ADDRESS: http://www.science.mcmaster.ca/biology/

Honours & 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 three 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. The options currently available are:

- Biology (Core)
- Biodiversity Specialization
- Genetics Specialization
- Microbiology and Biotechnology 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 1FC3, PHYSICS 1BA3 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, 1D03, STATS 1CC3 (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 1AO0, 1BO0

Students with other backgrounds such as Health Sciences may be admissible 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 field from those suggested below, are encouraged to obtain a degree audit through MUGSI 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 mathematics/statistics may replace STATS 1CC3, 2MA3 with STATS 2MA3, 2MB3. In this case, students are advised to register in MATH 1B03 or 1D03 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 II.
4. Students considering graduate studies in Biology are recommended to complete BIOLOGY 4C09 or 4F06.

BIOLOGY COURSE LIST
BIOLOGY 2EE3, 2G03, 2I03, all Biology Level III and IV courses except BIOLOGY 3Q03, 3Q03; BIOCHEM 2B03, 2BB3, 3G03, 3H03, 3N03, 3E03, 4E03, 4I03, 4K03, 4Q03; CHEM ENG 2B03; GEO 2A03, 2B03, 2C03; 2E03, 2I03, 2K03, 2W03, 3A03, 3I03, 3J03, 3N03, 3S03, 4A03, 4B03, 4C03, 4F03, 4I03, 4S03; HTH SCI 3I03, 3K03, 4I03; MED PHYS 3T03, 4B03; MOL BIOL 4H03, 4J03; PSYCH 2F03, 2T03, 3A03, 3F03, 3FA3, 3G03, 3T03, 3Y03, 4R03, 4Y03

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.
4. Students who wish to take the following courses should take both CHEM 2A03 and 2B03: BIOCHEM 3G03, BIOLOGY 3CC3, 3P03, 4B03, 4T03, more advanced Biochemistry and Chemistry courses. Students are advised to check prerequisites carefully.

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 from CHEM 2E03, 2A03 (See Note 4 above.)
15 units from BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03
9-12 units Electives

LEVEL III: 30 UNITS
3 units from BIOCHEM 2EE3, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03 (whichever is not completed)
8 units 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 Levels III, IV Biology
6 units from Biology Course List
9 units 3 units from Biology Course List, BIOLOGY 4F06 or
units from the Science Capstone Course List, 3 units from Biology Course List or
BIOLOGY 4C09
9 units Level III, IV courses
Biodiversity Specialization (2050812)

NOTES
1. Students interested in the Biodiversity Specialization are recommended to complete PHILOS 2D03 or 2G03 as an elective.
2. Students with mathematical interests are encouraged to complete RELIG ST 2W03 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.
6. Students who wish to take the following courses should take both CHEM 2B03 and 2B04: BIOCHEM 2E03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 2W03, 2X03, 2Y03, 2Z03, 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, 4A03, 4B03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4I03, 4J03, 4K03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4V03, 4W03, 4X03, 4Y03, 4Z03, 5A03, 5B03, 5C03, 5D03, 5E03, 5F03, 5G03, 5H03, 5I03, 5J03, 5K03, 5L03, 5M03, 5N03, 5O03, 5P03, 5Q03, 5R03, 5S03, 5T03, 5U03, 5V03, 5W03, 5X03, 5Y03, 5Z03, 6A03, 6B03, 6C03, 6D03, 6E03, 6F03, 6G03, 6H03, 6I03, 6J03, 6K03, 6L03, 6M03, 6N03, 6O03, 6P03, 6Q03, 6R03, 6S03, 6T03, 6U03, 6V03, 6W03, 6X03, 6Y03, 6Z03.

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 from CHEM 2E03, 2F03, 2G03 (See Note 6 above.)
- 21 units from BIOCHEM 2E03, BIOLOGY 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2G03.
- 3 units from Electives (See Note 4 above.)

LEVEL III: 30 UNITS
- 6 units from BIOLOGY 3F03, 3G03.
- 3 units from 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 from Electives.

LEVEL IV: 30 UNITS
- 3 units from BIOLOGY 4A03.
- 3 units from BIOLOGY 4E03 (See Note 4 above.)
- 9-12 units from Biodiversity Course List, including at least six units from Biology courses (See Note 6 above.)
- 9 units from BIOLOGY 4C09 or BIOLOGY 4F09 and three units from Biology Course List.
- 6 units from Electives.

Genetics Specialization (2050814)

NOTES
1. Students registered in the Genetics Specialization are recommended 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 2E03 in Level II.
4. BIOLOGY 2A03 and 2F03 are strongly recommended.

GENETICS COURSE LIST
- BIOCHEM 3G03, 4E03, 4E03; BIOLOGY 2E03, 3C03, 3E03, 3H03, 3J03, 3K03, 3M03, 3S03, 3V03, 3Y03, 4B03, 4D03, 4E03, 4E03, 4F03, 4P03, 4R03, 4X03, 4XX3; MOL BIOL 4H03
- 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
- 6 units from CHEM 2A03, 2B03.
- 12 units from BIOCHEM 2E03, BIOLOGY 2B03, 2C03, 2D03.
- 12 units from Electives.

LEVEL III: 30 UNITS
- 12 units from BIOLOGY 3F03, 3H03, 3I03, 3P03, 3S03.
- 9 units from Genetics Course List.
- 9 units from Electives.

LEVEL IV: 90 UNITS
- 12 units from BIOLOGY 4C09, 4R03.
- 3 units from BIOLOGY 3F03, 3H03, 3I03, 3P03, 3S03 (whichever is not completed).
- 9 units from Genetics Course List.
- 6 units from Electives.

Microbiology and Biotechnology Specialization (2050817)

ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of the Science I requirements, with a Cumulative Average of at least 6.0.

NOTES
1. The Microbiology and Biotechnology Specialization option allows students to focus on applied aspects of biology and to choose courses with significant laboratory and self-directed learning components. Students intending to specialize in Microbiology and Biotechnology are encouraged to consult with a Biology undergraduate advisor.
2. Students in the Microbiology and Biotechnology Specialization are recommended to undertake BIOLOGY 3F03, CHEM 2B03, HTH SCI 3I03 and 3K03.

MICROBIOLOGY AND BIOTECHNOLOGY COURSE LIST
- BIOLOGY 3F03, 3H03, 3I03, 3P03, 3S03, 4P03, 4D03, 4D03, 4E03, 4F03, 4G03, 4H03.

LEVEL I: 30 UNITS
- 30 units (See Admission above.)

LEVEL II: 30 UNITS
- 18 units from BIOCHEM 2E03, BIOLOGY 2B03, 2C03, 2E03, CHEM 2A03, 2B03.
- 6 units from Electives.

LEVEL III: 30 UNITS
- 21 units from BIOCHEM 3G03, BIOLOGY 3C03, 3P03, 3S03, 3V03, 3W03.
- 3 units from Microbiology and Biotechnology Course List.
- 6 units from Electives.

LEVEL IV: 30 UNITS
- 15 units from BIOLOGY 4C09, 4P03, 4P03.
- 6 units from Microbiology and Biotechnology Course List.
- 9 units from 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 achievements (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 the 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.
Honours Biology and Mathematics (2050320)

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1AA3
6 units BIOLOGY 1A03, 1AA3
6 units CHEM 1A03, 1AA3
3 units MATH 1B03
3 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, 1B00
*Students who have not taken Grade 12 Discrete Mathematics U must take MATH 1D03 as a prerequisite for MATH 1B03.

MINIMUM AVERAGES/GRADRES:
A Cumulative Average of 6.0 and an average of 6.0 in BIOLOGY 1A03, 1AA3 and an average of 6.0 in MATH 1A03, 1AA3, 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 2S03 or 2T03 in Level II, MATH 3A03 and 3X03 in Level III, and MATH 3AA3 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.

LEVEL I: 30 UNITS
30 units (See Admission above.)

LEVEL II: 30 UNITS
6 units CHEM 2A03, 2B03
12 units BIOCHEM 2EE3, BIOLOGY 2B03, 2C03, 2D03 (See Note 6 above.)
12 units Electives

YEAR 1 AND 2
3 units from BIOLOGY 2EE3, 3E03
15 units BIOLOGY 3FF3, 3I03, 3I03, 3G03, 3U03
3 units from Genetics Course List
9 units Electives
⇒ Work Orientation Course
SUMMER
3 units BIOLOGY 4XX3 (first two weeks of May)

LEVEL III: 30 UNITS
12 units BIOLOGY 2A03, 2B03, 2C03, 2F03
15 units MATH 2C03, 2E03, 2R03, 2XX3
3 units Electives

LEVEL IV: 30 UNITS
18 units Levels III, IV Biology (See Note 5 above.)
6 units MATH 3F03, 3N03
3 units from MATH 2S03, 2T03, 3A03
3-6 units STATS 2D03, 2B3
3-6 units Electives

Honours Biology and Pharmacology (Co-op) (2050419)

ADMISSION
Enrolment in this program is limited to a maximum of 20 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 2A03 and 2B03) 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 pharmaceutics.
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 3A06, 3B06, 4A03, 4AA3, 4C03, 4D03 and 4E03 will use a self-directed problem-based learning approach.
4. Students must be registered full-time and take a full academic workload.
5. Students are required to complete a Work Orientation Course before the first work placement.
6. Students should seek academic counselling for this program in the Department of Biology.
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 BIOLOGY 3Q03, 3QQ3; CHEM 3F03, 3FF3, 4DD3; GEO 3J03, 4A03, 4B03; HTH SCI 3I03, 4I13; MOL BIOL 4H03, 4J03; PSYCH 2RB3

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
30 units from the Science I requirements

LEVEL II: 90 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, 2EE3, 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 2RA3
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, 3UU3
12 units PHARMAC 3A06, 3B06

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
3 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 requirements, including:
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1CC3 (See Notes 7 and 8 below.)
6 units BIOLOGY 1A03, 1AA3
6 units CHEM 1A03, 1AA3
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/GRADES:
A Cumulative Average of 6.0 and an average of 6.0 in BIOLOGY 1A03, 1AA3, a grade of C+ in PSYCH 1A03, and an average of 6.0 in CHEM 1A03, 1AA3.

NOTES
1. Counselling for this program is shared by the Departments of Biology and Psychology, Neuroscience and Behaviour and alternates each year.
2. MATH 1B03 or 1D03 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 3). Enrolment is limited for the Psychology laboratory courses. (See Note 9 below.)
4. Students who hope to obtain scholarships should complete all 30 units of Levels II 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 Psychology. Students who have completed KINESIOL 4P03 may use it as a substitute for three units of Level IV Psychology.
7. Students who are registered in this program prior to September 2006 and who have completed PSYCH 2RR3 and STATS 1CC3 do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3.
8. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult with a departmental advisor.
9. For Psychology Courses with limited enrolment which require permission by pre-registration ballot, students must complete and submit a ballot by February 15, 2006. Ballots can be obtained on the Psychology, Neuroscience and Behaviour Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology and Combined Honours Psychology programs.
Honours Chemistry

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. 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 1A31 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, 1A31
- 6 units MATH 1A03, 1A31
- 3 units PHYSICS 1B03
- 9 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

PHYSICS 1A03 (or 1D03) must be completed by the end of Level II and is strongly recommended in Level I. PHYSICS 1B03 (or 1D03) 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/GRADRES:

A Cumulative Average of 6.0 and an average of 6.0 in CHEM 1A03, 1A31.

NOTES:

1. All options in Honours Chemistry fulfill the academic requirements of the Canadian Society for Chemistry.

2. MATH 2C03, PHYSICS 2A03 or 2B03 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 to 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.) The Department of Chemistry considers the Biological, Physical and Analytical, and Synthesis and Structure Specializations to be more appropriate for graduate studies in Chemistry.

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 2EE3 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.
level III: 30 units
18 units CHEM 3A03, 3BA3, 3D03, 3L13, 3P03, 3Q03
6 units CHEM 3B03, 3Z3
6 units Electives
If not completed: BIOCHEM 2EE3 or 3G03

LEVEL IV: 30 units
6 units CHEM 4G06
6 units Levels III, IV Chemistry
6 units Levels III, IV courses
12 units Electives

Synthesis and Structure

Specialization

NOTE
Additional Biochemistry is recommended from either BIOCHEM 2EE3, 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, 2D03, 3A03, 3L13, 3P03, 3Q03
12 units Electives
If not completed: MATH 1B03 (or 1D03), PHYSICS 1B03 (or 1BB3)

LEVEL III: 30 units
18 units CHEM 3A03, 3BA3, 3D03, 3L13, 3P03, 3Q03
12 units Electives
If not completed: BIOCHEM 2EE3 or 3G03 (See Note 5 above.)

LEVEL IV: 30 units
6 units Level IV Chemistry
12 units Levels III, IV courses
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. Recommended electives for Levels III and IV include BIOCHEM 2B03 and CHEM 3F03.

LEVEL I: 30 units
6 units BIOLOGY 1A03, 1A3
6 units CHEM 1A03, 1A3
6 units MATH 1A03, 1A3
6 units PHYSICS 1B03
6 units from Science I Course List
3 units Level I electives
2 courses SCIENCE 1A00, 1B00

LEVEL II: 30 units
18 units CHEM 2A03, 2BA3, 2BB3, 2D03, 3A03, 3L13, 3P03, 3Q03
3 units BIOLOGY 2B03
9 units Electives
If not completed: MATH 1B03 (or 1D03), PHYSICS 1B03 (or 1BB3)

LEVEL III: 30 units
18 units CHEM 3A03, 3BA3, 3D03, 3L13, 3P03, 3Q03
3 units from BIOCHEM 2B03, 3G03
3 units from BIOCHEM 2EE3, 3D03
3 units BIOLOGY 2C03
3 units Electives

LEVEL IV: 30 units
6 units CHEM 4G06
6 units CHEM 4D03, 4D03
3 units BIOCHEM 4K03
3 units from BIOCHEM 3L03 or Level IV Biochemistry
3 units Levels III, IV Biochemistry or Biology
9 units Electives

Physical and Analytical

Specialization

NOTES
1. CHEM 3BB3 and 3Z3 require completion of Level II Mathematics and Physics courses. Therefore, students are strongly recommended to take MATH 1B03 (or 1D03) and PHYSICS 1B03 (or 1BB3) 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, 2BA3, 2BB3, 2D03, 3A03, 3L13, 3P03, 3Q03
6 units MATH 2A03, PHYSICS 2A03 (See Note 1 above.)
6 units Electives (See Note 2 above.)
If not completed: MATH 1B03 (or 1D03), PHYSICS 1B03 (or 1BB3)

LEVEL III: 30 units
18 units CHEM 3A03, 3BA3, 3D03, 3L13, 3P03, 3Q03
6 units CHEM 3B03, 3Z3
6 units Electives
If not completed: BIOCHEM 2EE3 or 3G03

LEVEL IV: 30 units
6 units CHEM 4G06
6 units Levels III, IV Chemistry
6 units Levels III, IV courses
12 units Electives

Honours Chemistry 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 I 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 must take BIOCHEM 2EE3 or 3G03, BIOCHEM 3G03 is recommended. Other Biochemistry courses which have Biology prerequisites are permitted; see the Biological Specialization 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 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 (or 1D03), PHYSICS 1B03 (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 3BA3, 3Q03
9 units Electives
→ 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

TERM 1 AND 2
12 units CHEM 3A03, 3D03, 3I03, 3P03
6 units from CHEM 3BB3, 3L03, 3Z03, 4C03, 4D03, 4D03, 4D06, 4P03, 4R03, 4S03
6 units Levels III, IV courses, excluding Chemistry
6 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
3 units Levels III, IV Chemistry
3 units Level IV Chemistry
9 units Electives
If not completed: BIOCHEM 2EE3 or 3G03 (See Note 6 above.)

YEAR 3

SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG

Term 1
15 units from Academic Level III + Work Orientation Course

Term 2

Summer Term
15 units from Academic Level III + Work Orientation Course

YEAR 4

Term 1
15 units from Academic Level IV

Term 2
15 units from Academic Level III

Work Term

Summer Term
15 units from Academic Level IV

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, 1AA3
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.cos.mcmaster.ca

Honours Arts & Science and Computer Science (B.Arts.Sc.; See Arts & Science Program)

Honours Economics and Computer Science (B.A.; See Faculty of Social Sciences, Department of Economics)

Honours Computer Science [2153]

NOTES
1. The Honours Computer Science program, both Core and Specialized options, has been restructured to consist of a single Honours Computer Science option.
2. COMP SCI 4ZP6 is the Capstone course of the program. (See Science Capstone Courses in the Faculty of Science section of this Calendar.)

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A04
3 units from MATH 1B03, 1D03
6 units COMP SCI 1MD3, 1PC3

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 6.0 and a grade of C+ in each of COMP SCI 1MD3, 1PC3.

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
21 units COMP SCI 2CA3, 2CS3, 2ME3, 2MF3, 2MJ3, 2003, 2SC3
3 units STATS 2MA3
6 units Electives

LEVEL III: 30 UNITS (EFFECTIVE 2007-2008)
24 units COMP SCI 3CN3, 3DA3, 3DB3, 3EA3, 3IS3, 3M03, 3M03, 3R03
6 units Electives

LEVEL IV: 30 UNITS (EFFECTIVE 2008-2009)
21 units COMP SCI 4CD3, 4HC3, 4MM3, 4TB3, 4WW3, 4ZP6
3 units from COMP SCI 4AR3, 4TC3, 4TE3
6 units Electives

OPTIONS

The Core and Specialized options of the Honours Computer Science program are being phased out. Registration in Level III of these options will be last available in September 2006. Students who intended to register in Level II of these options should refer to the restructured Honours Computer Science program. Students currently registered in these options who wish to transfer to the Honours Computer Science program should consult the Department of Computing and Software.

Core [2145826]

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 III: 30 UNITS
15 units COMP SCI 3EA3, 3MG3, 3MH3, 3M03, 3T03
3 units from COMP SCI 3CB3, 3JA3
3 units Electives, excluding Computer Engineering, Computer Science, Software Engineering
9 units Electives, of which three units must not be Computer Engineering, Computer Science, Software Engineering, and at least six units must be from Levels III, IV
### LEVEL IV: 30 UNITS

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<td>6</td>
<td>COMP SCI 4ZP6</td>
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<td>Electives, of which at least six units must be from Levels III, IV</td>
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<tr>
<td>3</td>
<td>Electives</td>
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</table>

#### Specialized Option [2145828]

** COURSE LIST**

All Level III and IV Computer Science, Mathematics, Statistics or Physics 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

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#### LEVEL III: 30 UNITS

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<td>Level III, IV Mathematics, Statistics</td>
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<td>3</td>
<td>Electives, excluding Computer Engineering, Computer Science, Software Engineering</td>
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#### LEVEL IV: 30 UNITS

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<tr>
<td>6</td>
<td>COMP SCI 4ZP6</td>
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<td>from Course List which must include at least three units Level IV Computer Science</td>
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</table>

### Honours Computer Science and Mathematics [2145320]

The Honours Computer Science and Mathematics program is being phased out. Registration in Level III of this program will be last available in September 2008. Students who intended to register in Level II of this program should consult the Department of Computing and Software regarding an alternate course of study.

**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

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#### LEVEL III: 30 UNITS

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#### LEVEL IV: 30 UNITS

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<td>from Course List</td>
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<td>Electives, excluding Computer Science, Mathematics, Statistics</td>
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<td>Electives</td>
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</tbody>
</table>

### Honours Computer Science and Statistics [2145542]

The Honours Computer Science and Statistics program has been cancelled. Students who intended to register in Level II of this program should consult the Department of Computing and Software regarding an alternate course of study.

### Honours Computer Science B.Sc. as a Second Degree [2149]

#### ADMISSION

- 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.

**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. Students are admitted to Level III of this program.
2. Students without adequate background will be required to complete one or more Level I Computer Science courses in addition to the normal requirements for the program.
3. If students in the program have previously completed a required course (or its equivalent), they do not have to repeat the course. However, if the credit from that course has been used for credit towards a previous degree, students are required to complete another course with the required number of units, to be chosen from all Level III, IV Computer Science (excluding COMP SCI 4ZP6), Mathematics, Statistics and Physics courses and MATH 2T03.

#### REQUIREMENTS

60 units total

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<td>III</td>
<td>24 units</td>
<td>COMP SCI 2CA3, 2ME3, 2MF3, 2M3J, 2003, 2SC3, 3TA3, 4EB3</td>
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<td></td>
<td>3 units</td>
<td>SFW/ ENG 2C03</td>
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<td>3 units</td>
<td>STATS 2MA3</td>
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<td>SCIENCE 1A00</td>
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<td></td>
<td>3 units</td>
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<td>6 units</td>
<td>from COMP SCI 4ZP6, Level IV Computer Science</td>
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<tr>
<td>IV</td>
<td>15 units</td>
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<td>15 units</td>
<td>Level IV Computer Science</td>
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<tr>
<td>IV</td>
<td>24 units</td>
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<td></td>
<td>3 units</td>
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<tr>
<td></td>
<td>3 units</td>
<td>from COMP SCI 4AR3, 4TC3, 4TE3</td>
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### 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 who are currently completing a minor in Computer Science are advised to contact the Department of Computing and Software to discuss completion of the requirements for the minor.

#### REQUIREMENTS

24 units total

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<tr>
<th>Units</th>
<th>Course</th>
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SCHOOL OF GEOGRAPHY  
AND EARTH SCIENCES

WEB ADDRESS: http://www.science.mcmaster.ca/geo/

Honours Arts & Science and Geography and  
Environmental Sciences  
(B.Arts.Sc.; See Arts & Science Program)

Honours Geography (B.A.),  
B.A. in Geography and  
Honours 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
3 units from MATH 1A03, 1B03, 1D03, STATS 1CC3
3 units CHEM 1A03
9 units from BIOLOGY 1A03, 1A3, CHEM 1A0A, PHYSICS 1B03, 1B0A
6 units from ENVR SC 1A03, 1B03, 1G03
6 units Level I electives
2 courses SCIENCE 1A00, 1B00
Both ENVR SC 1A03 and 1G03 must be completed by the end of Level II and are recommended in Level I.

MINIMUM AVERAGES/ GRADES:

A Cumulative Average of 6.0 and a grade of C+ in two of ENVR 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 counselling 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 components 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 Geographic Information Systems is permitted.
8. Registration in a specialization will be noted on the student's transcript.

COURSE LIST 1

BILOGY 2D03, 2F03; CHEM 2A03, 2E03; GEO 2C03, 2G03, 2K03, 2K03; one of ENVR 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 Admissions above.)

LEVEL II: 30 UNITS

3 units CHEM 2R03 or GEO 2Q03
12 units GEO 2E03, 2G03, 2I03, 2W03
6 units from Course List 1
9 units Electives

Earth and Environmental Sciences (Core)  

{2211820}

COURSE LIST 2

ASTRON 2E03, BIOLOGY 2F03, 3S33, 3TT3; CHEM 2A03, 2E03; GEO 2B03, 2C03, 2K03, 2K03, 2K03, 3B03, 3C03, 3E03, 3I03, 3J03, 3L03, 3O03, 3P03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4F03, 4G03, 4HH3, 4K03, 4Q03, 4Q03, 4T03, 4W03, 4W03, 4Z03, 4Z23

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
3-6 units from GEO 4CC3, 4R06
9 units from Course List 2
12-15 units Electives

Geochemistry Specialization  

{2211825}

Geochemistry Course List 1: BIOLOGY 2F03; GEO 2B03, 2C03, 2K03, 3B03, 3I03, 3Q03, 3Q03

Geochemistry Course List 2: ASTRON 2E03, BIOLOGY 2F03, 3S33, 3TT3; CHEM 2A03 or 2E03; one Level III Chemistry course; GEO 2B03, 2C03, 2K03, 3B03, 3I03, 3Q03, 3U03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4E03, 4F03, 4G03, 4HH3, 4K03, 4Q03, 4Q03

LEVEL III: 30 UNITS

3 units GEO 3FE3
6 units GEO 3R03, 3Y03
6 units from Geochemistry Course List 1
9 units from Geochemistry Course List 2
6 units Electives

LEVEL IV: 30 UNITS

3 units GEO 4A03
3-6 units from GEO 4CC3, 4R06
9 units from Geochemistry Course List 1
9-12 units from Geochemistry Course List 2
6 units Electives

Geosciences Specialization  

{2211830}

Geosciences Course List 1: GEO 2B03, 2K03, 2K03, 3E03, 3Q03, 3V03, 3Z03, 4G03

Geosciences Course List 2: ASTRON 2E03, GEO 2B03, 2K03, 2K03, 3E03, 3I03, 3P03, 3Q03, 3U03, 3V03, 3Z03, 4E03, 4E03, 4F03, 4G03, 4K03, 4Q03, 4T03, 4Z03, 4Z23

LEVEL III: 30 UNITS

3 units GEO 3FE3
6 units GEO 3R03, 3Y03
6 units from Geosciences Course List 1
9 units from Geosciences Course List 2
6 units Electives

LEVEL IV: 30 UNITS

3 units GEO 4A03
3-6 units from GEO 4CC3, 4R06
9 units from Geosciences Course List 1
6-9 units from Geosciences Course List 2
6 units Electives
Hydrosciences Specialization (2211835)

Hydrosciences Course List 1: GEO 2B03, 2C03, 3C03, 3J03, 3W03, 3Z03

Hydrosciences Course List 2: GEO 2B03, 2C03, 2K03, 3B03, 3C03, 3I03, 3J03, 3L03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FF3, 4G03, 4Q03, 4W03, 4WW3

LEVEL III: 30 UNITS
3 units GEO 3FE3
6 units GEO 3R03, 3Y03
6 units from Hydrosciences Course List 1
9 units from Hydrosciences Course List 2
6 units Electives

LEVEL IV: 30 UNITS
3 units GEO 3A03
3-6 units from GEO 4CC3, 4R06
9 units from Hydrosciences Course List 1
6-9 units from Hydrosciences Course List 2
6 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 during the March counselling 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 Geographic Information Systems is permitted.

REQUIREMENTS
Total 120 units (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 3Y03
3 units GEO 4A03
3-6 units from GEO 4CC3, 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 (2212840)

Geochemistry Course List 1: BIOLOGY 2F03; GEO 2B03, 2C03, 3B03, 3J03, 3L03, 3Q03, 3Z03

Geochemistry Course List 2: ASTRON 2E03, BIOLOGY 2F03, 3SS3, 3TT3, CHEM 2A03 or 2E03, one Level III Chemistry course; GEO 2B03, 2C03, 2K03, 3B03, 3I03, 3J03, 3L03, 3Q03, 3Z03, 3U03, 4B03, 4E03, 4FF3, 4G03, 4Q03, 4H03, 4Q03, 4WW3

YEAR 3
6 units from Geochemistry Course List 1

YEAR 4
6 units from Geochemistry Course List 1
6-9 units from Geochemistry Course List 2

YEAR 5
3 units from Geochemistry Course List 1
9 units from Geochemistry Course List 2

Geosciences Specialization (2212845)

Geosciences Course List 1: GEO 2B03, 2K03, 2KK3, 3E03, 3Q03, 3Z03

Geosciences Course List 2: ASTRON 2E03, GEO 2B03, 2K03, 2KK3, 3E03, 3I03, 3K03, 3Q03, 3U03, 4E03, 4FE3, 4FF3, 4G03, 4Q03, 4K03, 4T03, 4Z03, 4Z23

YEAR 3
6 units from Geosciences Course List 1

YEAR 4
6 units from Geosciences Course List 1
6-9 units from Geosciences Course List 2

YEAR 5
3 units from Geosciences Course List 1
9 units from Geosciences Course List 2

Hydrosciences Specialization (2212850)

Hydrosciences Course List 1: GEO 2B03, 2C03, 3C03, 3J03, 3W03, 3Z03

Hydrosciences Course List 2: GEO 2B03, 2C03, 2K03, 3B03, 3C03, 3I03, 3J03, 3L03, 3Q03, 3U03, 3V03, 3W03, 3Z03, 4B03, 4C03, 4E03, 4FF3, 4G03, 4Q03, 4W03, 4WW3

YEAR 3
6 units from Hydrosciences Course List 1

YEAR 4
6 units from Hydrosciences Course List 1
6-9 units from Hydrosciences Course List 2

YEAR 5
3 units from Hydrosciences Course List 1
9 units from Hydrosciences Course List 2
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 ENVIR SC 1G03
- 3 units from ENVIR SC 1A03, 1B03
- 18 units: BIOLOGY 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 2W03, 2X03, 2Y03, 2Z03

Minor in Environmental Science

REQUIREMENTS
24 units total

- 5 units from ENVIR SC 1A03, 1B03, 1C03, 1D03, 1E03
- 18 units: BIOLOGY 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2G03, 2H03, 2I03, 2J03, 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03, 2R03, 2S03, 2T03, 2U03, 2V03, 2W03, 2X03, 2Y03, 2Z03

Minor in Geographic Information Systems (GIS)

REQUIREMENTS
24 units total

- 6 units from ENVIR SC 1A03, 1B03, 1C03, 1D03, 1E03
- 18 units: GEO 2I03, 3I03, 3S03, 3Y03, 4I03, 4S03

DIPLOMA IN SPATIAL INFORMATION SCIENCE AND CERTIFICATE IN G.I.S. (GEOGRAPHIC 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.)

(See Faculty of Social Sciences, Department of Kinesiology)

NOTE

All students admitted to Kinesiology I register in the Faculty of Social Sciences. (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.

Only those students who have completed Kinesiology I may be eligible for the Honours Kinesiology (B.Sc.) program.

Honours Kinesiology (B.Sc.)

[2671] ADMITTANCE

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, 1A04, CHEM 1A03, 1A04, PHYSICS 1B03, 1B03, 1H03
- 6 units Level I electives (See Note 1 below)

2 courses KINESIOL 1KL0, SCIENCE 1A00

MINIMUM AVERAGES/GRADERS:

A Cumulative Average of 6.0 and an average of 6.0 in KINESIOL 1A06, 1E03, 1H03.

NOTES

1. BIOLOGY 1A03, 1A04 and CHEM 1A03, 1A04 are required for students wishing to take some upper level Biology courses. Students do not need to complete all 12 of these units in Level I. PSYCH 1A03, 1A04 are required for students wishing to take upper level Psychology courses.

2. Effective September 2004, students entering the Honours Kinesiology (B.Sc.) program are not eligible to complete a minor.

COURSE LIST

KINESIOL 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, 4A03, 4B03, 4C03, 4D03, 4E03, 4F03, 4G03, 4H03, 4I03, 4J03, 4K03, 4L03, 4M03, 4N03, 4O03, 4P03, 4Q03, 4R03, 4S03, 4T03, 4U03, 4V03, 4W03, 4X03, 4Y03, 4Z03

REQUIREMENTS

120 units total (Levels I to IV), of which no more than 48 units may be Level I.

LEVEL I

30 units (See Admission above)

LEVEL II: 30 UNITS

- 15 units KINESIOL 2A03, 2B03, 2C03, 2D03, 2E03
- 9 units from the Faculty of Science
- 6 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 Levels II, III, IV courses from the Faculty of Science
- 12 units 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

NOTES

1. The Honours Materials Science program consists of three specializations as follows:
   - Materials Properties and Processing
   - Computational Materials Science
   - Nanomaterials

2. Students who completed Grade 12 Geometry and Discrete Mathematics U must register in MATH 1B03, otherwise MATH 1D03 must be completed. Students in the Computational Materials Science and Nanomaterials specializations must complete MATH 1B03 (which is a prerequisite for MATH 2R03) before entering Level II. Therefore those students in these specializations who did not complete Grade 12 Geometry and Discrete Mathematics U must use three units of electives to complete MATH 1D03 followed by MATH 1B03.
LEVEL III: 31 UNITS
4 units CHEM ENG 2A04
15 units MATLS 3C04, 3E03, 3M03, 3T04
3 units MATH 3I03
3 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**

**NANOMATERIALS COURSE LIST**
CHEM ENG 4203; CHEM 32Z3, 4F03; ENG PHYS 3F03, 3G03, 4E03, 4F03, 4S04; all Level III and IV Materials courses; PHYSICS 4M03, 4N03, 4S03

**REQUIREMENTS**
119-121 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 Note 2 and 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**
8 units MATLS 3E04, 3T04
3 units from MATLS 3A03, 3N03
6 units MATH 2R03, 3I03
3 units PHYSICS 2Q03
4 units CHEM ENG 3004 or MECH ENG 3004
6-7 units from Computational Materials Science Course List. MATLS 3C04 is recommended.

**LEVEL IV: 29-30 UNITS**
7 units MATLS 3M03, 4K04
3 units from MATLS 3A03, 3N03 (whichever not completed at Level III)
3 units ENG PHYS 2QM3
4 units STATS 3J04
12-13 units from Computational Materials 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, 4C03, 4H03

**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 MATLS 2B03, 2D03, 2X03, 3C04, 3T04
MATH 1

Statistics Specialization

MINIMUM AVERAGES/GRADES:

3 units
21 units

1. The Mathematics and Statistics Department recommends
   from MATH 1AA3, 1XX3

3 units

2. The Mathematics and Statistics Core requirements for Honours
   Statistics, Core, and Mathematics and Statistics Core electives.

3 units

3. Students may substitute certain courses offered by the
   Statistics Core, Origins Research Specialization.

4. A Cooperative Education program is available; see the re-
   for Honours Mathematics and Statistics Co-op programs in this section of the Calendar. Admission to the

ADMISSION

Completion of a Level I program in any Faculty, including:

3 units from MATH 1A03, 1X03
3 units from MATH 1A3, 1XX3
3 units from MATH 1B03 (See Note 2 below.)
21 units Level I courses to complete a Level I program

MINIMUM AVERAGES/GRADES:

A Cumulative Average of 6.0 and a grade of C+ in each of MATH
1AA3 or 1XX3; and MATH 1B03.

NOTES:

1. The Mathematics and Statistics Department recommends the
   Mathematics Specialization or Applied Mathematics Speciali-
   tions and Statistics Core electives.

2. MATH 1D03 is a prerequisite for MATH 1B03 for students who
   have not completed Grade 12 Geometry and Discrete Math-
   ematics U.

FACULTY OF SCIENCE

Web Address: http://www.math.mcmaster.ca

Honours Arts & Science and Mathematics
(B.Arts.Sc.; See Arts & Science Program)

Honours Biology and Mathematics
(See Department of Biology)

Honours Computer Science and Mathematics
(See Department of Computing and Software)

Honours Economics and Mathematics
(B.A.; See Faculty of Social Sciences, Department of Économies)

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.

2. The opportunity is provided to students by selecting Origins courses for Mathematics and
   Statistics Core electives. In addition to the courses specified for
   the Mathematics and Statistics Core, students must complete
   the following courses by the end of Level II:

   Level II: 30 units

   Core:

   Mathematics Specialization

   Statistics Specialization

   Applied Mathematics Specialization

   Options:

   Core:

   LEVELS II, III, IV: 51 UNITS

   15 units Level III, IV courses

   6 units from Course List

   3 units from Science Capstone Course List

   27 units Electives

   Applied Mathematics Specialization:

   LEVELS II, III, IV: 51 UNITS

   15 units Level III, IV courses

   6 units from Course List

   3 units from Science Capstone Course List

   27 units Electives

   Mathematics Specialization:

   LEVELS II, III, IV: 51 UNITS

   15 units Level III, IV courses

   6 units from Course List

   3 units from Science Capstone Course List

   27 units Electives

   Mathematics Specialization:

   LEVELS II, III, IV: 51 UNITS

   15 units Level III, IV courses

   6 units from Course List

   3 units from Science Capstone Course List

   27 units Electives
Statistics Specialization [2320836]

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: 21 UNITS
6 units STATS 3D03, 3DD3
6 units Levels II, III, IV Mathematics and Statistics
3 units STATS 3A03 (See Note above.)
3-6 units Electives

LEVEL IV: 15 UNITS (2006-2007 ONLY)
6 units STATS 4D03, 4M03
9 units Electives

LEVEL IV: 15 UNITS (EFFECTIVE 2007-2008)
3 units MATH 4A03
6 units STATS 4D03, 4M03
6 units Electives

Honours Mathematics and Physics [2320440]

ADMISSION
Completion of the Science I requirements, including:
3 units from MATH 1A03, 1X03
3 units from MATH 1A3, 1XX3
6 units CHEM 1A03, 1AA3
6 units PHYSICS 1B03, 1BA3 (or 1BB3)
3 units MATH 1B03
3 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, 1B00

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 6.0 and a grade of C+ in each of MATH 1AA3 or 1XX3; and MATH 1B03, PHYSICS 1B03, 1BA3, 1BB3.

NOTES
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 2SC3; MATH 2E03; STATS 2D03, 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 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
12 units MATH 2C03, 2R03, 2X03, 2XX3
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 4A03, 4X03
3 units PHYSICS 4B03
15 units from Course List
6 units Electives

Honours Mathematics and Statistics Co-op [2325846]

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 Cooperative 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, 3T03; 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 I
Completion of a Level I program in any Faculty, including:
3 units from MATH 1A03, 1X03
3 units from MATH 1AA3, 1XX3
3 units MATH 1B03
21 units Level I courses to complete a Level I program

Applied Mathematics Co-op Specialization [2325846]

NOTE
Students registered in the Applied Mathematics Co-op Specialization must take 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 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 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.

TERMS 1 AND 2
9 units MATH 3FF3, 3X03, 4A03
12 units 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
3 units from MATH 3FF3, 4G03, 4Q03, 4V03
6 units Levels III, IV Mathematics and Statistics
6 units Electives

Mathematics Co-op Specialization (2325842)

LEVEL II
30 units from Level II Honours Mathematics and Statistics (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, 3E03
3 units from Course List
3 units 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.

TERMS 1 AND 2
9 units MATH 3E03, 3X03, 4A03
3 units from Course List
9 units 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
3 units Levels III, IV Mathematics and Statistics
6 units Levels III, IV Statistics
6 units Electives

Statistics Co-op Specialization (2325844)

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 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
3 units STATS 3D03
3 units MATH 3A03
3 units from Course List
3 units STATS 3A03
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.

TERMS 1 AND 2
6 units MATH 3X03, 4A03
3 units STATS 3D03
3 units from Course List
9 units 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
3 units Levels III, IV Mathematics and Statistics
6 units Levels III, IV Statistics
6 units Electives

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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 2103 should not be taken by students wishing to complete this minor.

REQUIREMENTS
27 units total
3 units from MATH 1A03, 1X03
3 units from MATH 1A03, 1XX3
3 units MATH 1B03
18 units Levels II, III, IV Mathematics and Statistics, including at least six units from Levels III, IV Mathematics and Statistics

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 programming language.
Honours Medical and Health Physics (2443)

ADMISSION
Completion of the Science I requirements, including:
9 units MATH 1A03, 1A3, 1B03 (or 1D03)
3 units BIOLOGY 1A03
6 units CHEM 1A03, 1A3
3 units PHYSICS 1B03
3 units from BIOLOGY 1A3, PHYSICS 1B3 (or 1BB3)
6 units Level 1 electives
2 courses SCIENCE 1A00, 1B00
BIOLOGY 1A3 and PHYSICS 1B3 (or 1BB3) must be completed by the end of Level II. PHYSICS 1B3 (or 1BB3) is strongly recommended in Level I.

MINIMUM AVERAGES/GRADUES:
A Cumulative Average of 6.0, an average of 7.0 in MATH 1A03, 1A3, 1B03 (or 1D03), 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 2OA3 and 2OB3
9 units MATH 2A03, 2C03, 2E03
13 units PHYSICS 2B06, 2E03, 2H04
0-3 units Electives
If not completed: BIOLOGY 1A3, PHYSICS 1B3 (or 1BB3)

LEVEL III: 30 UNITS
9 units BIOLOGY 2B03, MATH 3C03, 3D03
6 units MED PHYS 3R03, 4BO3
12 units PHYSICS 2C03, 3H03, 3MM3, 3N03
3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3AA3, 3FA3, 3J03, 3N03. (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 (2330)

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.

NOTES
1. This is a five-year co-op program which includes two eight-month 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

LEVEL II
31 units from Level II Honours Medical and Health 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 MED PHYS 4B03
7 units PHYSICS 2C03, 3H01, 3N03
3 units from BIOCHEM 3G03, BIOLOGY 2C03, PSYCH 3A03, 3AA3, 3FA3, 3J03, 3N03. (Psychology courses require permission of the Departmental Academic Advisor or instructor.)

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.

TERM 1 AND 2
6 units BIOLOGY 2B03, 4U03
3 units MATH 3D03
13 units MED PHYS 4A01, 4R06, 4T03, 4XX3
9 units PHYSICS 3M03, 4D06

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
5 units MED PHYS 3R03, 4A02
5 units PHYSICS 3H02, 4E03
3 units Electives

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MEDICAL RADIATION SCIENCES

WEB ADDRESS: 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 Ontario College Advanced Diploma in Medical Radiation Sciences from Mohawk 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 practica in a setting that is not of their choosing. The College cannot accommodate any student requests for special consideration. Students must prepare financially and personally to relocate and/or commute to their assigned clinical placements. Students are responsible for arranging their own travel to and from assigned placements and are responsible for covering any costs incurred.

5. All students in Radiography or Ultrasonography will be required to attend full-time clinical practica at a minimum of two different clinical agencies that may be located across Ontario.

6. Basic Cardiac Life Support Training: All Level II students are required to have obtained a current certificate in Basic Cardiac Life Support - Level C and First Aid Training prior to commencing term 2 of Level II.

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 Sciences 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:
3 units BIOLOGY 1A03
3 units CHEM 1A03
6 units KINESIOI Y1Y3, 1YY3
3 units MATH 1A03
9 units MEDRADSC 1A03, 1B03, 1C03
3 units* STATS 1C3
3 units Electives
2 courses SCIENCE 1A00, 1B00
* If Grade 12 Physics U not completed with a minimum average of 60%, PHYSICS 1P03

MINIMUM AVERAGES/GRADERS:
Completion of all the course requirements as prescribed for Medical Radiation Sciences I by the end of term 2, with a Cumulative Average of 5.0. Students who fail to meet one or both of these criteria may appeal to the Reviewing Committee (Chair Medical Radiation Sciences (Mohawk), Coordinator Radiography Specialization, Coordinator Ultrasonography Specialization, Coordinator Radiation Therapy Specialization, Coordinator Medical Radiation Sciences (McMaster)). Since there are limited spaces for clinical practicum, enrollment in Level II and above of Medical Radiation Sciences is limited. Therefore, appeals may not be successful.

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.

REQUIREMENTS
164 units total (Levels I to IV), 50 units of clinical practicum are interspersed with 84 units of academic courses in Levels II to IV.

Radiation Therapy Specialization

LEVEL II: 50 UNITS
3 units HUMAN 2C03
18 units MEDRADSC 2A03, 2B03, 2C03, 2D03, 2E03, 2F03
9 units MEDRADSC 2S03, 2T03, 2U03
17 units MEDRADSC 2V17 (Clinical Practicum I)
3 units PSYCH 1AA3

LEVEL III: 48 UNITS
3 units MED PHYS 4B03
18 units MEDRADSC 3B03, 3E03, 3F03, 3I03, 3K03, 3L03
15 units MEDRADSC 3S03, 3T03, 3U03, 3V03, 3W03
3 units from MEDRADSC 3A03, 3D03, 3E03
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)

Radiography Specialization

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: 48 UNITS
21 units MEDRADSC 3A03, 3B03, 3C03, 3E03, 3F03, 3I03, 3L03
17 units MEDRADSC 3S03, 3T03, 3J03, 3K03, 3L03
15 units MEDRADSC 3S03, 3T03, 3U03, 3V03, 3W03
3 units from MEDRADSC 3D03, 3D13, 3D33, 3D3E
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)
Ultrasonography Specialization (1410)

**LEVEL II: 53 UNITS**
- 3 units HUMAN 2C03
- 9 units MEDRADSC 2A03, 2B03, 2C03
- 21 units MEDRADSC 2K03, 2L03, 2M03, 2N03, 2O03, 2P03, 2Q03
- 17 units MEDRADSC 2R17 (Clinical Practicum I)
- 3 units PSYCH 1AA3

**LEVEL III: 45 UNITS**
- 15 units MEDRADSC 3A03, 3B03, 3C03, 3E03, 3X03
- 18 units MEDRADSC 3M03, 3N03, 3O03, 3P03, 3Q03, 3R03
- 3 units from MEDRADSC 3DC3, 3DF3, 3DG3
- 3 units PHILOS 2D03
- 6 units Electives

**LEVEL IV: 36 UNITS**
- 3 units HTH SCI 3B03
- 16 units MEDRADSC 4C16 (Clinical Practicum II)
- 17 units MEDRADSC 4D17 (Clinical Practicum III)

**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 2B03, 2BB3, BIOLOGY 2C03, CHEM 2OA3, 2OB3
- 9 units MOL BIOL 2B03, 2L06
- 6 units Electives. BIOLOGY 2A03, 2D03, CHEM 2N03, 2R03, ORIGINS 2FF3 are recommended.

**LEVEL III: 30 UNITS (2006-2007 ONLY)**
- 18 units BIOCHEM 3D03, BIOLOGY 2EE3 (or 3E03); 3O03, MOL BIOL 2L06, 3V03
- 6 units from BIOLOGY 3H03, 3HH3, 3I03, 3M03, 3S03
- 6 units Electives. MOL BIOL 3A03, 3I03 are strongly recommended

**LEVEL III: 30 UNITS (EFFECTIVE 2007-2008)**
- 18 units BIOCHEM 3D03, BIOLOGY 3EE3, 3O03, 3S03, MOL BIOL 3A03, 3V03
- 6 units from BIOLOGY 3H03, 3H03, 3I03, 3M03
- 6 units Electives. MOL BIOL 3A03, 3I03 are strongly recommended

**LEVEL IV: 30 UNITS (2006-2007 ONLY)**
- 6-9 units from BIOCHEM 4L03, 4P03, BIOLOGY 4F06, MOL BIOL 4R09
- 6 units BIOCHEM 4E03, 4K03
- 9-12 units from BIOCHEM 4EE3, 4O03, BIOLOGY 3S03, 4B03, 4E03, 4P03, 4P10, 4R03, 4T03, 4V03, HTH SCI 4113, MOL BIOL 4H03, 4J03
- 6 units Electives

**LEVEL IV: 30 UNITS (EFFECTIVE 2007-2008)**
- 15 units from BIOCHEM 4EE3, MOL BIOL 4A03, 4R09
- 9 units from BIOCHEM 4EE3, 4K03, 4O03, BIOLOGY 4B03, 4E03, 4P03, 4PP3, 4R03, 4T03, 4V03, HTH SCI 4113, MOL BIOL 4H03, 4J03
- 6 units Electives

**MOLECULAR BIOLOGY**

Honours Molecular Biology (2365)

**PROGRAM OVERVIEW**
Honours Molecular Biology is a research-intensive program that focuses on laboratory research and communication skills, preparing students for graduate studies or careers in industry or academic research laboratories. Jointly offered by the Departments of Biology, Biochemistry and Biomedical Sciences and Pathology and Molecular Medicine to provide students with a broad view and understanding of biological processes from a molecular perspective. Students will develop knowledge and understanding of the structure, interaction and function of biomolecules and the molecular basis of cellular and organismal biology.
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 space-time
• the origin of elements
• the origin of structure in the cosmos
• the origin of life
• the origin of species and biodiversity
• the origin of humanity

The Origins Research Specialization curriculum is designed to introduce Natural Science to students through these themes. Students graduating from the specialization will possess comprehensive, multifaceted knowledge about the natural world.

NOTE

The Origins Research Specialization curriculum must be taken in conjunction with a Core program in Biochemistry, Biology, Chemistry, Mathematics and Statistics, Physics, Psychology or Honours Science. It may also be taken in conjunction with the Honours Arts and Science program. 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.

ADMISSION

Enrollment in this specialization 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 and 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 the admission and selection procedures may be obtained from the Origins Institute web site at http://origins.mcmaster.ca or by contacting the Associate Director (Jon Stone, Life Sciences Building, Room 327, 905-525-9140 ext. 26135 or email jstoney@mcmaster.ca.

Completion of Science I requirements, including:
6 units BIOLOGY 1A03, 1AA3
3 units CHEM 1A03
3 units MATH 1A03
3 units from MATH 1A3, 1B03 (or 1D03), STATS 1CC3
3 units PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1G03

MINIMUM AVERAGES/GRADGr

A Cumulative Average of 6.0.

NOTES

1. Students wishing to combine the Origins Research Specialization with the Biochemistry Core program must complete the Level I courses required for entry into Honours Biochemistry. In addition, students must complete three units from ASTRON 1F03, PHYSICS 1BA3 or 1BB3 by the end of Level II.
2. Students wishing to combine the Origins Research Specialization with the Biology Core program must complete the Level I courses required for entry into Honours Biology. In addition, students must complete three units from ASTRON 1F03, PHYSICS 1BA3 or 1BB3 by the end of Level II. Students will complete ORIGINS 4A09, (Origins Research Thesis) as their Capstone Course.
3. Students wishing to combine the Origins Research Specialization with the Chemistry Core program must complete the Level I courses required for entry into Honours Chemistry. In addition, students must complete BIOLOGY 1A03 and 1AA3 by the end of Level II.
4. Students wishing to combine the Origins Research Specialization with the Mathematics and Statistics Core program must complete the Level I courses required for entry into Honours Mathematics and Statistics. In addition, students must complete the following courses by the end of Level II:
6 units from BIOLOGY 1A03, 1AA3
3 units CHEM 1A03
3 units PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1G03

5. Students wishing to combine the Origins Research Specialization with the Physics Core program must complete the Level I courses required for entry into Honours Physics. In addition, students must complete BIOLOGY 1A03 and 1AA3 by the end of Level II.
6. Students wishing to combine the Origins Research Specialization with the Psychology Core program must complete the Level I courses required for entry into Honours Psychology. In addition students must complete the following courses by the end of Level II:
6 units CHEM 1A03, PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1G03

7. Students wishing to combine the Origins Research Specialization with the Honours Science program must satisfy all the Honours Science requirements as well as the courses specified by the Origins Research Specialization. Students may do this by selecting Origins courses for Honours Science electives. In addition, students must complete the following courses by the end of Level II:
6 units BIOLOGY 1A03, 1AA3
3 units CHEM 1A03
3 units PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1G03

8. Students wishing to combine the Origins Research Specialization with the Honours Arts & Science program must satisfy all the requirements for that program as well as the courses specified by the Origins Research Specialization. Students may do this by selecting Origins courses for Arts & Science electives. Students should consult with the program administrator in the Arts & Science program and the Associate Director for the Origins Institute to devise a curriculum.

9. ORIGINS 2B03, 2F03 and 2S03 must be completed by the end of Level III.

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 9 above.)
3 units ORIGINS 2S03

LEVEL III: 12 UNITS
3 units from ORIGINS 2B03, 2F03 (See Note 9 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 programming language such as Basic, C, Fortran or Pascal. PHYSICS 2G03 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, 1A3
- 6 units CHEM 1A03, 1AA3
- 6 units PHYSICS 1B03, 1BAA3 (or 1B3)
- 6 units from Science I Course List
- 6 units Level I electives
- 2 courses SCIENCE 1A00, 1B00

Math 1B03 or 1D03 must be completed by the end of Level II and is strongly recommended in Level I. MATH 1B03 is preferred.

The Computation and Theory specialization requires completion of MATH 1B03. Therefore, students must take Geometry and Discrete Math U in Grade 12 or MATH 1D03 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 1A03 is also strongly recommended for this specialization.

The Astrophysics Specialization requires completion of ASTRON 1F03 by the end of Level II and is strongly recommended in Level I.

MINIMUM AVERAGES/GRADES:
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, 1BAA3 (or 1B3).

NOTES
1. This program consists of five options: a core and four specializations. The core 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 wish to follow one of several specializations which are more appropriate for graduate studies in Physics or Astronomy.

   - Physics (Core) (formerly interdisciplinary)
   - Biophysics Specialization
   - Biophysics Specialization
   - Computation and Theory Specialization
   - Experimental Specialization

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.

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 possible 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 Statistics 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, Mathematics, 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.

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, 2G03
- 9 units from the option requirements (see below)

If not completed: MATH 1B03 or 1D03

LEVEL III: 30 UNITS

- 6 units PHYSICS 3H03, 3M3
- 6 units MATH 3C03, 3D03
- 18 units from the option requirements (see below)

LEVEL IV: 30 UNITS

- 3 units PHYSICS 4A03
- 9 units Levels III, IV Astronomy, Mathematics, Physics, GEO 3V03 (See Note 7 above.)
- 18 units from the option requirements (see below)

OPTIONS

Core

LEVELS II, III, IV: 45 UNITS

- 18 units Levels III, IV courses
- 27 units Electives

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

LEVEL II: 18 UNITS

- 3 units BIOCHEM 3G03
- 6 units PHYSICS 3K03, 3S03
- 9 units Electives. See Biophysics Course List for recommended courses.

LEVEL III: 18 UNITS

- 3 units BIOCHEM 4Y03
- 3 units PHYSICS 4S03 (See Note 7 above.)
- 1 course from BIOCHEM 4B06, 4P03, PHYSICS 4P06, 4Q03
- 6-9 units Electives. See Biophysics Course List for recommended courses.

Computation and Theory Specialization

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 3Q03 is recommended.

LEVEL IV: 18 UNITS

- 12 units PHYSICS 3C03, 4B03, 4F03, 4G03
- 6 units Electives
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 I 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 load.
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 3B03
4 units PHYSICS 3H11, 3N03
6 units Electives

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, 3M03
13 units PHYSICS 4A01, 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 3H12
2 units PHYSICS 4A05
3 units from PHYSICS 4E03, 4K03
6 units Electives. PHYSICS 4F03 is strongly recommended. (See Note 4 above.)
120 FACULTY OF SCIENCE

3 units from CHEM 1A03, PHYSICS 1B03 (See Note 9 below.)
6 units PSYCH 1A03, 1A05
6 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 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 Behaviour Specialization
   Students who choose not to specialize will remain in the Honours Psychology (Core) program.
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 courses specified by 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, 1BB3
   - 3 units from CHEM 1AA3, 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) or MATH 1D03 (Algebra and Geometry) is strongly recommended for students intending to pursue graduate work in psychology. COMP SCI 1MA3 (Computer Based Problem Solving) or COMP SCI 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.
7. Students with credit in PSYCH 2RR3, do not need to complete PSYCH 2RA3 or 2RB3.
8. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2M03. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult with a departmental advisor.
9. It is recommended that students complete both CHEM 1A03 and PHYSICS 1B03. Chemistry is particularly useful for neuroscience and biological aspects of psychology. Physics is particularly useful for perception, electrophysiology, and mathematical modelling of psychological processes.
10. Students may substitute three units from the Science Capstone Course List.

11. The Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the three core courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2QQ3, 3C03, 3QQ3, 4QQ3, 4Q03). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3B3, 3E3, 3L3, 3LL3, 3QQ3, 3V03) and limited enrollment courses (PSYCH 3BN3, 4B03, 4BN3, 4F03, 4J03, 4R03, 4Y03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006. Ballots can be obtained from the Psychology, Neuroscience and Behaviour Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

LAB COURSE LIST A
PSYCH 3BL3, 3E3E, 3L03, 3LL3, 3QQ3, 3S03, 3V03, 4QQ3

CAPSTONE COURSE LIST B
PSYCH 3I06, 4B03, 4C03, 4D06, 4D09, 4F03, 4J03, 4Q03, 4R03, 4Y03

PSYCHOLOGY COURSE LIST C
BIOLOGY 4T03; HTH SCI 4B33; KINESIOL 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 II: 30 UNITS
6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units from any courses in the Faculty of Science
12 units Electives

LEVEL III: 30 UNITS
12 units from Psychology Course List C, PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
3 units from Lab Course List A
15 units Electives

LEVEL IV: 30 UNITS
6 units from Psychology Course List C
9 units 6 units from Capstone Course List B (See Note 10 above.) and 3 units from Psychology Course List C or PSYCH 4D09
15 units Electives

Behavioural Neuroscience (2461858)

LEVEL II: 30 UNITS
6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
3 units PSYCH 2F03
6 units from PSYCH 2D03, 2E03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
9 units Electives

LEVEL III: 30 UNITS
9 units from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3H03, 3J03, 3M03, 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 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3H03, 3J03, 3M03, 3Y03, 4BN3, 4F03, 4Y03
3 units from Psychology Course List C
9 units 6 units from Capstone Course List B (See Note 10 above.) and 3 units from Psychology Course List C or PSYCH 4D09
12 units Electives

Cognition and Perception (2461890)

LEVEL II: 30 UNITS
6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
6 units PSYCH 2E03, 2H03
3 units from PSYCH 2D03, 2F03, 2TT3
6 units from any courses in the Faculty of Science
9 units Electives
LEVEL III: 30 UNITS
12 units from PSYCH 3A03, 3A33, 3BB3, 3BN3, 3FA3, 3HH3, 3I13, 3J03, 3U03, 3U33, 3VV3
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, 3A33, 3BB3, 3BN3, 3FA3, 3HH3, 3I13, 3J03, 3U03, 3U33, 3VV3, 4BN3, 4C03, 4203
3 units from Psychology Course List C
9 units 6 units from Capstone Course List B (See Note 10 above.) and 3 units from Psychology Course List C or PSYCH 4D09
12 units Electives

Developmental Specialization {2461862}

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
9 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
6 units from any courses in the Faculty of Science
9 units Electives

LEVEL III: 30 UNITS
3 units PSYCH 3GG3
6 units from PSYCH 3H13, 3I13, 3J13. (Three units may be taken in Level IV.)
6 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 3H13, 3I13, 3J13, (If not completed in Level III), 3B03, 3Z03, 3Z33, 4C03
3 units from Psychology Course List C
9 units 6 units from Capstone Course List B (See Note 10 above.) and 3 units from Psychology Course List C or PSYCH 4D09
12 units Electives

Evolution and Social Behaviour Specialization {2461864}

LEVEL I
30 units (See Admission above.)

LEVEL II: 30 UNITS
6 units PSYCH 2RA3, 2RB3 (See Notes 7 and 8 above.)
3 units PSYCH 2T13
6 units from PSYCH 2D03, 2E03, 2F03, 2H03
6 units from any courses in the Faculty of Science
9 units Electives

LEVEL III: 30 UNITS
9 units PSYCH 2C03, 3A03, 3F03, 3J33, 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, 3J33, 3M03, 3T03, 3Y03, 4R03, 4Y03
3 units from Psychology Course List C
9 units 6 units from Capstone Course List B (See Note 10 above.) and 3 units from Psychology Course List C or PSYCH 4D09
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 Level II, III Psychology courses, including at least six units from Level III Psychology courses

HONOURS SCIENCE PROGRAMS

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.
3. Students are restricted to a total of 36 units of Levels II, III, IV Biology of which no more than 12 units may be taken in each of Level II, III or IV.
4. Students are responsible for ensuring that prerequisites for anticipated courses for Level III (and IV) are completed in Level II (and III). Some upper level courses are restricted by program.
5. 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.

Honours Science (Geoscience) {2513}
(Include Environmental Science, Geography and Earth Sciences)

ADMISSION
Completion of the Science I requirements, including:
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1DD3, STATS 1CC3
6 units from ENVIR SC 1A03, 1B03, 1G03
12 units from Science I Course List

2 courses SCIENCE 1A00, SCIENCE 1B00

Specific Level I Courses for Geoscience:
ENVIR SC 1A03, 1B03, 1G03

All nine units must be completed by the end of Level II.

MINIMUM AVERAGES/GRDES FOR ADMISSION:
A Cumulative Average of 5.0 and an average of 6.0 in two of ENVIR SC 1A03, 1B03, 1G03.

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.

Honours Science (Life Science) {2514}
(Include Biochemistry, Biology and Psychology)

ADMISSION
Completion of the Science I requirements, including:
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1DD3, STATS 1CC3
6 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
12 units from Science I Course List (See Note below.)

2 courses SCIENCE 1A00, SCIENCE 1B00

Specific Level I Courses for Life Science:
BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
All 12 units must be completed by the end of Level II.

MINIMUM AVERAGES/GRDES:
A Cumulative Average of 5.0 and a grade of C+ in one of BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3, and one other course 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.

NOTE:
Students who intend to complete Biochemistry courses or who wish to be eligible for a wider selection of Biology courses, must complete at least 6 units from: BIOLOGY 1A03, 1A04, CHEM 1A03, 1A04, PSYCH 1A03, 1A04.

Honours Science (Mathematical Science) (2515)
(Includes Mathematics and Statistics and Computer Science)

ADMISSION
2006-2007 ONLY: Completion of the Science I or Mathematics and Statistics I requirements, including:
6 units MATH 1A03, 1A04
3 units from COMP SCI 1FC3, 1MA3, 1MD3, MATH 1B03
15 units from Level I courses to complete Science I or Mathematics and Statistics I
6 units Level I electives
2 courses SCIENCE 1A00, SCIENCE 1B00

Specific Level I courses for Mathematical Science:
COMP SCI 1FC3, 1MA3, 1MD3 must be completed in Level I for students who intend to complete Level II, III, IV Computer Science courses.

EFFECTIVE 2007-2008: Completion of the Science I or Mathematics and Statistics I requirements, including:
6 units MATH 1A03 (or 1X03), 1A04 (or 1XX3)
3 units from COMP SCI 1FC3, 1MD3, MATH 1B03 (or 1D03)
15 units from Level I courses to complete Science I or Mathematics and Statistics I
6 units Level I electives
2 courses SCIENCE 1A00, SCIENCE 1B00

Specific Level I courses for Mathematical Science:
COMP SCI 1FC3, 1MD3 must be completed in Level I for students who intend to complete Level II, III, IV Computer Science courses.

MINIMUM AVERAGES/GRADES:
A Cumulative Average of 5.0 and a grade of C+ in one of 1MA3, 1MD3, MATH 1A03, 1B03 and one other course 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

NOTE:
Students should be aware that MATH 1B03, in addition to MATH 1D03, may be a prerequisite for upper level Computer Science and Mathematics courses.

Honours Science (Physical Science) (2516)
(Includes Chemistry, Materials Science and Physics)

ADMISSION
Completion of the Science I requirements, including:
6 units MATH 1A03, 1A04
6 units from CHEM 1A03, 1AA3; or PHYSICS 1B03, 1BA3 (or 1BB3)
12 units from Science I Course List
6 units Level I electives
2 courses SCIENCE 1A00, SCIENCE 1B00

Specific Level I courses for Physical Science:
CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3 (or 1BB3)
All 12 units must be completed by the end of Level II.

MINIMUM AVERAGES/GRADGrades:
A Cumulative Grade of 5.0 and a grade of C+ in one of CHEM 1A03, 1AA3, PHYSICS 1B03, 1BA3 or 1BB3 and one other course 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 intending to take upper level Physics courses should take MATH 1B03 (or D03) by the end of Level II.
2. MATLS 1MD03 is recommended as an Introduction to Materials Science.

All Honours Science Programs Level II, III, IV

NOTE
Admission to an Honours Science program does not guarantee admission to all courses. Some courses have program restrictions. Please read course descriptions and prerequisites carefully.

Geosciences Course List
All Level II, III and IV Geo courses except GEO 2G03, 2MM3, 2MW3, 3AA3, 3CC3, 3DD3, 3NN3 and non-science Geo courses. Non-science Geo courses contain the letter H in the course code.

Life Sciences Course List
BIOCHEM 2B03, 2BB3, 2C03, 2EE3, 3D03, 3G03, 3H03, 3N03, 4C03, 4E03, 4K03, 4Q03; all Level II, III and IV Biology courses except BIOLOGY 3Q03, 3Q33; HTH SCIENCE 3103, 3K03, 4I13; MOL BIOLOGY 4H03; All Level II, III, and IV Psychology courses

Mathematical Science Course List
All Level II, III and IV Computer Science, Mathematics and Statistics courses.

Physical Science Course List
All Level II, III and IV Astronomy, Chemistry and Physics courses; GEO 2Q03, 3Q03, 3V03; all Level II, III and IV Materials Science courses; MATH 2A03, 2C03, 3C03, 3D03, MED PHYSICS 4B03

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 from Level II courses from the Course List of the chosen area of study
6 units from courses offered by the Faculty of Science excluding the Course List of the chosen area of study
6 units from courses outside the Faculty of Science
6 units Electives. Specific 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 3 above.)

Level III: 30 Units
12 units Level III, IV courses from the Course List of the chosen area of study
3 units from courses offered by the Faculty of Science excluding the Course List of the chosen area of study
9 units from 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 3 above.)

Level IV: 30 Units
6 units from INQUIRY 3S03, 4SB3, 4SC3, 4SF3, 4SG3, 4SH3, 4SI3, 4S33, MATH 3Z03
12 units from Level III, IV courses from the Course List of the chosen area of study
6 units from courses offered by the Faculty of Science excluding the Course List of the chosen area of study
6 units Electives. No more than 12 units from Level II, III, IV Biology may be taken in Level IV. (See Note 3 above.)

Origins Research Specialization

ADMISSION
Enrolment in this specialization 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 and Statistics, Physics, Psychology, Arts & Science or Honours Science. Eligible students must submit an application for admission by March 31 in the academic year prior to registration. Information about the specialization and the admission and selection procedures may be accessed at the Origins Institute web site at http://origins.mcmaster.ca or by contacting the Associate Director (Jon Stone, Life Sciences Building, Room 327, 905-525-9140 ext. 26136 or email jstoner@mcmaster.ca)
Completion of Science I requirements, including:
6 units BIOLOGY 1A03, 1AA3
3 units CHEM 1A03
3 units MATH 1A03
3 units from MATH 1AA3, 1B03 (or 1D03), STATS 1C3
3 units PHYSICS 1B03
3 units from ASTRON 1F03, PHYSICS 1BAA3, 1BB3
3 units from CHEM 1AA3, ENVIR SC 1C03

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/GRADES:
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 3AA3, 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: 30 UNITS
12 units Level II courses from the Course List of the chosen area of study
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 Level III, IV courses from the Course List of the chosen area of study
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 4A09
12 units Level III, IV courses from the Course List of the chosen area of study
9 units Electives

THREE-LEVEL B.S.C. PROGRAMS

NOTES
1. Students who successfully complete the first three Levels of any Honours B.Sc. degree may request permission from the Office of the Associate Dean of Science for transfer to graduate courses for a three-level B.Sc. Science degree.
2. 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.
3. Students registered in any three-level B.Sc. program are not eligible to register for any Level IV Biology courses.
4. Students are responsible for ensuring that the prerequisites for anticipated courses for Level III are completed in Level II before registering for the course.
5. 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.

B.Sc. in Geoscience (1149)
(Includes Environmental Science, Geography and Earth Sciences)

ADMISSION
Completion of the Science I requirements, including:
3 units MATH 1A03
6 units from MATH 1AA3, 1B03, 1D03, STATS 1C3
6 units from ENVIR SC 1A03, 1B03, 1G03
12 units from Science I Course List
8 units Level I electives
2 courses SCIENCE 1A00, 1B00

*Specific Level I courses for Geoscience:
ENVIR SC 1A03, 1B03, 1G03
All nine units must be completed by the end of Level II.

MINIMUM AVERAGES/GRADERS FOR ADMISSION:
A cumulative average of 3.5 and an average of 4.0 in two courses from the Science I Course List.

NOTES
1. There are Level II prerequisites for many Level III courses; these should be considered when choosing Level II courses. As an aid to choosing a coherent set of courses in a single discipline, students should consult the required specialist option courses in the Honours Earth and Environmental Sciences program.
2. Students should seek academic counselling from the School of Geography and Earth Sciences to ensure that their choices are appropriate.

B.Sc. in Life Science (1312)
(Includes Biochemistry, Biology, and Psychology)

ADMISSION
Completion of the Science I requirements, including:
3 units MATH 1A03
3 units from MATH 1AA3, 1B03, 1D03, STATS 1C3
6 units from BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
12 units from Science I Course List (See Note 4 below.)
6 units Level I electives
2 courses SCIENCE 1A00, 1B00

*Specific Level I courses for Life Science:
BIOLOGY 1A03, 1AA3, PSYCH 1A03, 1AA3
All 12 units must be completed by the end of Level II.

MINIMUM AVERAGES/GRADERS FOR ADMISSION:
A cumulative average of 3.5 and an average of 4.0 in two courses from the Science I Course List.

NOTES
1. No more than six units of Level II, III Biology may be taken in any given Fall/Winter session by students enrolled in a three-year Baccalaureate degree program.
2. Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II. As an aid in selecting appropriate courses for Level II, students should refer to the program requirements for the Core Programs in Honours Biochemistry or Honours Biology or Honours Psychology.
3. For assistance with the selection of courses, students may seek academic counselling with the Department of Biochemistry and Biomedical Sciences, Biology or Psychology, Neuroscience and Behaviour.
4. 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, 1AA3.
LIFE SCIENCE COURSE LIST

BIOCHEM 2EE3, 3D03, 3G03, 3H03, 3N03; BIOLOGY 2A03, 2B03, 2C03, 2D03, 2F03, all Level III Biology courses (except BIOLOGY 3Q03, 3QQ3); CHEM 2E03, 2Q03, 2Q03; PSYCH 2A03, 2B03, 2C03, 2D03, 2E03, 2F03, 2H03, 2TT3, 3A03, 3A03, 3B03, 3F03, 3FA3, 3GG3, 3HI3, 3II3, 3J03, 3J03, 3K03, 3M03, 3N03, 3N03, 3Q03, 3QQ3, 3T03, 3U03, 3V03; STATS 2MA3

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 Life Science Course List
6 units from courses offered by the Faculty of Science excluding the Life Science Course List
6 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology. More than six units of Level II, III Biology may be taken in Level II. (See Note 1 above.). 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 courses from the Life Science Course List
3 units from courses offered by the Faculty of Science excluding the Life Science Course List
9 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology. More than six units of Level II, III Biology may be taken in Level III. (See Note 1 above.).

B.Sc. in Mathematical Science

(Includes Computer Science and Mathematics and Statistics)

ADMISSION

2006-2007 ONLY: Completion of any Level I program, including:
6 units MATH 1A03, 1AA3
3 units from COMP SCI 1FC3, 1MA3, 1MD3, MATH 1B03
21 units Level I courses to complete a Level I program
2 courses SCIENCE 1A00, 1B00

*Specific Level I courses for Mathematical Science:
COMP SCI 1FC3, 1MA3, 1MD3 must be completed in Level I for students who intend to complete Level II, III, IV Computer Science courses.

EFFECTIVE 2007-2008: Completion of any Level I program, including:
6 units MATH 1A03 (or 1X03), 1AA3 (or 1XX3)
3 units from COMP SCI 1FC3, 1MD3, MATH 1B03 (or 1D03)
21 units Level I courses to complete a Level I program
2 courses SCIENCE 1A00, 1B00

*Specific Level I courses for Mathematical Science:
COMP SCI 1FC3, 1MD3 must be completed in Level I for students who intend to complete Level II, III, IV Computer Science courses.

MINIMUM AVERAGES/GRADERS FOR ADMISSION:

A Cumulative Average of 3.5 and an average of 4.0 in two courses from the Science I Course List.

NOTES

1. Students should be aware that MATH 1B03, in addition to MATH 1D03, may be a prerequisite for upper Level Computer Science and Mathematics courses.
2. Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II. As an aid in selecting appropriate courses for Level II, students should refer to the program requirements for the Core programs for Honours Mathematics and Statistics or Honours Computer Science.
3. For assistance with the selection of courses, students may seek academic counselling with the Department of Mathematics and Statistics and/or the Department of Computing and Software.

MATHMATICAL SCIENCE COURSE LIST

All Level II, III, IV Computer Science courses; MATH 2A03, 2AB3, 2C03, 2D03, 2E03, 2F03, 2K03, 2S03, 2T03; STATS 2D03, 2MB3, all Level III and IV Mathematics and Statistics courses

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 Physical Science Course List
6 units from courses offered by the Faculty of Science
6 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology. 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 courses from the Physical Science Course List
3 units from courses offered by the Faculty of Science
9 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology

B.Sc. in Physical Science

(Includes Chemistry, Materials Science and Physics)

ADMISSION

Completion of the Science I requirements, including:
6 units MATH 1A03, 1AA3
*6 units from CHEM 1A03, 1AA3, PHYSICS 1B03, 1B03 (or 1BB3)
12 units from Science I Course List (See Note 4 below.)
6 units Level I electives
2 courses SCIENCE 1A00, 1B00

*Specific Level I courses for Physical Science:
CHEM 1A03, 1AA3, MATH 1AA3, PHYSICS 1B03, 1B03 (or 1BB3)

All 12 units must be completed by the end of Level II.

MINIMUM AVERAGES/GRADERS FOR ADMISSION:

A Cumulative Average of 3.5 and an average of 4.0 in two courses from the Science I Course List.

NOTES

1. Students are responsible for ensuring that prerequisites for anticipated courses for Level III are completed in Level II. As an aid in selecting appropriate courses for Level II, students should refer to the program requirements for the Core programs for Honours Chemistry, Honours Physics or Honours Materials Science.
2. Students should seek academic counselling to ensure that their choices are appropriate. For counselling, students should approach the Departments of Chemistry, Physics or Materials Science and Engineering.
3. Students proceeding in Physics must include PHYSICS 2B06 and MATH 2A03 and MATH 2C03 in Level II.
4. Students intending to take upper level Physics courses should take MATH 1B03 (or 1D03) by the end of Level II.

PHYSICAL SCIENCE COURSE LIST

Levels II and III Astronomy, Chemistry, Materials Science and Physics courses; GEO 2003, 3Q03, 3V03; all Level II and III Materials Science courses; MATH 3C03, 3D03; MED PHYS 4B03

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 Physical Science Course List
6 units from courses offered by the Faculty of Science
6 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology. 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 courses from the Physical Science Course List
3 units from courses offered by the Faculty of Science
9 units from courses outside the Faculty of Science
6 units Electives, excluding Biology and Psychology
The social sciences are concerned with the study of human activities and relationships and their social, political, economic, cultural and spatial contexts. Through the pre-industrial to the post-industrial eras, social scientists examine social, economic, cultural and political issues experienced by individuals, groups, and societies as well as the interactions between people and their environments, both natural and built.

The Faculty offers a range of degree programs in Anthropology, Economics, Geography, Gerontology, Health Studies, Kinesiology, Labour Studies, Political Science, Psychology, Religious Studies, Social Work and Sociology. In addition, there are various opportunities for students to link their academic goals with their career interests. These experiential education initiatives include, but are not limited to, inquiry, internships, community service learning, student project grants, and undergraduate summer research assistantships.

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.

PROGRAMS AND DEGREES

A. Level I Programs

Kinesiology I

PROGRAM NOTE

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 from Course List 1
18 units Electives, which may include courses from Course List 1.

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 programs 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.

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 KINESIOI 1A06, 1E03, 1H03
1 course KINESIOI 1K03
18 units Electives (See Note 2 above.)

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 an Honours Kinesiology degree may request permission of the Office of the Associate Dean of Social Sciences for 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 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)

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 KINESIOI 1A06, 1E03, 1H03.

Kinesiology students who fail to meet these minimum requirements but have a C.A. of at least 3.5 may register 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. This program option is being phased out. Entry into Level II will be last available in September 2006.
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). Students will normally complete approximately 36 units of work in each level of the program (normally 12 units per level in each subject). The Honours B.Kin. 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. 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 a B.S.W. degree. (See program 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 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 2E01 may apply for internships. 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

ACADEMIC REGULATIONS

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

Students enrolled in a program in the Faculty of Social Sciences, in addition to meeting the Academic Regulations of the University, shall be subject to the following regulations of the Faculty of Social Sciences.

ADMISSION TO LEVEL II PROGRAMS
Any student seeking admission to a Level II program in the Faculty of Social Sciences, with the exception of Combined B.A./B.S.W. programs, for the following Fall/Winter session must submit an Application for Admission to Level II through MUGSI by April 6. The application allows students to rank four program choices. Students will be notified of their eligibility for the Level II programs to which they have applied on their grade report in June.

TRANFER TO THE FACULTY OF SOCIAL SCIENCES
Students from other Faculties are able to transfer to degree programs offered by the Faculty of Social Sciences provided they have obtained a Cumulative Average of at least 3.5 and have completed the necessary admission requirements.

Students who do not meet these requirements must consult with the Office of the Associate Dean. Requests for transfer will be considered at the same time as applications for reinstatement (see below).

TRANSFER/APPLICATION TO KINESIOLOGY I
Any student seeking transfer/admission to Kinesiology I for the following Fall/Winter session must submit an Application for Admission through MUGSI by April 6. The application allows students to rank four program choices. Students will be notified of their eligibility for transfer to Kinesiology I on their grade reports in June.

A limited number of exceptionally qualified students are admitted each year. To be considered, applicants must have an average of at least 5.0 (B) on a minimum of 24 units of university work taken on a full-time basis. McMaster students interested in transferring may contact the Undergraduate Administrative Assistant (Kinesiology) or the Office of the Associate Dean, Social Sciences. Students transferring from another university should see the Admission Requirements and Application Procedures sections of this Calendar. Effective September 2007, to be considered, applicants must complete a minimum of 24 units of university work taken on a full-time basis, including an average of at least 6.0 in either KINIOLOG 1Y03 and 1Y03 or BIOLOGY 1A03 and 1A03. Given the number of required units and prerequisites of Kinesiology courses, transfer students may not be able to complete the requirements in three additional years of study.

REINSTATEMENT
A student who may not continue at the University may apply for reinstatement. Application for reinstatement must be made to the Office of the Registrar using the Reinstatement Request Form by the deadline for the session. See the Sessional Dates section of this Calendar. Reinstatement forms will be carefully reviewed and the evidence considered will include the student's academic performance before and after admission to McMaster, a letter of explanation supported by two letters of reference and other appropriate documentation.

Reinstatement is not automatic or guaranteed. Decisions are normally made after June 30 for September entry. Effective September 1997, the Cumulative Average for students who are reinstated is reset to 0.0 on zero units. Credit is retained for courses in which passing grades have been achieved. NOTE: If at a review after reinstatement the 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 Kinesiology students will be considered for reinstatement to Kinesiology upon completion of a minimum of 24 units of university work taken on a full-time basis in a non-Kinesiology program with a minimum average of 7.0 (B-). Application forms are available from the Office of the Associate Dean or the Department of Kinesiology. The application deadline is April 30 for September entry. Reinstatement is not guaranteed.

DEADLINES
The Faculty of Social Sciences will not consider applications for admission, admission to a second degree or continuing studies, or applications for reinstatement 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 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 studies to fit their interests. Advising also involves reviewing students’ 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 strongly 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 refunds. Students who fail to withdraw formally from any course(s) by the stated deadlines will remain registered whether or not they attend classes and will be assigned a grade.

LETTER OF PERMISSION
Students in good academic standing who wish to attend another 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 the requirement of a grade of at least C- for transfer credit. Courses taken at another university cannot be used to satisfy the university’s minimum residence requirements, will not be included in the calculation of the 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 the planned exchange.

For further information please see International Study in the General Academic Regulations section in this Calendar. Information concerning student exchanges can also be found in the Academic Facilities, Student Services and Organizations section of this Calendar under the heading Centre for Student Development, International Student Services.

Acceptance to the Ontario and University-wide Exchange Programs is by recommendation. Application forms can be obtained from:

Centre for Student Development
Student Exchanges
Gilmour Hall, Room 104
Telephone: (905) 525-9140, extension 24748
128 FACULTY OF SOCIAL SCIENCES

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 have completed ANTHROP 2103 are not required to take ANTHROP 3L03.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
18 units from the Level I program completed prior to admission to the program. (See Admission above.)
6 units ANTHROP 2E03, 2F03, 2P03, 2A03, 3L03 (See Note 2 above.)
12 units from ANTHROP 2D03, 2F03, 2H03, 3K03, 3P03
12 units from ANTHROP 2A03, 2B03, 2P03, 2V03, 2W03, 2B03
12 units Level IV Anthropology
6 units ANTHROP 4103
3 units Level IV Anthropology
12 units Levels II, III or IV Anthropology
36 units Electives.
3 units from SOC SCI 2J03 or STATS 1CC3 or in combined programs with at least 3.5 including an average of at least 0.6 units 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.

*B.A. in Anthropology {1010}

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 ANTHROP 1A03, 1B03, 1Z03.

REQUIREMENTS
80 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 ANTHROP 2E03, 2F03, 2P03
18 units ANTHROP 2A03, 2B03, 2P03, 2A03, 3L03
36 units Electives.

If not completed in Level I, a minimum of 6 units must be from the Faculty of Humanities and/or the Department of Religious Studies. Students combining Anthropology with Arts and Sciences, or with a Humanities subject, are exempt from this requirement.

INTERDISCIPLINARY MINOR
IN ARCHAEOLOGY

See the Interdisciplinary Minors and Thematic Areas section of this Calendar.

DEPARTMENT OF ECONOMICS

WEB ADDRESS: http://www.socserv.vcmaster.ca/econ/

honours Arts & Science and Economics
(B.A.arts.Sc.; See Arts & Science Program)

Honours Economics (Specialist Option) {2151}

The Honours Economics (Specialist Option) is being phased out. Registration in Level II will be last available in September 2006.

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 1B03. Credit in Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2F3 may be substituted for ECON 2003.
2. ECON 2G03 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, 2G03, 2H03, 2H03, 3F03, 3G03, 4A03
6 units ECON 3A03, 3AA3, 4T03, 4T03
24 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 3U03, 2E03, 2G03, 2L03, 2A03, 2B03, 2T03 (See Notes 1 and 2 above.)
6 units ECON 2B03 and 3U03 (See Note 3 above.)
3 units** from MATH 1AA3 or 1M03
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U)

27 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 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 1B03. Credit in Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2F3 may be substituted for ECON 2003.
2. ECON 2G03 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.
4. Many graduate programs in Economics require ECON 3G03, 4T03 and 4T03. Students interested in an M.A. in Economics are advised to consult a departmental advisor for more detailed information.

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 ECON 2G03, 2G03, 2H03, 2H03, 3F03, 3G03, 4A03
24 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 3U03, 2E03, 2G03, 2L03, 2A03, 2B03, 2T03 (See Notes 1 and 2 above.)
6 units ECON 2B03 and 3U03 (See Note 3 above.)
3 units** from MATH 1AA3 or 1M03
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U)

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 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 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 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, STATS 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 2FA3 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 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 ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03 (See Note 3 above.)
15 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2K03, 2P03, 2T03 (See Notes 4 and 5 above.)
36 units courses specified for the other subject.
6 units ECON 2B03 and 3U03; or, in combined programs within the Faculty of Social Sciences, the Research Methods/Statistics requirement specified for the other subject. (See Note 2 above.)
3 units* from MATH 1A03 or 1M03.
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U).
9 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities or/and the Department of Religious Studies. Students choosing Economics 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.
**If requirement completed in Level I or with Grade 12 U or M courses, these units will be taken as electives.

Honours Economics and Computer Science

ADMISSION
Completion of any Level I program with a Cumulative Average of at least 8.0, 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 1MA3 and 1MD3 or 1FC3; MATH 1A03, 1AA3 and 1BB3. MATH 1B03 may be postponed until Level II.

NOTES
1. COMMERCE 2FA3 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.

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 MATH 1K03 or equivalent.

NOTES
1. COMMERCE 2FA3 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
120 units total (Levels I to IV), 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.)
18 units ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03
18 units Levels II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2K03, 2P03, 2T03 (See Notes 2 and 3 above.)
18 units COMP SCI 2CA3, 2ME3, 2MF3, 2MJ3, 2003, 2SC3
9 units from COMP SCI 3CN3, 3DA3, 3DB3, 3IS3, 3MH3, 4HC3, 4WW3
3 units Levels III or IV Computer Science except COMP SCI 4ZP6
6-9 units STATS 2D03 and either STATS 2M33, or 3D03 and 3D33 (or 3D03), or ECON 2B03 and 3U03. (See Note 4 above.)
15-18 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 a grade of at least B in each of ECON 1A06 (or an average of at least 7.0 in ECON 1B03 and 1BB3), MATH 1A03, 1AA3 and 1BB3.

NOTES
1. COMMERCE 2FA3 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
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 ECON 2G03, 2GG3, 2H03, 2HH3, 3F03, 4A03
18 units Levels 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.)
18 units MATH 2C03, 2R03, 2X03 (or 2AB3), 3A03, 4A03 (or 3AAM)
3 units from MATH 2S03, 2T03.
15 units Levels III, IV Mathematics, Statistics 6-9 units STATS 2D03 and either STATS 2M33, or 3D03 and 3D33 (or 3D03), or ECON 2B03 and 3U03. (See Note 3 above.)
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.
3 units** from STATS 1L03 (or Grade 12 Mathematics of Data Management U)
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 2B03 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 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 2FA3 may be substituted for ECON 2103.
3. COMMERCE 2QA3 (or equivalent statistics course) may be substituted for ECON 2B03.
4. 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 I, II, III, IV Economics with no more than six units from ECON 2A03, 2C03, 2D03, 2E03, 2F03, 2I03, 2J03, 2K03, 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 6.0 including an average of at least 6.0 in six units from GEO 1H53, 1H58, ENVIR SC 1A03, 1B03, 1G03.

NOTES
1. One of SOC SCI 2J03 or STATS 1CC3 must be completed by the end of 80 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 4CC3 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 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 2003
3 units from GEO 2E03, 2HR3
12 units from Level II or III GEO, excluding GEO 2G03, 2HC3, 2HG3, 2HU3, 2MM3, 2WW3, 3A03, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3 (See Note 5 above.)
3 units from SOC SCI 2J03 or STATS 1CC3* (See Note 1 above.)
9 units Electives

LEVELS III AND IV: 60 UNITS
(See below for the Level III and IV requirements for specializations)
3 units GEO 3R03
3 units from GEO 3FE3, 3HF3
15 units Level IV GEO, including one of GEO 4CC3 or 4R06 (See Note 3 above.)
12 units Level III GEO, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
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}

Analysis Specialization

{2240870}

G.I.S. and Spatial Analysis Specialization

{2240871}

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, 3HF3
12 units from GEO 3A03, 3FE3, 3HG3, 3HH3, 3HJ3
9 units GEO 3A03, 4H13, 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

ADMISSION
Completion of Level II Honours Geography, including a grade of at least C+ in GEO 2103 and completion of GEO 2FA3. (See Note 7 above.)

NOTE
Students considering this specialization are strongly encouraged to complete MATH 1K03 if a Grade 12 Math U was not completed.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
3 units GEO 3R03
3 units from GEO 3FE3, 3HF3
18 units from GEO 3D03, 3HG3, 3I03, 3S03, 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 2H3, 2HD3, 2HY3.

REQUIREMENTS
LEVELS III AND IV: 60 UNITS
3 units GEO 3R03
3 units from GEO 3FE3, 3HF3
9 units from GEO 2H3, 2HD3, 2HY3 (if not completed in Level II), 3HD3, 3HG3, 3HT3, 3HU3, 3HZ3
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.

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 1H3, 1HU3, ENVIR SC 1A03, 1B03, 1G03. (See Note 1 below.)

NOTES
1. GEO 1HS3, 1HU3 and one of ENVIR SC 1A03, 1B03, 1G03 must be completed by the end of 60 units.
2. One of SOC SCI 2J03 or STATS 1CC3 must be completed by the end of 60 units.
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
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 GEO 2A03, 2I03, 3A03, 3H3, 3R03, 3A03
3 units from GEO 2E03, 2HR3
3 units from GEO 3FE3, 3HF3
15 units Level IV GEO, including one of GEO 4CC3 or 4R06
12 units Level II GEO, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
12 units Level IV GEO, excluding GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
6 units* GEO 1HS3, 1HU3, which must be completed by the end of 60 units
3 units* from ENVIR SC 1A03, 1B03, 1G03, which must be completed by the end of 60 units
3 units* from SOC SCI 2103 or STATS 1CC3* (See Note 2 above.)
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.

*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 1H3, 1HU3, ENVIR 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/or the Department of Religious Studies.

Honours in Geography

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 1H3, 1HU3, ENVIR SC 1A03, 1B03, 1G03 and satisfaction of admission requirements for the Honours program in the other B.A. subject.

NOTES
1. 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.
2. Students who entered the program prior to September 2001, may substitute three units of Level IV GEO with electives.
3. Students in a combined Honours program within the Faculty of Social Sciences may substitute GEO 2HR3 with the three or six unit Research Methods course specified for the other subject (i.e., GERONTOL 2C03, HEALTHST 2B03, POL SCI 3N06, SOCIOL 2203).

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 GEO 2I03, 3R03
3 units from GEO 2E03, 2HR3 (See Note 4 above.)
3 units from GEO 3FE3, 3HF3
6 units Level III GEO, excluding GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
9 units Level II or III GEO, excluding GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3AA3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
15 units Level IV GEO, including one of GEO 4CC3 or 4R06 (See Note 3 above.)
or 12-15 units Level IV GEO and the thesis or honors seminar specified by the department for the other subject. (See Note 3 above.)
36 units courses specified for the other subject
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. Students combining Geography and Arts & Science or with a Humanities subject, are exempt from this requirement.

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 1H3, 1HU3, ENVIR SC 1A03, 1B03, 1G03.

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 GEO with no more that six units from GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3
12 units Level III GEO with no more than six units from GEO 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3
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 Geography

REQUIREMENTS
24 units total
6 units from GEO 1A03, 1B03, 1G03, 1HB6, 1HS3, 1HU3, ENVIR SC 1A03, 1B03, 1G03, 1H03
18 units Levels II, III or IV GEO, including at least six units of Levels III or IV. No more than six units may be from GEO 2GG3, 2HC3, 2HU3, 2MM3, 2WW3, 3CC3, 3DD3, 3HJ3, 3HR3, 3NN3

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

ANTHROPO 2A03, 2F03, 2H03, 2U03, 3C03, 3Z03, 4AE3, 4P03
BIOLOGY 2D03, 2E03, 2F03, 3SS3, 3TT3, 4Y03
ECON 2J03, 3W03
GEO 2A03, 3G03, 2HG3, 3WW3, 3AA3, 3C03, 3CC3, 3HE3,
3HH3, 4X03, 4HH3, 4HY3
HEALTHST 4E03
PHILOS 2G03, 2N03
POL SCI 2E06, 3Z03, 3Z23, 4D06
RELIG ST 2W03

REQUIREMENTS
24 units total
3 units from GEO 1HS3, 1HU3
3 units from ENVR SC 1A03, 1B03, 1G03, 1H03
6 units from GEO 2A03, 3A03, 4A03
12 units from Course List including at least six units from Levels 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, ENVR SC 1A03, 1B03, 1G03, 1H03; and GEO 2G03 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 ENVR SC 1A03, 1B03, 1G03, GEO 1HS3, 1HU3
(See Note 2 above.)
18 units GEO 2I03, 3I03, 3G03, 3Y03, 4I03, 4S03 (See Notes 2 and 3 above.)

DIPLOMA IN SPATIAL INFORMATION SCIENCE AND CERTIFICATE IN G.I.S.
(Geographic Information Systems)

For further information see the Certificate and Diploma Programs section of this Calendar.

DEPARTMENT OF HEALTH, AGING AND SOCIETY

WEB ADDRESS: http://www.socsci.mcmaster.ca/gerontology/
WEB ADDRESS: http://www.socsci.mcmaster.ca/healthst/

Honours Arts & Science and Gerontology
(B.Arts.Sc.; See Arts & Science Program)

Honours Arts & Science and Health Studies
(B.Arts.Sc.; See Arts & Science Program)

Honours Gerontology

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 GERONTOl 1A03 or 1A06.

NOTES
1. Application for admission must be made by April 6. 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 are strongly recommended to complete GERONTOl 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and to complete GERONTOl 3R03 by the end of Level III.
5. Students are strongly recommended to complete GERONTOl 2E03 prior to registration in GERONTOl 3B03.

COURSE LIST

ANTHROPO 3Z03, 3Z23
BIOLOGY 3D03, 3Q03, 3Z03
ECON 2G03, 3G03, 4G03
GEO 2G03, 3G03, 4G03
HEALTHST 2E03, 3G03
PHILOS 3G03, 3S03
POL SCI 2E03, 3G03, 4G03
RELIG ST 2W03

REQUIREMENTS
120 units total (Levels I to IV), of which 45 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
18 units GERONTOl 2B03, 2D03, 3B03, 3D03, 4A06
3 units Level IV Gerontology
18 units Levels II, III or IV Gerontology or courses from Course List 1
6 units GERONTOl 2C03, 3R03 (See Note 4 above.)
3 units from SOC SCI 2J03, STATS 1C03 (See Note 4 above.)
42 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
Gerontology 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 GERONTOl 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 6. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
3. 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.
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 GERONTOl 2C03 and SOC SCI 2J03 (or another approved statistics course) by the end of Level II and to complete GERONTOl 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 GERONTOl 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 GERONTOl 2E03 prior to registration in GERONTOl 3B03.
8. Students who enroll in the program prior to September 2003 or students who have permission of the Director of Gerontology to complete the Research Methods as required by their other component will replace GERONTOl 3R03 with a three unit elective.
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 GERONTOL 2B03, 2D03, 3B03, 3D03
3 units GERONTOL 2003
9 units Levels 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 45S3 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 1

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3A03, 3D03, 3E03, 3H03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOL 3CC3, 3G03, 3HH3
or other designated and approved courses. (See Note 4 above.)

COURSE LIST 2

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3A03, 3D03, 3E03, 3H03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOL 3CC3, 3G03, 3HH3
or other designated and approved courses. (See Note 4 above.)

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 6. 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 should consult with the Director regarding GERONTOL 3B03 (the Gerontology Field Observation requirement) and SOC WORK 3DD6.
5. Students are strongly recommended to complete GERONTOL 2E03 prior to registration in GERONTOL 3B03.

COURSE LIST 1

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3A03, 3D03, 3E03, 3H03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOL 3CC3, 3G03, 3HH3
or other designated and approved courses. (See Note 3 above.)

COURSE LIST 2

ANTHROP 3Z03, 3ZZ3
ECON 3D03, 3Q03, 3Z03
GEO 2HG3, 3HH3
HEALTHST 2AA3, 2C03, 2D03, 3AA3, 3A03, 3D03, 3E03, 3H03, 4C03
HTH SCI 3B03
KINESIOL 3F03, 3SS3
PHILOS 2D03, 3C03
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 4L03, 4R03
SOCIOL 3CC3, 3G03, 3HH3
or other designated and approved courses. (See Note 3 above.)

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 6. 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.
COURSE LIST
(Students are responsible for ensuring that course prerequisites are fulfilled.)

ANTHROP 2AN3, 2U03, 3C03, 3Q03, 3Y03, 3Z03, 3ZZ3
ECON 3Z03
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03, 3NN3
RELG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3003
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 from HEALTHST 3A03 (See Note 4 above.)
18 units from Levels 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
42 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, 1S03 (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 6. 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 Levels 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 Levels 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
ECON 3Z03
GEO 3HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03, 3NN3
RELG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3003
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 from HEALTHST 3A03 (See Note 4 above.)
9 units from Levels 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 1 (See Notes 3 and 6 above.)
3 units from SOC SCI 2J03 or STATS 1CC3* or an equivalent statistics course
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.

*If requirement completed in Level I, these units will be taken as electives.

B.A. in Health Studies

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 1S03 (or SOC SCI 1H03).

NOTES
1. Application for admission must be made by April 6. 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 Levels 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 3 HH3
GERONTOL 2F03, 3H03, 3K03, 3L03, 3N03
HTH SCI 2G03, 2J03,
HISTORY 3V03
INDIG ST 3H03, 3HH3
KINESIOL 3A03, 3SS3
PHILOS 2D03, 3C03
PSYCH 3B03, 3N03, 3NN3
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3Q03
SOCIOI 3G03, 3HH3
WOMEN ST 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 from HEALTHST 3A03 (See Note 4 above.)
3 units from HEALTHST 2B03
3 units from HEALTHST 3G03 (See Note 5 above.)
6 units from Courses Level II or II 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

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 SCIENC3 2G03 before September 2003 may use these toward the minor requirements.
4. KINESIOL 2G03 and 3AO3 may be used to satisfy Health Studies requirements for Kinesiology students pursing 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, 3HH3, 3K03, 3L03, 3N03, 3Y03, 4I03
HEALTHST 2C03, 2D03, 2E03, 2H03, 3C03, 3D03, 3E03, 3F03, 3H03, 3M03, 3Y03
HTH SCI 2G03, 2J03, 2HH3
HISTORY 3V03, 3Y03
INDIG ST 3H03, 3HH3
KINESIOL 3SS3
LABR ST 3D03
PHILOS 2D03, 3C03
POL SCI 3M03
PSYCH 3B03, 3N03, 3NN3
RELIG ST 2C03, 2M03, 2N03, 2WW3
SOC WORK 3C03, 3Q03
SOCIOI 3G03, 3HH3, 4G03
WOMEN ST 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

[308]

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 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, 1AA3, CHEM 1A03, 1A3, 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 1KL0
18 units Electives (See Note 2 above.)

Honours Bachelor of Kinesiology

[433]

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 Levels 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. Kinesiology courses may not be used toward the elective component of the degree.

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 from SOC SCI 2J03, STATS 1CC3*
12 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.)

Bachelor of Kinesiology Major

(Formerly Bachelor of Kinesiology)

Students who registered in this program prior to 2005 may see an Academic Advisor in the Office of the Associate Dean for program requirements.
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 6.0 including an average of at least 7.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03.

NOTES
1. Application for admission must be made by April 6. 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 complete a six unit Research Methods/Statistics course will reduce their elective component by three units.
5. 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.
6. 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.
7. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
8. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
9. 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.
10. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
11. Students are encouraged to complete LABR ST 3H03 before registering in 4A06.

COURSE LIST 1

COMMERCe 2B3, 1R3, 1B3
LABR ST
2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03

COURSE LIST 2

COMMERCe 3B3
ECON 2C03, 2F03, 2K03, 2N03
GERONTOL 3J03
HISTORY 3W03, 3W03
POL SCI 3D03, 3E03, 3E03, 3F03
SOCIOL 2E06, 2I03, 2Q06, 2R03, 2R03, 2V06, 3F03, 3L03

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.)
15 units LABR ST 2A03, 2C03, 3H03, 4A06
21 units from Course List 1, where at least nine units must be selected from Levels III or IV courses (See Note 5 above.)
3 units from LABR ST 4C03, 4E03 (See Note 6 above.)
3-6 units from Course List 2 (See Notes 5 and 6 above.)
3 units from SOC SCI 2J03 or STATS 1CC3 or an equivalent Research Methods/Statistics course as prescribed by the other Social Sciences Programs. (See Note 4 above.)

42-45 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 Labour 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 Cumulative Average of at least 6.0 including an average of at least 7.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03. Satisfaction of admission requirements for the Honours B.A. program in the other subject.

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. Application for admission must be made by April 6. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
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 enter the program prior to September 2003, and who have completed LABR ST/SOCIOL 2106, will use this course to satisfy six units of Course List 1 and not Course List 2.
9. Students who have completed LABR ST 4D03 need not complete LABR ST 4C03 or 4E03.
10. Students are encouraged to complete LABR ST 3H03 before registering in 4A06.

COURSE LIST 1

COMMERCe 2B3, 1R3, 1B3
LABR ST
2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03

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 3.5 including an average of at least 4.0 in six units from LABR ST 1A03 and one of LABR ST 1C03 or 1Z03.

NOTES
1. Application for admission must be made by April 6. 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

COMMERCe 2B3, 1R3
LABR ST
2B03, 2BB3, 2G03, 3A03, 3B03, 3C03, 3D03, 3E03, 3F03, 3G03, 3J03, 3W03
REQUIREMENTS
36 units from the Level III Political Science Program (The maximum Political Science courses to be taken is 54 units).
6 units POL SCI 2006
9 units Level III Political Science
9 units Levels 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.
18 units Electives. If not completed in Level I, a minimum of six units must be from the Faculty of Humanities and/or a Humanities subject, are exempt from this requirement. (The maximum Political Science courses to be taken is 54 units).

Combined Honours in Political Science 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 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 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.
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
12 units Level II Political Science
6 units Level IV Political Science
42 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.)

B.A. in Political Science {1450}

ADMISSION
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 alerted to those Levels II and III courses that are required to qualify for a number of Level IV courses. Students who wish to enter courses but who lack the necessary prerequisites must obtain the permission of the instructor.
2. 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
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 Levels II, III, IV Political Science of which up to 12 units may be Level II
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, Neuroscience and Behaviour.)

Honours Linguistic Cognitive Science (B.A.)
(See B.A., Faculty of Humanities, Department of Linguistics and Languages)

Honours Psychology (B.A.)

ADMISSION
Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1A33 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

NOTES
1. Application for admission must be made by April 6. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
2. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.
3. Students with credit in PSYCH 2RA3, do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STAT 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3 for any Honours B.A. Psychology program.
4. PSYCH 2RA3 and 2RB3 must be completed before entrance into Level III of the program. Students wishing to have more mathematical statistics may replace PSYCH 2RA3 and 2RB3 with STAT 2DD3 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult a departmental advisor.
5. 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.

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) or 1D03 (Algebra & Geometry) is strongly recommended for students intending to pursue graduate work in Psychology. COMP SCI 1MA3 (Computer Based Problem Solving) or TSA3 (Computing Fundamentals) is strongly 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 Levels III or IV Psychology.
12. The Department of Psychology, Neuroscience and Behaviour pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09) and the Individual Study courses (PSYCH 2QQ3, 3QQ3, 3QQ4, 4QQ3, 4QQ3Q). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3BL3, 3EE3, 3L03, 3L33, 3S03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4BN3, 4F03, 4J03, 4R03, 4Y03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006. Ballots can be obtained on the Department of Psychology, Neuroscience and Behaviour 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, 3L33, 3QQ3, 3S03, 3V03, 4QQ3

COURSE LIST 2 (CAPSTONE COURSES)
PSYCH 3T03, 4BN3, 4F03, 4J03, 4R03, 4Y03

COURSE LIST 3 (PSYCHOLOGY COURSE LIST)
BIOLOGY 4T03
HTH SCI 4BB3
KINESIOL 3E03

All Levels III and IV Psychology courses

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

LEVEL I: 30 UNITS
30 units from the Level I program completed prior to admission to the program. (See Admission above.)

LEVEL II: 30 UNITS
6 units from PSYCH 2RA3, 2RB3 (See Notes 3 and 4 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, 1A33, 1K03
12 units Electives
*If requirement completed in Level I, these units will be taken as electives.

LEVEL III: 30 UNITS
12 units from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and nine units from Course List 3
3 units from Course List 1
15 units Elective

LEVEL IV: 30 UNITS
15 units from Course List 3 and six units from Course List 2; or six units from Course List 3 and PSYCH 4D09
15 units Electives

Honours Psychology Specializations

On satisfaction of 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 Specialization

ADMISSION
Completion of Level II Honours Psychology, including PSYCH 2F03.
### FACULTY OF SOCIAL SCIENCES 139

#### REQUIREMENTS

**LEVELS II: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 units</td>
<td>from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03</td>
</tr>
<tr>
<td>6 units</td>
<td>from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3</td>
</tr>
<tr>
<td>3 units</td>
<td>from Course List 1. PSYCH 3BL3, 3EE3, 3L03, or 3V03 is recommended.</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**LEVEL IV: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 units</td>
<td>from PSYCH 2D03, 3A03, 3AA3, 3BN3, 3FA3, 3HH3, 3J03, 3M03, 3Y03, 4BN3, 4F03, 4Y03, BIOLOGY 4T03</td>
</tr>
<tr>
<td>12 units</td>
<td>six units from Course List 3 and six units from Course List 2</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Cognition and Perception [2460882]

#### Specialization

**ADMISSION**

Completion of Level II Honours Psychology, including PSYCH 2E03, 2H03.

**REQUIREMENTS**

**LEVEL III: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 units</td>
<td>from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3J03, 3L03, 3U03, 3V03, 3Y03</td>
</tr>
<tr>
<td>3 units</td>
<td>from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3</td>
</tr>
<tr>
<td>3 units</td>
<td>from Course List 1. PSYCH 3EE3, 3LL3 or 3V03 is recommended.</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**LEVEL IV: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 units</td>
<td>from PSYCH 3A03, 3AA3, 3BB3, 3BN3, 3FA3, 3HH3, 3J03, 3U03, 3V03, 4BN3, 4C03, 4D09</td>
</tr>
<tr>
<td>12 units</td>
<td>six units from Course List 3 and six units from Course List 2</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Developmental Specialization [2460878]

#### ADMISSION

Completion of Level II Honours Psychology.

**REQUIREMENTS**

**LEVEL III: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 units</td>
<td>PSYCH 3GG3</td>
</tr>
<tr>
<td>6 units</td>
<td>from PSYCH 3HH3, 3J03, 3JH03,</td>
</tr>
<tr>
<td>6 units</td>
<td>from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3</td>
</tr>
<tr>
<td>3 units</td>
<td>from Course List 1. PSYCH 3EE3, 3LL3 or 3V03 is recommended.</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**LEVEL IV: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 units</td>
<td>from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3</td>
</tr>
<tr>
<td>12 units</td>
<td>six units from Course List 3 and six units from Course List 2</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Behavioural Specialization [2460880]

#### ADMISSION

Completion of Level II Honours Psychology, including PSYCH 2TT3.

**REQUIREMENTS**

**LEVEL III: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 units</td>
<td>PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03</td>
</tr>
<tr>
<td>6 units</td>
<td>from Course List 3; or three additional units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3 and three units from Course List 3</td>
</tr>
<tr>
<td>3 units</td>
<td>from Course List 1. PSYCH 3LL3 or 3S03 is recommended.</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**LEVEL IV: 30 UNITS**

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 units</td>
<td>PSYCH 2C03, 3A03, 3F03, 3JJ3, 3M03, 3T03, 3Y03, 4R03, 4Y03</td>
</tr>
<tr>
<td>12 units</td>
<td>six units from Course List 3 and six units from Course List 2</td>
</tr>
<tr>
<td>12 units</td>
<td>Electives</td>
</tr>
</tbody>
</table>

### Combined Honours in Psychology and Another Subject (B.A.)

#### ADMISSION

Enrolment in this program is limited. Selection is based on academic achievement but requires, as a minimum, completion of any Level I program with a Cumulative Average of at least 6.0; a grade of at least B- in each of PSYCH 1A03 and 1AA3 (or PSYCH 1A06); and credit in MATH 1A03 or a grade of at least C- in MATH 1M03.

**NOTES**

1. Application for admission must be made by April 6. See Admission to Level II Programs in Academic Regulations in this section of the Calendar.
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 with the Arts and Science Program.
3. Credit in MATH 1A03 or 1M03 with a grade of at least C- must be completed before entrance into Level II.
4. Students with credit in PSYCH 2RR3, do not need to complete PSYCH 2RA3 and 2RB3. Beginning September 2006, students with credit in STATS 1CC3 but not PSYCH 2RR3 must complete both PSYCH 2RA3 and 2RB3 for any Honours B.A. Psychology program.
5. PSYCH 2RA3 and 2RB3 must be completed before entrance into Level III of the program. Students wishing to have more than one statistical analysis program replace PSYCH 2RA3 and 2RB3 with STATS 2D03 and 2MB3. In this case, students are advised to take MATH 1B03 or 1D03 in Level I and consult with a departmental advisor.
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 KINESIOI 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) or 1D03 (Algebra & Geometry) is strongly recommended for students intending to pursue graduate work in Psychology. COMP SCI 1MA03 (Computer Based Problem Solving) or 1SA3 (Computing Fundamentals) is strongly recommended for students in the Behavioural Neuroscience and Cognition and Perception Specialization, 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 Levels III or IV Psychology.
12. The Department of Psychology, Neuroscience and Behaviour: pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2Q03, 3Q03, 4Q03, 4Q03, 4Q03). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3Q03, 3V03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4BN3, 4F03, 4J03, 4R03, 4Y03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006. Ballots can be obtained on The Department of Psychology, Neuroscience and Behaviour web site at: http://www.mcmaster.ca/psychology. Priority will be given to students in Honours Psychology programs.

**COURSE LIST 1 (LAB COURSES)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3Q03, 3V03, 4Q03</td>
<td></td>
</tr>
</tbody>
</table>

**COURSE LIST 2 (PSYCHOLOGY COURSE LIST)**

- **Biology 4T03**
- **HTH SCI 4BB3**
- **KINESIOI 3E03**

All levels III and IV Psychology courses

**Requirements**

- **LEVEL I: 30 UNITS**
  - 6 units PSYCH 2RA3, 2RB3 (See Notes 4 and 5 above.)
  - 6 units from PSYCH 2D03, 2E03, 2F03, 2H03, 2TT3
  - 3 units from BIOLOGY 1A03, 1A03, 1K03
  - 12 units courses as specified for the other subject
  - 3 units Electives
  - *If requirement completed in Level I, these units will be taken as electives.

- **LEVEL II: 30 UNITS**
  - 3 units Course List 1
  - 9 units Course List 2, or three additional units from 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 1A03 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 strongly recommended.
2. One of STATS 1A03, 1CC3, or SOC SCI 2J03 must be completed before entrance into Level III of the program.
3. Completion of one of BIOLOGY 1K03, 1A03, 1A03 by the end of 60 units is required for all Honours B.A. Psychology programs and is strongly recommended for B.A. programs.
4. The Department of Psychology, Neuroscience and Behaviour: pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4D06, 4D09), and the Individual Study courses (PSYCH 2Q03, 3Q03, 3Q03, 4Q03, 4Q03). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3BL3, 3EE3, 3L03, 3LL3, 3Q03, 3V03) and limited enrolment courses (PSYCH 3BN3, 4BN3, 4F03, 4J03, 4R03, 4Y03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006. Ballots can be obtained on The Department of Psychology, Neuroscience and Behaviour 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*, SOC SCI 2J03 (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 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 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
  - 1A03 or 1A06
  - 12 units Levels II or III Psychology
  - 6 units Level III Psychology

**DEPARTMENT OF RELIGIOUS STUDIES**

**WEB ADDRESS:** [www.socsci.mcmaster.ca/relstud/](http://www.socsci.mcmaster.ca/relstud/)

**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. Levels II, III and IV courses are allocated to the fields as follows:

**I. ASIAN RELIGIONS**

- RELIG ST 2E03, 2F03, 2I03, 2L03, 2P06, 3A03, 3E03, 3L03, 3P03, 3Q03, 3U03, 3V03, 4H03

- SANSKRIT 3A06, 4B06

**II. BIBLICAL STUDIES**

- RELIG ST 2B03, 2DD3, 2EE3, 2GG3, 2HH3, 2VV3, 2YY3, 2Z03, 3A03, 3GG3, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03, 4F03

- HEBREW 2A03, 2B03, 3A03, 3B03

**III. WESTERN RELIGIOUS THOUGHT**

- RELIG ST 2C03, 2EA3, 2EB3, 2FF3, 2II3, 2J03, 2K03, 2MM3, 2QQ3, 2UC3, 2V03, 2Z03, 3A03, 3CC3, 3D03, 3GG3, 3KK3, 3LL3, 3MMM, 3N03, 3W03, 3X03, 3Z03, 3Z28, 4H03

**IV. CONTEMPORARY AND COMPARATIVE RELIGIONS**

- RELIG ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2W03, 2WW3, 3EE3, 4P03

**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 Levels III and IV courses.
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, 2003 or 2V03 toward the Contemporary and Comparative Fields of Study.
5. RELIG ST 4R06 is strongly recommended for students considering graduate work in Religious Studies.
6. Since not all Level IV seminars are offered each year, students in the Honours program are encouraged to take at least three units Level IV seminar in Level III.

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 Religious Thought
3 units from Contemporary and Comparative Religions. (See Note 4 above.)
3 units RELIG ST 3F03
21 units Levels II, III 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. (See Notes 5 and 6 above.)
9 units Level IV Religious Studies. (See Notes 5 and 6 above.)
6 units* from Linguistics, a language other than English or Statistics
39 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.

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, 2003 or 2V03 toward the Contemporary and Comparative 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 Levels 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

Enrolment in this program is limited. Eligibility is dependent upon completion of any Level I program, including two of PSYCH 1A03 and 1A03 or (1A06), SOCIO1 1A06, SOC WORK 1A06, normally with a Cumulative Average of at least 6.0 and evidence of personal suitability, which may be evaluated by one or a combination of written statements, tests, or interviews.

ADMISSION NOTES

1. Beginning 2007-2008: Enrolment in this program is limited. Eligibility is dependent upon completion of any Level I program (a minimum of 30 units), including six units from SOCIO1 1A06 or SOC WORK 1A06 and six additional units from the Course List (see below), normally with a minimum Cumulative Average of 6.0 and evidence of personal suitability which may be evaluated by one or a combination of written statements, tests, or interviews.

COURSE LIST

ANTHROP 1A03, 1B03, 1Z03
CMST 1A03, 1B03
ECON 1B03, 1B03
EDUC 1H03, 1H03
GERONTOL 1A03
HEALTHST 1A03
INDIG ST 1A03, 1AA3
INQUIRY 1S33
LABR ST 1A03, 1C03, 1Z03
PEACE ST 1A03, 1B03
POL SCI 1G06
PSYCH 1A03, 1AA3
RELIG ST 1B06, 1D06, 1E03, 1I03
SOC WORK 1A06
SOCIOI 1A06
WOMEN ST 1A03, 1AA3 (or 1A06)

2. Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOC WORK 1A06 and, therefore, are required to complete two of PSYCH 1A03 and 1A03 or SOCIO1 1A06 to be considered for admission to the B.A./B.S.W. Program. Beginning in 2007-2008 such students must complete six additional units from the Course List. (See Note 1 above.)

3. An applicant must complete Level I (a minimum of 30 units) by April of the year in which application is made.

4. In choosing Level 1 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.

5. 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.socsci.mcmaster.ca/socwork/ugrprog/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.

6. 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.

7. 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. Beginning 2007-2008 such students must complete Introductory Sociology or Social Work and six additional units from the Course List. (See Note 1 above.)

8. 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.

PROGRAM NOTES

1. Course Groupings: There are two groups of courses in the Social Work program:

   a) Foundation for Social Work includes core courses which are required.


   FOUNDATION FOR 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, 3003, 4B03, 4C03, 4D03, 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.: SOCIO1 2203, or GERONTOL 2003). 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.

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, 2BB3, 2E03, (which must be completed prior to enrolling in SOC WORK 3D06 and 3D06).

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, 4A03, 4X03

12 units SOC WORK 4J03 and nine additional units selected from the Social and Political Context of Social Work courses. See Program Note 1 above.

3 units Social Sciences Research Methods. (These units will be taken as electives for the B.A. (See Program 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 1AA3 (or 1A06), SOCIOl and six additional units from the Course List (see below), 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.

Beginning 2007-2008: Enrolment in this program is limited. Eligibility is dependent upon completion of an undergraduate degree from a recognized university, including six units from SOCIOl 1A06 or SOC WORK 1A06 and six additional units from the Course List (see below), normally with a minimum Cumulative Average of 6.0 and evidence of personal suitability which may be evaluated by one or a combination of written statements, tests or interviews.

COURSE LIST

ANTHROP 1A03, 1B03, 1203
CMST 1A03, 1B03
ECON 1B03, 1BB3
GEO 1HS3, 1HU3
GERONTOL 1A03
HEALTHST 1A03
INDIG ST 1A03, 1AA3
INQUIRY 1SS3
LABR ST 1A03, 1C03, 1203
PEACE ST 1A03, 1903
POL SCI 1G06
PSYCH 1A03, 1AA3
RELIG ST 1B06, 1D06, 1E03, 1103
SOC WORK 1A06
SOCIOL 1A06
WOMEN ST 1A03, 1AA3 (or 1A06)

Students who have successfully completed the two-year College of Applied Arts and Technology Social Services Diploma with a minimum Grade Point Average of 3.0 on a 4.0 scale (75%) are considered to have completed the equivalent of SOC WORK 1A06 and, therefore, are required to complete two of PSYCH 1A03 and 1AA3 or SOCIOl 1A06 to be considered for admission to the B.A./B.S.W Program. Beginning 2007-2008 such students must complete six additional units from the Course List above.

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 105D 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 the Office of the Registrar, McMaster University) 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 or 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.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. 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 then 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, 3D06, 4D06, 4DD6, 4003, 4X03

   SOCIAL AND POLITICAL CONTEXT OF SOCIAL WORK

   SOC WORK 3C03, 3H03, 3003, 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 3D06 and 4DD6, and a CA of at least 6.0.

3. Students must complete three units of Social Sciences research Methods (eg. SOCIOl 2203 or GERONTOL 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 3D06 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.

FACULTY OF SOCIAL SCIENCES 143
FACULTY OF SOCIAL SCIENCES

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 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.socsci.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 SOCIOL 1A06.

NOTES
1. Students may take a maximum of six units of Level IV independent research (SOCIOl 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 SOCIOL 3GG3 and 4GG3.
4. Students who previously completed SOCIOL 3103 may substitute this course with SOCIOL 3003 or 3W03 to satisfy the Advanced Sociological Methods requirement.

REQUIREMENTS
120 units total (Levels I to IV), of which 48 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
6 units SOCIOL 2S06
3 units from SOCIOL 3A03, 3P03, 3PP3
3 units from SOCIOL 3003, 3W03 (See Note 4 above.)
12 units Level IV Sociology
18 units Levels II or III Sociology
3 units SOCIOL 2Z03 which must be completed by the end of 60 units
6 units SOCIOL 3H06
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.

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 SOCIOL 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 (SOCIOl 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 SOCIOL 3GG3 and 4GG3.
6. Students who previously completed SOCIOL 3103 may substitute this course with SOCIOL 3003 or 3W03 to satisfy the Advanced Sociological Methods requirement.

REQUIREMENTS
90 units total (Levels I to III), of which 42 units may be Level I
30 units from the Level I program completed prior to admission to the program. (See Admission above.)
6 units SOCIOL 2S06
3 units from SOCIOL 3003, 3W03 (See Note 4 above.)
15 units Levels II or II 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.

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 SOCIOL 2S06
3 units from SOCIOL 3003, 3W03 (See Note 4 above.)
15 units Levels 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 2506 may use these units towards this requirement of the minor.
2. Students should check both this Calendar and the Departmental web-site for prerequisites and course descriptions.

REQUIREMENTS
24 units total
6 units SOCIOL 1A06
6 units from SOCIOL 2C06, 2D06, 2R03 and 2RR3, 2V06 (See Note 1 above.)
12 units Levels II or III Sociology
INDIGENOUS STUDIES PROGRAM

COMBINED B.A. IN INDIGENOUS STUDIES AND ANOTHER SUBJECT

WEB ADDRESS: http://www.mcmaster.ca/indigenous/default.htm

Hamilton Hall, Room 103
Ext. 27426

Director
D.J. Martin-Hill/B.A., M.A., Ph.D.
Aboriginal Student Counsellor
R. McLester/B.A.

ACADEMIC REGULATIONS

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.

The Combined B.A. Program in Indigenous Studies is governed by the general Academic Regulations of the University and the regulations described below.

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 1203, INDIG ST 1A03, 1AA3, MOHAWK 1203, OJIBWE 1203 or a grade of at least C- in one of CAYUGA 1206, INDIG ST 1A06, MOHAWK 1206 or OJIBWE 1206 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. Students who previously completed ANTHROP 3F03 or POL SCI 3C03 may use these units toward the Course List requirement.

COURSE LIST

| ANTHROP 203, 2H03, 2V03, 2W03, 3Y03 |
| 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 2Z03, INDIG ST 2AA3, MOHAWK 2Z03, OJIBWE 2Z03

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 courses specified for the other subject

12 units Electives

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. Students who previously completed ANTHROP 3F03, INDIG ST 3I03, 3L03 or POL SCI 3C03 may use these units toward the Course List requirement.

COURSE LIST

| INDIG ST 1A03 |
| INDIG ST 1AA3 |
| INDIG ST 2A03 |
| INDIG ST 2AA3 |
| INDIG ST 2B03 |
| INDIG ST 2C03 |
| INDIG ST 2D03 |
| INDIG ST 3C03 |
| INDIG ST 3CC3 |
| INDIG ST 3D03 |
| INDIG ST 3E03 |
| INDIG ST 3G03 |

| Introduction to Indigenous Studies |
| Introduction to Contemporary Indigenous Studies |
| Indigenous Peoples’ Spirituality |
| Indigenous Knowledge and Methodology |
| History of Indigenous Peoples’ Sovereignty |
| Contemporary Indigenous Societies and Issues: Selected Topics |
| Traditional Indigenous Ecological Knowledge |
| Study of Iroquois First Nations in Contemporary Times |
| Contemporary Indigenous Societies: Selected Topics |
| Contemporary Native Literature in Canada |
| Contemporary Native Literature in the United States |
| Indigenous Creative Arts and Drama: Selected Topics |
| Indigenous Medicine I - Philosophy |
| Indigenous Medicine II - Practical |
| Indigenous Human Rights |
| Indigenous Independent Study |
| Introduction to Cayuga Language and Culture |
| Intermediate Cayuga |
| Introduction to Mohawk Language and Culture |
| Intermediate Mohawk |
| Introduction to Ojibwe Language and Culture |
| Intermediate Ojibwe |
| Indigenous Peoples of North America |
| Environment and Culture |
| The Ancient Maya |
| The Aztecs and Incas |
| Aboriginal Community Health and Well-Being |
| Social Work and Indigenous Peoples |

from INDIG ST 1A03, 1AA3, CAYUGA 1Z03, MOHAWK 1Z03, OJIBWE 1Z03 from the Course List (See Notes 2 and 3 above.)
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 Finstein (Anthropology)
Michele George (Classics)
Darren Gröcke (Geography and Earth Sciences)
Celina Gray (Classics)
Alexandra Reitzel (Classics)
Hendrik Poinar (Anthropology)
Kostalena Michelaki (Anthropology)
W. Jack Rink (Geography and Earth Sciences)
Shelley Saunders (Anthropology)

The Interdisciplinary Minor in Archaeology is based on archaeology and archaeology-related 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 1L13 (History and Archaeology of the Ancient World II).

### COURSE LIST

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<td>ANTHROP 2C03</td>
<td>Environmental Crises in Archaeological Perspectives</td>
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<td>ANTHROP 2FF3</td>
<td>Human Skeletal Biology and Bioarchaeology</td>
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<td>ANTHROP 2P03</td>
<td>North American Prehistory</td>
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<td>ANTHROP 2VV3</td>
<td>The Ancient Maya</td>
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<td>ANTHROP 2W03</td>
<td>The Aztecs and Incas</td>
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<td>ANTHROP 3AS3</td>
<td>Archaeology and Society</td>
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<td>ANTHROP 3CA3</td>
<td>Ceramic Analysis</td>
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<td>ANTHROP 3CC6</td>
<td>Archaeological Field School</td>
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<td>ANTHROP 3DD3</td>
<td>Archaeology of Death</td>
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<td>ANTHROP 3E03</td>
<td>Special Topics in Archaeology I</td>
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<td>ANTHROP 3EE3</td>
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<td>Archaeological Interpretation</td>
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<td>ANTHROP 3N03</td>
<td>Primate Evolution</td>
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<td>ANTHROP 3PP3</td>
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<td>ANTHROP 3X03</td>
<td>Zooarchaeology</td>
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<td>ANTHROP 4EE3</td>
<td>Advanced Topics in Archaeology II</td>
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<td>ANTHROP 4F03</td>
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<td>ANTHROP 4F03</td>
<td>Archaeology of Hunters and Foragers</td>
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<td>ANTHROP 4F03</td>
<td>Skeletal Biology of Human Populations</td>
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<td>ANTHROP 4F03</td>
<td>Greek Art</td>
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<td>Roman Art</td>
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<td>ANTHROP 4F03</td>
<td>Greek Sanctuaries</td>
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<td>ANTHROP 4F03</td>
<td>The Archaeology of the City of Rome and Roman Italy</td>
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<td>CLASSICS 2B03</td>
<td>Classical Literature I</td>
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<td>CLASSICS 2C03</td>
<td>Classical Literature II</td>
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<td>CLASSICS 3C03</td>
<td>Classical Literature III</td>
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<tr>
<td>CLASSICS 3S03</td>
<td>Classical Literature IV</td>
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</tbody>
</table>

### Jewish Studies

**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 four- or five-level programs in any Faculty. Students will be required to complete a minimum of 24 units from the lists below. At least 12 of these units will be taken from List A, comprised of courses focusing directly on an area of Jewish Studies. Students are urged to take at least six units of Hebrew language as part of their List A requirements. A minimum of six units will be taken from List B, comprised of courses which provide crucial background for understanding important issues in Jewish Studies. Students 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

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<tr>
<td>COMP LIT 2G03</td>
<td>The Bible as Literature</td>
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<tr>
<td>COMP LIT 3M03</td>
<td>Topics in Modern Literature, Israel/Palestine: Boundaries Crossing Borders</td>
</tr>
<tr>
<td>HEBREW 2A03</td>
<td>Introduction to Biblical Hebrew I</td>
</tr>
<tr>
<td>HEBREW 2B03</td>
<td>Introduction to Biblical Hebrew II</td>
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<tr>
<td>HEBREW 3A03</td>
<td>Intermediate Hebrew I</td>
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<td>HEBREW 3B03</td>
<td>Intermediate Hebrew II</td>
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<td>HIST 3D03</td>
<td>The Jewish World in New Testament Times</td>
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<tr>
<td>HIST 3D03</td>
<td>The Jewish World in New Testament Times</td>
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<tr>
<td>PHILOS 3J03</td>
<td>Modern Jewish Thought</td>
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<td>RELIG ST 2B03</td>
<td>Women in the Biblical Tradition</td>
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<tr>
<td>RELIG ST 2D03</td>
<td>The Five Books of Moses</td>
</tr>
<tr>
<td>RELIG ST 2E03</td>
<td>Prophets of the Bible</td>
</tr>
<tr>
<td>RELIG ST 2V03</td>
<td>The Bible as Literature</td>
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<tr>
<td>RELIG ST 2Y03</td>
<td>The Bible and Film</td>
</tr>
<tr>
<td>RELIG ST 3A03</td>
<td>Modern Jewish Thought</td>
</tr>
</tbody>
</table>

### REQUIREMENTS

24 units total

12 units from List A (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.
The following listing is designed to assist you in choosing courses in areas of study, in which there is currently no B.A. program.

**THREATIC 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 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**

ART HIST 2203 Art and Visual Culture in East Asia
ART HIST 3203 Chinese Art and Visual Culture, 200 – 750
CMST 2AA3 Japanese Communication
COMMERC 4SF3 Japanese Business
COMP LIT 3M03 Asian Literatures
COMP LIT 3N03 Arabic and Persian Literatures
GEO 3HF3 Geography of Japan
HISTORY 3AA3 The Modern Middle East
HISTORY 3B03 Modern Japan
HISTORY 3G03 China: The Revolutionary Century, 1895-1995
HISTORY 4GB6 Special Topics in the History of Modern Japan
HISTORY 4GG6 Topics in Middle Eastern and Islamic History
POL SCI 2N03 Politics of India and South Asia
RELIG ST 2F03 Storytelling in East Asian Religions
RELIG ST 2G03 Storytelling in Indian Religion
RELIG ST 2L03 Life, Work and Teachings of Mahatma Gandhi
RELIG ST 2P03 Japanese Civilization
RELIG ST 3A03 Popular Religion in the Indian Tradition
RELIG ST 3J03 Japanese Religion
RELIG ST 3P03 The Indian Religious Tradition

**INTERDISCIPLINARY MINORS AND THEMATIC AREAS**

**COURSES WITH SIGNIFICANT ASIAN CONTENT**

ECON 2C03 Asian-Pacific Economies
HISTORY 2H03 Mediterranean Encounters, 1500-1800
POL SCI 2M06 Topics in International Political Economy
RELIG ST 1B06 World Religions
RELIG ST 2B03 Images of the Divine Feminine
RELIG ST 2H03 Theory and Practice of Non-Violence
RELIG ST 2Q03 Cults in North America
RELIG ST 2S03 Women and Religion
RELIG ST 2W03 Health, Healing and Religion

**LANGUAGE COURSES**

JAPANESE 1206 Beginner's Japanese
JAPANESE 2203 Intermediate Intensive Japanese I
JAPANESE 2223 Intermediate Intensive Japanese II
JAPANESE 3A03 Advanced Intensive Japanese I
JAPANESE 3A06 Advanced Intensive Japanese II
JAPANESE 3B03 Business Japanese I
JAPANESE 3C03 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 3A05 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 3AA3 The Modern French-Canadian Novel
FRENCH 4U03 Topics in French-Canadian Literature
HISTORY 2T03 Survey of Canadian History, Beginnings to 1867
HISTORY 2T03 Survey of Canadian History, 1867 to the Present
HISTORY 3G03 Business History: The Canadian Experience in International Perspective
HISTORY 3N03 History of Canada's Revolutions: 1939-1982
HISTORY 3P03 Religion and Society in Canada
HISTORY 3W03 Women in Canada and the U.S. to 1920
HISTORY 3W03 Women in Canada and the U.S. from 1920
MUSIC 3T03 Death, Disease and Degeneration: A History of Health and Health Care in Canada
MUSIC 3T03 Canadian Music

**SOCIAL SCIENCES**

ANTHROP 3Y03 Aboriginal Community Health and Well-Being
ECON 2K03 Economic History of Canada
GEO 2H3C Canada
GEO 3HT3 Geography of Planning
GEO 4HH3 Urban Housing
POL SCI 1G06 Politics and Government
POL SCI 3GG3 Canadian Foreign Policy
POL SCI 3GH3 Federalism: Theoretical, Constitutional and Institutional Issues
POL SCI 3H03 Intergovernmental Policy Issues in Canada
POL SCI 3J03 Provincial Politics in Canada
POL SCI 4C06 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 study 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 so doing, 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 1 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 admitted 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/parttime

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) 525-3140, 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 staff 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.
CERTIFICATE AND DIPLOMA PROGRAMS

CENTRE FOR CONTINUING EDUCATION

Located at The Downtown Centre, 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 Federation (CACCF) 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 ability of health and social service professionals 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.

CREATIVE 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.

FAMILY MEDIATION, CERTIFICATE/DIPLOMA IN (8938/8948)

- Maximum Credit Toward Degree Studies - 24 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 fields of alternative dispute resolution and family mediation.

HUMAN RESOURCES MANAGEMENT, DIPLOMA IN (8958)

- Maximum Credit Toward Degree Studies - 24 units
The Diploma in Human Resources Management will provide the knowledge and skills essential to succeed as a practitioner in Human Resources Management. This program offers all courses required to fulfill the academic requirement of HRPAO to become eligible to write the certification exam for the Certified Human Resources Professional (CHRP) designation.

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.

WEB DESIGN AND DEVELOPMENT, CERTIFICATE/DIPLOMA IN (8932/8930)

- Maximum Credit Toward Degree Studies - 15 units (Certificate)
- 24 units (Diploma)

This program focuses on the development of technical, design and communication skills as they relate to development in the field of website management.

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 Federation (CACCF)
- Canadian Institute of Certified Administrative Managers (CAM)
- Canadian Institute of Management (CIM)
- Certified General Accountants Association of Ontario (CGA)
- Credit Institute of Canada
- Credit Union Institute of Canada (CUIC)
- Global Risk Management Institute (CRM and FRM)
- Human Resources Professionals Association of Ontario (HRPAO)
- 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.
CERTIFICATE AND DIPLOMA PROGRAMS

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 experiential 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 (9919)

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
(GEOGRAPHIC INFORMATION SYSTEMS) (8947)

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.
Courses If no prerequisite is listed, the course is open.

ANTHROP 1A03 INTRODUCTION TO ANTHROPOLOGY: CULTURE AND SOCIETY
An introduction to the cross-cultural study of living peoples, their ways of life, and the ways in which they interpret and experience the world. The course discusses topics in anthropology to explore the social world. Two hours (lecture), one hour (tutorial); one term

ANTHROP 1B03 WORLD ARCHAEOLOGY
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 1D03 THE HUMAN SPECIES: BECOMING AND BEING HUMAN
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 ANTHROPOLOGY OF FOOD AND NUTRITION
An 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 INDIGENOUS PEOPLES OF NORTH AMERICA
A comparative study of selected cultures of this continent, dealing with traditional and modern situations. Three hours (lectures and discussion); one term

ANTHROP 2C03 ENVIRONMENTAL CRISIS IN ARCHAEOLOGICAL PERSPECTIVES
Examination of the influence of natural and human-induced environmental crises on long-term cultural history. Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 1B03

ANTHROP 2D03 GENETICS IN ANTHROPOLOGY
An introduction to human genetics, microevolution and macroevolution. Three hours (one hour lecture, two hour lab); one term
Prerequisite: ANTHROP 1D03

ANTHROP 2E03 WORLD ARCHAEOLOGY
An overview of the chronology and diversity of human prehistory. Examination of the influence of natural and human-induced environmental crises on long-term cultural history. Three hours (lectures and discussion); one term
Prerequisite: Three units of Level I Anthropology

ANTHROP 2F03 PRIMATE BEHAVIOUR
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 2G03 HUMAN VARIATION AND EVOLUTIONARY CHANGE
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 1D03 is strongly recommended.

ANTHROP 2H03 CULTURAL ANTHROPOLOGY
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.

ANTHROP 2I03 HUMAN SKELETAL BIOLOGY AND BIOARCHAEOLOGY
Study of the human skeleton (bones and dentition) for application in archaeology and forensic anthropology. Includes determination of sex, age, stature and other individual characteristics. Three hours (lectures, discussion and lab); one term
Prerequisite: Registration in an Honours Anthropology program. Completion of ANTHROP 1D03 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 2G03 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 Linguistics and Languages.

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, 3L03, LINGUIST 2Q03

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 1A06 (or 1A07); or permission of the Department
Cross-list: LINGUIST 2L03
This course is administered by the Department of Linguistics and Languages.

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
Prerequisite: Registration in Level II and above
Antirequisite: ANTHROP 2Q03, 3L03, LINGUIST 2Q03

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 will also 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: SOCIOL 2Z03
Antirequisite: One of ANTHROP 2L03 or LINGUIST 2L03; or permission of the instructor

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
Antirequisite: (Beginning in 2006-2007): One of ANTHROP 2L03, LINGUIST 2L03
Cross-list: LINGUIST 3A03
This course is administered by the Department of Linguistics and Languages.

ANTHROP 3AS3 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 change, 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 in registration in Level III or IV of any program. ANTHROP 2E03 is strongly recommended.

ANTHROP 3CA3 CERAMIC ANALYSIS
Examination of the theories and methods used by archaeologists to analyze ceramic and undertake basic ceramic technology. The class will include strong hands-on and original-research components.
Three hours (lectures, labs, discussion); one term
Prerequisite: ANTHROP 2P03
Not open to students with credit in ANTHROP 3E03, if the topic was Ceramic Analysis.
Enrolment is limited.
ANTHROP 3CC6  ARCHAEOLOGICAL FIELD SCHOOL
Field instruction in the techniques used in the excavation of an archaeological site. The course includes hands-on instruction in manual excavation methods, mapping, field recording, and laboratory analysis.
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
2006-2007 Topic: Farming, Frontiers and Transitions
The topic varies with each instructor (e.g. one class may examine Ancient Mesopotamian Cities and another focus on The Archaeology of Hierarchy).
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3EE3  SPECIAL TOPICS IN ARCHAEOLOGY II
2006-2007 Topic: Northwest coast Archaeology and Ethnology
As per ANTHROP 3E03.
Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2PA3

ANTHROP 3G03  COMPARATIVE MYTHOLOGY
The reconstruction of lost mythic 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 2LL3, LINGUIST 2LL3 or permission of the Department.
Cross-list: LINGUIST 3I03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

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 Linguistics and Languages.

ANTHROP 3I33  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 3I33 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
Enrolment 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 2103
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 2LL3, LINGUIST 2LL3 or permission of the Department.
Cross-list: LINGUIST 3M03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

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 3N3

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 3PP3  PALEOPATHOLOGY
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 2FF3
Enrolment is limited.

ANTHROP 3R03  GENETICS AND MODERN HUMAN ORIGINS
This course surveys genetic studies in anthropology and considers key issues in the field, such as the human genome diversity project.
Three hours (one hour lecture, two hour lab); one term
Prerequisite: ANTHROP 2D03 or BIOLOGY 3J03
(There will be a supplementary fee for supplies used in labs.)
Enrolment is limited.

ANTHROP 3RR3   THE ANTHROPOLOGY OF GENDER
Selected topics relating to the construction and practice of gender in various cultural contexts.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level III or IV of any Anthropology program

ANTHROP 3T03  POWER AND RESISTANCE
A critical examination of power in post-colonial conflicts. Examines concepts and case studies of local resistance to economic globalization, the re-defining of nationalities, and the spread of universalizing cultures.
Three hours (lectures and discussion); one term
Prerequisite: Six units of Social/Cultural Anthropology

ANTHROP 3V03  ANTHROPOLOGY AND THE HISTORICAL IMAGINATION
This course is situated at the intersection of history and anthropology, and focuses 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
Enrolment is limited.

ANTHROP 3W03**   SPECIAL TOPICS IN ANTHROPOLOGY
The topic varies with each instructor (e.g. one class may examine Current Issues in Medical Anthropology and other classes may focus on Readings in Myth or Contemporary Issues in Archaeology).
One term
Prerequisite: Registration in any program in Anthropology
ANTHROP 3X03 ZOOARCHAEOLOGY
Study of the long-term histories of human-environment interaction through analysis of archaeologically recovered animal remains.
Three hours (labs and discussion); one term
Prerequisite: ANTHROP 2PA3
Enrolment is limited.

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 BIOLOGICAL 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 strongly recommended.

ANTHROP 3Z23 MEDICAL ANTHROPOLOGY: SYMBOLIC HEALING
An interdisciplinary approach to traditional systems of healing such as Greek humoral 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 strongly recommended.

ANTHROP 4A03 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 and registration in an honours program; or permission of the instructor.

ANTHROP 4B03 CURRENT PROBLEMS IN ANTHROPOLOGY I
2006-2007 Topic: Rights, Culture and Conflict
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 4B3 CURRENT PROBLEMS IN ANTHROPOLOGY II
2006-2007 Topic: Museum Anthropology
As per ANTHROP 4B03.
Three hours (seminar); one term
Prerequisite: Registration in Level IV Honours Anthropology.
ANTHROP 4B03 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
2006-2007 Topic: The peoples of the New World
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 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 HUMAN EVOLUTIONARY GENETICS
The use of population genetics for resolving the origins of modern humans.
Three hours (seminar); one term
Prerequisite: ANTHROP 3R03
Enrolment is limited. Access will be provided to all 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 4J3 ADVANCED TOPICS IN PHYSICAL ANTHROPOLOGY II
As per ANTHROP 4J03.
Three hours (seminar); one term
Prerequisite: ANTHROP 2E03
ANTHROP 4J3 may be repeated, if on a different topic, to a total of six units.

ANTHROP 4L03 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 4L03
Antirequisite: ANTHROP 4L3, LINGUIST 4L3
This course is administered by the Department of Linguistics and Languages.

ANTHROP 4L3 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 4L03
Antirequisite: ANTHROP 4L3, LINGUIST 4L3
This course is administered by the Department of Linguistics and Languages.

ANTHROP 4M03 ADVANCED TOPICS IN MYTHOLOGY
A seminar in current topics and issues in comparative mythology.
Three hours (seminar); one term
Prerequisite: Two units of Anthropology or Linguist OR registration in any Honours program.

ANTHROP 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.
ANTHROP 4003  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 systematic; 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.

ANTHROP 4R03  SKELETAL BIOLOGY OF EARLIER HUMAN POPULATIONS
The analysis of human skeletal samples, including such topics as paleopathology, paleodemography, paleonutrition and biological distance analyses. Three hours (lectures and discussion); one term
Prerequisite: ANTHROP 2F3
Antirequisite: ANTHROP 3C06

ART 1F03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2C06

ART 1FF3  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2A06

ART 2A03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2B06

ART 2B03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2B06

ART 2C03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2C06

ART 2C06  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2F06

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, 1FF3 (or ART 1F06)
Antirequisite: ART 2F06

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

WEB ADDRESS: http://www.humanities.mcmaster.ca/~scola/
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  INTRODUCTORY DRAWING 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  INTRODUCTORY DRAWING 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 1F03
Antirequisite: ART 1F06

PORTFOLIO REVIEW REQUIRED. Entrance to any Honours Art Program requires the permission of the School of the Arts and 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 are held 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 1F03  INTRODUCTORY SCULPTURE I
A series of studio projects designed to provide technical and conceptual abilities in the field of sculpture. Four hours; one term
Prerequisite: ART 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2B06

ART 2B03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2B06

ART 2C03  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 1F03, 1FF3 (or ART 1F06)
Antirequisite: ART 2C06

ART 2C06  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, 1FF3 (or ART 1F06)
Antirequisite: ART 2F06

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 intercon-
nections between print media and drawing which may include produc-
tion 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 intercon-
nexions between sculpture and painting which may include the ex-
change between three dimensional and two dimensional concepts of
colour in painted reliefs, 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 intercon-
nexions 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 intercon-
nexions between sculpture and drawing which may include exploration in
media such as two dimensional studies for three dimensional produc-
tions, 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
critique 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.

ART HISTORY
ART HIST 1A03 INTRODUCTION TO THE STUDY OF ART
A course that introduces students to the visual arts through a considera-
tion of principles and elements of painting, sculpture and architecture
and a discussion of various genres.
Two lectures; one tutorial; one term.

ART HIST 1AA3 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 VISUAL CULTURE
A study of art and visual culture from c. 1830 to c. 1970 and an examina-
tion of critical frameworks such as modernism and postmodernism.
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 in-
forms 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 1AA3 is recommended.
Cross-list: CMST 2F03, MMEDIA 2F03.
This course is administered by the Department of Communication Studies
& Multimedia.

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 2G03 (formerly CMST 2G06), THTR&FLM 2G03.
Offered in alternate years.
This course is administered by the Department of Philosophy.

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.
Cross-list: CMST 2H03, PHILOS 2H03.
This course is administered by the Department of Philosophy.

ART HIST 2I03 RENAISSANCE AND BAROQUE ART
An introduction to the history of European art in the period 1400 to 1700.
Three lectures; one term.
Prerequisite: Registration in Level II or above.

ART HIST 2J03 ART AND VISUAL CULTURE IN EAST ASIA
An introduction to the history of the arts in China, Korea and Japan from antiquity
modem times, highlighting the impact of cultural exchange and diversity.
Three lectures; one term.
Prerequisite: Registration in Level II or above.

ART HIST 3A03 CONTEMPORARY ART AND VISUAL CULTURE
An examination of international art and visual culture applying theoretical
approaches such as modernism, postmodernism, feminism, masculinism,
pop-cultural, and quee theories.
Three lectures; one term.
Prerequisite: ART HIST 2D03 and registration in Level II or above.
Alternates with ART HIST 3J03.
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 3D03.

ART HIST 3D03  17TH-CENTURY ART
An examination of art and architecture produced in the seventeenth century and global variations of Baroque Art.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2B03 is recommended
Alternates with ART HIST 3B03.

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. 200-600).
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 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: ART HIST 2B03
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 1400-1550
An advanced level lecture course dealing with selected artists and works from the Early Renaissance to Manierism.
Three lectures; one term
Prerequisite: Registration in Level II or above. Prior completion of ART HIST 2B03 is recommended
Alternates with ART HIST 3I03.

ART HIST 3J03  ISSUES IN 19TH-CENTURY ART
AND VISUAL CULTURE
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
Alternates with ART HIST 3A03.

ART HIST 3L03  THEORIZING CULTURE
THROUGH PERFORMANCE
Students will explore artists' practises in making performances and will analyze their 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 2D03, 3A03, 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 STUDY 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 program
*Studio Art Critiques are regularly scheduled sessions during which the work of Art students is discussed by their peers, faculty members and visiting professionals from the art world. Visiting Artists' talks are held on weekday evenings on the same day as the Studio Critiques.

ART HIST 3PP3  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 2B03 is recommended
Alternates with ART HIST 3I03.

ART HIST 3XX3  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 relationships to other art forms, narrative, genre and authorship.
Two lectures, plus one weekly film screening; one term
Prerequisite: ART HIST 2G03
Cross-list: CMST 3XX3, THTR&FLM 3L03
Offered in alternate years.
This course is administered by the Theatre & Film program.

ART HIST 3Z03  CHINESE ART AND VISUAL CULTURE 200-750
An examination of how recent archaeological finds are re-defining our understanding of the pluralistic achievements in various arts during the transformative Period of Disunity leading to the Golden Age in China.
Three lectures; one term
Prerequisite: ART HIST 1B03.

ART HIST 4AA3  SEMINAR IN CONTEMPORARY ART
AND VISUAL CULTURE
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 3A03 and permission of the School of the Arts
Offered in alternate years.
Enrollment 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.
Enrollment is limited.
This course is administered by the Department of Classics.

ART HIST 4CC3  SEMINAR IN ART AND VISUAL CULTURE 900-1400
A focused study of issues concerning art and visual culture of the tenth through fourteenth centuries. Consult the School of the Arts concerning the topic to be offered.
Seminar (two hours); one term
Prerequisite: Registration in Level III of an Honours program in Art or Art History. Prior completion of one of ART HIST 3I03, 3S03 or 3Z03 is recommended.
Offered in alternate years.
ART HIST 4CC3 may be repeated, if on a different topic, to a total of six units.
Enrollment is limited.

ART HIST 4EO3  SEMINAR IN ART AND VISUAL CULTURE 1400-1750
A focused study of issues concerning art and visual culture of the fourteenth through eighteenth centuries. Consult the School of the Arts concerning 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, 3E03 or 3S03 is recommended.
Offered in alternate years.
ART HIST 4EO3 may be repeated, if on a different topic, to a total of six units.
Enrollment is limited.

ART HIST 4HH3  SEMINAR IN ART AND VISUAL CULTURE 1750 TO THE PRESENT
A focused study of issues concerning art and visual culture of the eighteenth through twentieth centuries. Consult the School of the Arts concerning 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 3A03 or 3S03 is recommended.
Offered in alternate years.
ART HIST 4HH3 may be repeated, if on a different topic, to a total of six units.
Enrollment is limited.
ART HIST 4006 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/artsci
Commons Building, Room 105
Ext. 24655 or 23153

Faculty as of January 15, 2006

Director
Peter G. Sutherland

Council of Instructors
John D. Browning(Linguistics and Languages) B.A., M.Phil. (London), Ph.D. (Essex)
Augie Fieras/B.A. (Waterloo), M.A. (McMaster), Ph.D. (Victoria)
Nbaldo H. Gaieguia/L(Cultural) Science) B.A. (Chile), M.A. (McMaster), Ph.D. (Toronto)
Kathleen Garay(Archivist, Mills Library; Women's Studies) B.A. (East Anglia), M.A. (Toronto), Ph.D. (McMaster)
Louise Greenspan(Reigious Studies) B.A. (McMaster), B.A. (Dalhousie), Ph.D. (Brandeis)
Karen E. Ham/P(Molecular Genetics and Biochemistry) B.Sc (Alberta), M.Sc. (Toronto)
Robert Henderson(Kinesiology) B.E.(McMaster), M.A. (McMaster), Ph.D. (Alberta)
Alf Kubuski(Economics) B.A. (American University, Beirut), M.S., Ph.D. (Purdue)
Miroslav Lovric(Mathematics and Statistics) B.S. (Zagreb), M.S., Ph.D. (Ohio State), 3M Teaching Fellow
Carmel E. Mothersill(Medical Physics and Applied Radiation Sciences) B.Sc., Ph.D. (University College Dublin)
Nicole Nevers/B.A. (Carleton), M.A. (McMaster)
Annie Pearse/Reigious Studies) B.A. (McGill), M.A. (University of Victoria), Ph.D. (Toronto)
Annette Reed(Reigious Studies) B.A. (McGill), M.A. (Harvard), M.A. (McMaster), Ph.D. (Princeton)
Collin B. Seymour(Medical Physics and Applied Radiation Sciences) D.C.R. (Guy's Hospital), B.L. (King's Inn), Ph.D. (Trinity College Dublin)
Pamela Sugiman(Sociology) B.A., M.A., Ph.D. (Toronto)
Peter G. Sutherland(Physics and Astronomy: Arts & Science) B.Sc. (McGill), M.S., Ph.D. (Illinois)
Roman Viveros-Aguirera(Mathematics and Statistics) B.A. (Veracruz, Mexico), M.A. (National Polytechnic Inst., Mexico), Ph.D. (Vancouver)
Mark Vorobej(Philosophy) B.A. (Carleton), M.A., Ph.D. (Toronto)
Jean Wilson(Linguistics and Languages: Comparative Literature and Arts & Science) B. (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 1B06 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 1D06 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 1A33 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, Niezsche, Schopenhauer, Freud and Skinner.

ARTS&SCI 2B06 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.

ARTS&SCI 3B03 TECHNOLOGY AND SOCIETY I
The Culture of Technology. Technological practices and approaches are studied as cultural activities in the contexts of beliefs, philosophies, values and social structures both past and present.

ARTS&SCI 3CB3 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 3C66 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.

ARTS&SCI 3CE6 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.

December 15, 2005
This course is administered by the Arts & Science Office. Enrolment is limited.

**ARTS&SCI 3CF3**

**INQUIRY TOPIC: DISCOVERY: THE CONTEXT OF SCIENTIFIC RESEARCH I**

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.

**ARTS&SCI 3CG3**

**INQUIRY TOPIC: DISCOVERY: THE CONTEXT OF SCIENTIFIC RESEARCH II**

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.

**ARTS&SCI 3C13**

**INQUIRY TOPIC: DIVERSITY AND MULTICULTURALISM I**

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.

**ARTS&SCI 3C33**

**INQUIRY TOPIC: DIVERSITY AND MULTICULTURALISM II**

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.

**ARTS&SCI 3EE3**

**EXPERIENTIAL LEARNING STUDY I**

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Prerequisite: Registration in Level III 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.

**ARTS&SCI 3L03**

**THE INDIAN RELIGIOUS TRADITION**

Readings of Indian texts in translation will centre around themes such as the nature of human nature, 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 L03

This course is administered by the Department of Religious Studies.

**ARTS&SCI 3S03**

**THE EAST ASIAN RELIGIOUS TRADITION**

Readings of East Asian texts in translation will centre around themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.

Two lectures, one tutorial; one term.

Prerequisite: Registration in Level III or above.

Cross-list: RELIG ST S03, JAPAN ST 503

This course is administered by the Department of Religious Studies.

**ARTS&SCI 4A06**

**INDIVIDUAL STUDY**

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.

**ARTS&SCI 4A12**

**INDIVIDUAL STUDY**

The same as ARTS&SCI 4A06 but based on more extensive study.

**ARTS&SCI 4C06**

**THESIS**

This course consists of original research under the supervision of a McMaster faculty member. Proposal deadline is March 1; Information package is available in the Program office.

**ARTS&SCI 4C12**

**THESIS**

The same as ARTS&SCI 4C06 but based on more extensive research.

**ARTS&SCI 4EE6**

**EXPERIENTIAL LEARNING STUDY II**

Experiential study under the supervision of a McMaster faculty member, including a presentation at a final defence.

Prerequisite: ARTS&SCI 3E3 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.

**ASIAN STUDIES**

(SEE INTERDISCIPLINARY MINORS AND THEMATIC AREAS)
BIOCHEM 2B03 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 1A3
Corequisite: Either CHEM 2B03 or 2A03, and either CHEM 2P03 or 2R03; or registration in Honours Molecular Biology
Antirequisite: BIOCHEM 2A06, 3B03, 3BT3, 3G03

BIOCHEM 2EE3 METABOLISM AND PHYSIOLOGICAL CHEMISTRY
A brief introduction to proteins, enzymes and gene expression followed by a more extended treatment of energy and intermediary metabolism with emphasis on physiological chemistry.
Three lectures; second term
Prerequisite: One of CHEM 2B03, 2E03, 2O3 or permission of the department
Antirequisite: BIOCHEM 2A06, 3D03

BIOCHEM 2L06 INQUIRY IN BIOCHEMICAL TECHNIQUES
An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops with a focus on how to search the primary literature, prepare and deliver written and oral presentations.
One lecture (one hour), one lab or workshop (four hours); two terms
Prerequisite: Registration in BIOCHEM 2B03 and registration in Honours Arts & Science and Biochemistry, Honours Biochemistry, Honours Chemistry (Biological Specialization), Honours Molecular Biology; or BIOCHEM 2EE3 and 3G03 and registration in Honours Chemistry (Biological Specialization); or registration in Honours Physics (Biophysics Specialization)
Cross-list: MOL BIOL 2L06
Antirequisite: BIOCHEM 3L03

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 agreement of the supervisor. For further information, please refer to www.fhs.mcmaster.ca/biochem/Undergraduate.htm.
Prerequisite: BIOCHEM 2B03 and registration in Honours Biochemistry or Honours Molecular Biology. 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 2B03
Antirequisite: BIOCHEM 2A06, 2EE3

BIOCHEM 3E03 BIOCHEMISTRY OF MACROMOLECULES
Chemical and conformational properties of proteins and relationships to their function including regulation of enzyme activity. Chemical and physical structure of DNA and RNA relevant to biological function.
Three lectures; first term
Prerequisite: CHEM 2A03 and 2B03; or CHEM 2B03 and 2E03; or a grade of at least B+ in CHEM 2E03; or CHEM 2E03 and registration in a Chemical Engineering program or Honours Physics (Biophysics Specialization)
Antirequisite: BIOCHEM 2A06, 2B03, 2B3, 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 2A06 or 3D03; or BIOCHEM 2EE3 and 3Q03; 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 2B03, and registration in Honours Arts & Science and Biochemistry, Honours Biochemistry. Honours Chemistry (Biological Specialization), or Honours Molecular Biology; 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. Multiplex 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 2L06 or 3L03; and registration in Honours Arts & Science and Biochemistry or an Honours Biochemistry Specialization Antirequisite: BIOLOGY 3V03, MOL BIOL 3V03
Enrollment 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 biomedical lab.
Three lectures/tutorials in a computer lab; second term
Prerequisite: Completion of any Biochemistry course
Enrollment 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. This provides a suitable experience for graduate school or industry. Assessment is based on laboratory work, a poster presentation and a final report.
Three terms
Prerequisite: BIOCHEM 3P03 and registration in an Honours Biochemistry Specialization; or registration in Honours Physics (Biophysics Specialization). Permission of the Department is required. Application for permission to enrol must be received by March 1st of the academic year prior to registration. Students are expected to have a CA of at least 8.0. For further information, please refer to www.fhs.mcmaster.ca/biochem/Undergraduate.htm.
Antirequisite: BIOCHEM 4B06, 4F09, 4L03, 4P03, CHEM ENG 4L3
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOCHEM 4C03 INQUIRY IN BIOCHEMISTRY
Broader aspects of biochemistry such as those relating to food, drugs, health and environment discussed in small groups. Group and individual projects, seminars and lectures as appropriate to the subject matter.
Three hours; second term
Prerequisite: Registration in Level IV of Honours Biochemistry (Core)
Antirequisite: HTH SCI 3H03, 4A08, 4608

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 diagnostics and gene therapy. Current concepts of gene regulation at different levels.
Three lectures; first term
Prerequisite: One of BIOCHEM 2B03, 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 study of 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 Honours Biochemistry (Molecular Biology 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.

BIOCHEM 4G03  INTRODUCTION TO MOLECULAR BIOPHYSICS
A presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. Topics include physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.
Three lectures; second term
Prerequisite: One of BIOCHEM 2E03, 3G03, 3BB3, 3TB3, 3D03; or HTH SCI 2E03
Antirequisite: BIOCHEM 4DD3

BIOCHEM 4H03  BIOTECHNOLOGY AND DRUG DISCOVERY
Selected topics on genomics, proteomics and bioinformatics illustrating the modern application of molecular biology and biochemistry to pharmaceutical and other research.
Three lectures; first term
Prerequisite: One of BIOCHEM 3BB3, 3BT3, 3D03, or BIOCHEM 3G03 and registration in a Chemical Engineering program; or HTH SCI 2E03
Antirequisite: BIOCHEM 4DD3

BIOCHEM 4I03  STRUCTURE AND FUNCTION OF MEMBRANES AND MACROMOLECULES
Three lectures; second term
Prerequisite: One of BIOCHEM 3BB3, 3BT3, 3D03, 3G03; or BIOCHEM 2BB3 and registration in Honours Chemistry (Biological Specialization); or HTH SCI 2E03
Antirequisite: BIOCHEM 4I03, 4M03

BIOCHEM 4J03  BIOCHEMICAL 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: BIOLOGY 3X03 or HTH SCI 3X03; and one of BIOCHEM 3BB3, 3BT3, 3D03, 3G03, BIOLOGY 3H03
Cross-list: HTH SCI 4J03, MOL BIOL 4J03
This course is administered by the Bachelor of Health Sciences (Honours) Program.

BIOCHEM 4K03  ADVANCED BIOCHEMISTRY LABORATORY
Fundamental principles of experimental biochemistry with emphasis on modern methods in enzymology and molecular biology.
Two lab sessions (four hours); first term
Prerequisite: BIOCHEM 3L03, 3BT3, or BIOCHEM 2L06 or 3L03 and one of BIOCHEM 2B03, 3B03, BIOLOGY 3H03, and one of BIOCHEM 3BB3 or 3D03
Antirequisite: BIOCHEM 4B06, 4BB6, 4F09, 4G03, 4L03; CHEM ENG 4L03; MOL BIOL 4F09
Not open to students registered in Honours Biochemistry (Biotechnology and Genetic Engineering Specialization).

BIOCHEM 4L03  BIOTECHNOLOGY AND GENETIC ENGINEERING LABORATORY
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 bio processing 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 a Chemical Engineering program
Antirequisite: BIOCHEM 4BB6, 4F09, 4G03, 4L03
Cross-list: CHEM ENG 4L03

BIOCHEM 4P03  RESEARCH PROJECT IN BIOCHEMISTRY AND MOLECULAR BIOLOGY
A project supervised by a member or associate member of the Department of Biochemistry and Biomedical Sciences. Assessment is based on laboratory work and a final report. May be taken first or second term.
Prerequisite: BIOCHEM 3P03 or BIOLOGY 3V03; and one of BIOCHEM 3B03, 3BT3, 3D03, 3G03, BIOLOGY 3H03; and registration in an Honours Biochemistry Specialization, Honours Molecular Biology or 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 C.A. of at least 7.0. For further information, please refer to www.fhs.mcmaster.ca/biochem/Undergraduate.htm.

BIOCHEM 4Q03  GENOMES AND EVOLUTION
Molecular evolution and comparative analysis of genomes. Bacterial evolution, phylogeny, origins of eukaryotes, organelles and their genomes. Comparison of the human genome with other species. Use of microarrays and proteomics.
Three lectures; second term
Prerequisite: BIOCHEM 2B03 or 3G03
Antirequisite: BIOLOGY 4DD3

BIOLOGY
WEB ADDRESS: http://www.science.mcmaster.ca/biology/
Life Sciences Building, Room 118 Ext. 23049

Faculty as of January 15, 2006

Chair
Turlough M. Finan

Associate Chairs
Patricia Chow-Fraser/Undergraduate Studies
Elizabeth A. Weretilnyk/Graduate Studies

Distinguished University Professor
Christopher M. Wood/B.Sc. (British Columbia), Ph.D. (East Anglia), F.R.S.C./Senior Canada Research Chair

Professors
Patricia Chow-Fraser/B.Sc., M.Sc. (Waterloo), Ph.D. (Toronto)/Undergraduate Advisor
Turlough M. Finan/B.Sc., M.Sc. (Galway), Ph.D. (Guelph)
G. Brian Golden/B.Sc. (Dalhousie), Ph.D. (Alberta)/Senior Canada Research Chair
Delsworth G. Hamish/(Pathology and Molecular Medicine) B.Sc., M.Sc., Queen's, Ph.D. (McMaster)
John A. Hassell/(Biochemistry and Biomedical Sciences, Pathology and Molecular Medicine) B.Sc. (McGill), Ph.D. (Connecticut)
J. Roger Jacob/B.Sc. (Guelph), M.Sc., 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., Ph.D. (London), Ph.D. (McMaster)/Undergraduate Advisor
C. David Rollis/B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
Herbert E. Schellhorn/B.Sc., M.Sc. (Guelph), Ph.D. (North Carolina)
Rama S. Singh/B.Sc. (Agra), M.Sc. (Kanpur), Ph.D. (California-Davis)
Elizabeth A. Weretilnyk/B.Sc., Ph.D. (Alberta)

Associate Professors
Christian Baron/Dipl. Microbiol, Ph.D. (Munich)
André Boudard/B.Sc. (Montreal), Ph.D. (McGill)
Robin K. Cameron/B.Sc. (Waterloo), Ph.D. (McGill)
Ana Campos, B.A., M.A. (Rio de Janeiro), Ph.D. (Brandeis)
Juliet M. Daniel, B.Sc. (Queen's), Ph.D. (British Columbia)
Susan A. Dudley, B.Sc., M.Sc., M.S. (McGill), Ph.D. (Chicago/Undergraduate Advisor)
Suleman A. Igouara, B.Sc. (Victoria), M.Sc. (Western Ontario), Ph.D. (McGill)
James S. Quinn, B.Sc. (Queen's), M.Sc. (Brock), Ph.D. (Oklahoma)
Jianping Xu, B.Sc. (Jiangxi), M.Sc. (Nanjing and Toronto), Ph.D. (Toronto)

Adjunct Associate Professors

David A. Galbraith, (Royal Botanical Gardens), B.Sc., M.Sc. (Guelph), Ph.D. (Queen's)
James S. Pringle, (Royal Botanical Gardens), A.B. (Dartmouth), M.S. (New Hampshire), Ph.D. (Tennessee)

Assistant Professors

Kimberley De, B.Sc. (Toronto), Ph.D. (Johns Hopkins)
Marie Elliott, B.Sc., Ph.D. (Alberta)/Canada Research Chair
Ben Evans, B.S. (Tufts), M.S., M.Phil., Ph.D. (Columbia)
Bhagwati Gupta, B.Sc. (Banaras Hindu), M.Sc. (Jawaharlal Nehru), Ph.D. (TATA Institute)/Canada Research Chair
Lovaye Kajuri, B.Sc., M.Sc., Ph.D. (McMaster)
Grant B. McClelland, B.Sc. (Ottawa), Ph.D. (British Columbia)
Jonathan Stone, B.Sc., M.Sc., Ph.D. (Toronto)/SHARCNet Chair in Computational Biology
Peter Summers, B.Sc. (Guelph), M.Sc., Ph.D. (Alberta)
Xu-Dong Zhu, B.Sc. (Nanjing), M.Sc. (Regina), Ph.D. (Toronto)

Instructional Assistants

Lori Goff, B.Sc., M.Sc. (Guelph)
Marvin Guenard, B.Sc., M.Sc. (McMaster)
Thelma Leech, B.Sc., M.Sc., M.Sc.(T.) (McMaster)
Beryl Piccinini, B.Sc. (Mount Allison), M.Sc. (McMaster)
Raymond Provat, B.Sc. (McMaster), B.Ed. (Toronto)

Note:
No more than 12 units of Level II, III Biology (six units per year) may be taken in total by students enrolled in a three year Baccalaureate degree program. Detailed course descriptions are available on the program web site at http://www.science.mcmaster.ca/biology/biology_undergraduate_CourseOfferings

Courses

If no prerequisite is listed, the course is open.

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 and registration in one of Science I, Arts & Science 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. Registration in or completion of CHEM 1A03, 1A3 is strongly recommended. CHEM 1A03, 1A3 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 have laboratories.

BIOLOGY 1A33 BIODIVERSITY, EVOLUTION AND ECOLOGY
Fundamental evolutionary and ecological concepts with particular reference to the diversity of life.
Three lectures, two labs (three hours); one term
Prerequisite: Grade 12 Biology U and registration in one of Science I, Arts & Science 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. Registration in or completion of CHEM 1A03, 1A3 is strongly recommended. CHEM 1A03, 1A3 are prerequisites for many Biology courses in Level II, III, and IV.
Corequisite: SCIENCE 1A00. Students registering in BIOLOGY 1A33 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 have 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 2H03
Not open to students registered in a program in the Faculty of Science. Students who transfer to the Faculty of Science do not retain credit for this course.
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, electrohy/e balance.
Three lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 1A03, 1AA3
Antirequisite: BIOLOGY 4D03, ENGINEERING 4X03, ENG PHYS 3X03, HTH SCI 1H03, 1H13, 2F03, 2F03, KINESCIOL 1A06, 1Y03, 1Y03
Not open to students with credit or registration in BIOLOGY 3F03, 3J03, 3UU3.

BIOLOGY 2B03 CELL BIOLOGY
Basic structure and function of cells; transport and structure and function in specialized cells.
Three lectures, one lab (three hours), one tutorial; one term
Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1A03
Antirequisite: MOL BIOL 2B03
Not open to students registered in the Honours Molecular Biology program.

BIOLOGY 2C03 GENETICS
Structure, function and transmission of genes; eukaryotic 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 1A03; 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, 1AA3; and BIOLOGY 1A03 or ENVIR SC 1B03

BIOLOGY 2EE3 INTRODUCTION TO MICROBIOLOGY AND BIOTECHNOLOGY
Introduction to microbial cell biology, ecology, pathogenicity, physiology, taxonomy, antimicrobial agent action and to the application of microorganisms in biotechnology.
Two lectures, one lab (three hours); one term
Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3 and credit or registration in CHEM 2E03 or 2O3; or registration in Level III Chemical Engineering and Bioengineering.
Antirequisite: BIOLOGY 3E03

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 (two hours); 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 2I03
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 2B03
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 strongly recommended.
Not open to students with credit in BIOCHEM 4Q03 or registration in Honours Biology and Pharmacology.

BIOLOGY 3B03
PLANT PHYSIOLOGY
Principles of physiology and plant cell metabolism. Topics include: photosynthesis, photoperiodism, mineral nutrition, water relations and transpiration.
Two lectures, one lab (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 tutorial (three hours); one term
Prerequisite: BIOLOGY 2B03, 2D03
Offered on a irregular rotation basis.

BIOLOGY 3CC3
MICROBIAL GENOMES AND SYSTEMS BIOLOGY
Advanced topics of microbial physiology/biochemistry and introduction to "systems" approaches based on microbial genomics, transcriptomics, proteomics and metabolomics projects.
Two lectures, one tutorial (three hours); one term
Prerequisite: BIOCHEM 2B03 or 2EE3; BIOLOGY 2B03, 2C03; and BIOLOGY 2EE3 or 3E03; and CHEM 20A3, 20B3

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 2B03. BIOLOGY 2C03 is strongly recommended.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Offered in alternate years.

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 (two hours); one term
Prerequisite: BIOLOGY 2G03. Restricted to students registered in Level III Honours Biology (Biodiversity 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 2G03
Antirequisite: BIOCHEM 3D03

BIOLOGY 3H33
ORGANIZATION OF THE CYTOPLASM
A detailed examination of the molecular organization and function of cytoplasmic structures in metazoa, 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
Molecular genetics of eukaryotes, with focus on molecular mechanisms of eukaryotic DNA replication, DNA repair and recombination, cell cycle and cancer, telomeres and telomerase.
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 2B03. BIOLOGY 2A03 is strongly 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
FUNDAMENTAL CONCEPTS OF DEVELOPMENT
Recent advances using genetic and molecular approaches will be discussed in the context of classical experiments. Various model systems (mice, fruitflies, worms) will be examined.
Two lectures, one tutorial or lab (three hours); one term
Prerequisite: BIOLOGY 2A03

BIOLOGY 3M33
INVERTEBRATE FORM AND FUNCTION
Analysis of sensory reception, nervous control systems, feeding, skeletal support, locomotion, excitation, respiration, and reproduction in selected invertebrates.
Two lectures, one lab/tutorial (three hours); one term
Prerequisite: BIOLOGY 2A03

BIOLOGY 3O33
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 2B03. BIOLOGY 3E03 or 3SO3 is strongly recommended.

BIOLOGY 3P03
CELL PHYSIOLOGY
Analysis of cell function with an emphasis on electrical properties, ion transport proteins, signalling 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, 2B03, or 3G03

BIOLOGY 3Q03
PEER MENTORING IN BIOLOGY (CELLULAR AND MOLECULAR BIOLOGY)
This course gives students theoretical and practical experience with teaching methods in cellular and molecular biology and focuses upon effective presentation and scientific writing skills.
One lecture (two hours), one practicum; one term
Prerequisite: BIOLOGY 1A03; and registration in Level III or above of a program in Arts & Science or the Faculty of Science; and permission of the instructor.
Antirequisite: BIOLOGY 3Q03, 3M03 or 3SO3
Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 118 prior to registration.
Placements announced after completion of a successful interview. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3Q03
PEER MENTORING IN BIOLOGY (BIODIVERSITY, EVOLUTION AND ECOLOGY)
This course gives students theoretical and practical experience with teaching methods in biodiversity, evolution and ecology and focuses on effective presentation and scientific writing skills.
One lecture (two hours), one practicum; one term
Prerequisite: BIOLOGY 1A03; and registration in Level III or above of a program in Arts & Science or the Faculty of Science; and permission of the instructor.
Antirequisite: BIOLOGY 3Q03, 3M03 or 3SO3
Enrolment is limited. Applications must be submitted to the Undergraduate Assistant, Life Sciences Building, Room 118 prior to registration. Placements announced after completion of a successful interview. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
BIOLOGY 3R03  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 courses. These 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, 1A3 or one of ENVR SC 1A03, 1B03 or 1G03; and permission of the Course Coordinator, Life Sciences Building, Room 118. Some modules have additional prerequisites. For information on Field Biology, please go to the Biologe Web site at http://www.science.mcmaster.ca/biology/biology_undegraduate/CourseOfferings 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.

BIOLOGY 3S03  AN INTRODUCTION TO BIOINFORMATICS
This course introduces the techniques and methods of basic computer analysis of biological data, including alignment, databases, and phylogenetic reconstruction.
Three lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03
Antirequisite: BIOLOGY 4K03

BIOLOGY 3S3S  POPULATION ECOLOGY
Three lectures; one term
Prerequisite: BIOLOGY 2F03

BIOLOGY 3T03  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 (three hours); one term
Prerequisite: BIOLOGY 2F03, BIOLOGY 2D03 and STATS 1CC3 are recommended.

BIOLOGY 3U03  ANIMAL PHYSIOLOGY - HOMEOSTASIS
Respiration, circulation, acid-base balance and renal function.
Two lectures, one lab (four hours); one term
Prerequisite: BIOLOGY 2A03 and registration in Level III or above of any Honours Biology program. Available as MOL BIOLOGY 2EE3 and 3E03 are recommended.
Antirequisite: HTH SCI 1D06, 2F03, 2FF3, 2L03, 2L3
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3U03  ANIMAL PHYSIOLOGY - REGULATORY SYSTEMS
Regulation associated with major features and functions of organisms (e.g. feeding, reproduction, thermoregulation, growth, stress, sleep, aging). Emphasis on endocrinology, evolution, vertebrates and ecology. Material will include selected readings.
Two lectures; one term
Prerequisite: BIOLOGY 2A03, BIOLOGY 2B03 and 2C03 are recommended.
Antirequisite: BIOLOGY 4D03, HTH SCI 1D06, 2F03, 2FF3, 2L03, 2L3

BIOLOGY 3V03  TECHNIQUES IN MOLECULAR GENETICS
A laboratory course involving basic experiments in Molecular Genetics. One lecture, two labs (three hours) each term.
Prerequisite: Credit or registration in BIOLOGY 3003 and registration in Level III or above of any Honours Biology program; permission of the instructor.
Antirequisite: BIOCHEM 3P03, MOL BIOLOGY 3V03
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

BIOLOGY 3W03  MICROBIOLOGY INQUIRY
An interactive course highlighting current research programs in the general field of microbiology as well as specific interests in microbiology within the Department of Biology.
One lecture (three hours), one tutorial; one term
Prerequisite: Registration in Level III Honours Biology (Microbiology and Biotechnology Specialization)
First offered in 2007-08.

BIOLOGY 3Y03  PLANT RESPONSES TO THE ENVIRONMENT
How plants respond at the genetic, molecular, biochemical and phenotypic levels to environmental stress. Manipulation of these responses to improve crops will be explored.
Three lectures; one term
Prerequisite: BIOLOGY 2B03, 2C03, 2D03

BIOLOGY 4A03  ADVANCED TOPICS IN ECOLOGY
Examination of current topics in ecology including ecosystem and landscape ecology, evolutionary ecology and behavioural ecology.
Two lectures, one tutorial (three hours); one term
Prerequisite: One of BIOLOGY 3F03, 3J03, 3SS3 or 3TT3 and registration in Level III or above of any Honours program.

BIOLOGY 4A03  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 lab (three hours); one term
Prerequisite: BIOLOGY 2C03; and one of BIOLOGY 3F03, 3J03, 3SS3 or 3TT3 and registration in Level III or above of any Honours program.

BIOLOGY 4B03  PLANT METABOLISM AND MOLECULAR BIOLOGY
Analysis of plant cell metabolism and the regulation of metabolism at the biochemical and molecular genetic level.
Three Honours program
Prerequisite: One of BIOCHEM 2A06, 2BB3 or 3G03 and registration in Level III or above of any Honours program. BIOLOGY 3B03 and 3H03 are recommended.
Offered in alternate years.

BIOLOGY 4C09  SENIOR THESIS
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 Coordinator, 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/biology_undegraduate/CourseOfferings and click on BIOLOGY 4C09, or contact the Course Administrator.
Antirequisite: HTH SCI 4D03, 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 4D03  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 3FF3; and registration in Level III or above of any Honours program.
Antirequisite: BIOCHEM 4Y03
Offered in alternate years.

BIOLOGY 4E03  POPULATION GENETICS
Conceptual foundations of evolutionary theory and principles of population genetics.
Three lectures; two lectures, one tutorial; one term
Prerequisite: BIOLOGY 2C03, 2FF3; and registration in Level III or above of any Honours program.
Antirequisite: BIOLOGY 3J03

BIOLOGY 4E03  HUMAN DIVERSITY AND HUMAN NATURE
The nature of genetic diversity in humans; the nature versus nurture debate in relation to genetic determination and bibliographical basis of behaviour.
Three lectures and one tutorial; one term
Prerequisite: BIOLOGY 2C03; and one of ANTHROP 2E03, BIOLOGY 3FF3, 3J03 or registration in Level III or above of any Honours program.

BIOLOGY 4F06  SENIOR PROJECT
Students undertake an experimental or library project in a specialized area of biology under the direction of a member of the Biology department.
Prerequisite: Registration in Level IV of any Honours Biology program and permission of the Course Coordinator, Life Sciences Building, Room 118. Students are expected to have a C.A. of at least 8.5. Arrangements to take BIOLOGY 4F06, 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/biology_undegraduate/CourseOfferings and click on BIOLOGY 4F06, or contact the Course Administrator.
Antirequisite: HTH SCI 4D03, 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 4F06  SENIOR PROJECT
Students undertake an experimental or library project in a specialized area of biology under the direction of a member of the Biology department.
Prerequisite: Registration in Level IV of any Honours Biology program and permission of the Course Coordinator, Life Sciences Building, Room 118. Students are expected to have a C.A. of at least 8.5. Arrangements to take BIOLOGY 4F06, 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/biology_undegraduate/CourseOfferings and click on BIOLOGY 4F06, or contact the Course Administrator.
Antirequisite: HTH SCI 4D03, 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 4G6: 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 co-registration in BIOLOGY 3K03); and registration in Level III or above of any Honours program; 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.
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
Offered in alternate years.

Biology 4G9: 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 Biology 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 4G9, 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/biology_undergraduate_CourseOfferings and click on BIOLOGY 4G9.
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.
Enrollment 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/biology_undergraduate_CourseOfferings and click on BIOLOGY 4I03; or contact the Course Administrator, Life Sciences Building, Room 118.
Antirequisite: BIOLOGY 4C08, 4F06, 4F03, 4G09, HTH SCI 3H03, 4A09, 4B06, MOL BIOL 4F03, PHARMAC 4F09
Enrollment 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 completing for credit in BIOLOGY 3R03, 4J33. 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, 1A05 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/biology_undergraduate_CourseOfferings and click on BIOLOGY 4J03, or contact the Course Administrator.
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

Biology 4J33: 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 completing for credit in BIOLOGY 3R03, 4J33. 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, 1A05 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/biology_undergraduate_CourseOfferings and click on BIOLOGY 4J33, or contact the Course Administrator.
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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 (three hours); one term
Prerequisite: BIOLOGY 2B03, 2C03, 3I03; and registration in Level III or above of any Honours program.
Offered in alternate years.

Biology 4R05: 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: BIOLOGY 2B03 or 2C03, and credit or registration in one of MED PHYS 3T03, 4B03, PHYSICS 3T03; or registration in Year 4 of Medical and Health Physics Co-op; or permission of the instructor

Biology 4S03: Virology
The viruses of animals, bacteria, and plants, with emphasis on the molecular biology of virus replication and the diversity of virus-cell interactions.
Two lectures, one tutorial (three hours); one term
Prerequisite: One of BIOCHEM 3G03, BIOLOGY 3H03, 3H33, 3U03, PSYCH 2F03, 3F03; 3F03 is also recommended.
Offered in alternate years.

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 3M03, 3P03, 3U03, 3U33; and registration in Level III or above of any Honours program; or permission of the instructor

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 2E03 or 3E03, and registration in Honours Biology (Genetics Specialization or Microbiology and Biotechnology Specialization) or Honours Biology Genetics Specialization Co-op; and permission of the instructor. Application for permission must be received by March 31st of the academic year prior to registration.
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
INTRODUCTORY 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.

Antirequisite: BIOLOGY 3X03 or HTH SCI 3103

MED PHYS 4B03
Radioactivity and Radiation Interactions
Radioactivity and radiation phenomenon: interaction of radiations with matter, dosimetry, radiation in medicine, biological effects, radiation levels and regulations, radiation protection.

Antirequisite: One of PHYSICS 1BA3, 1BB3 or permission of the instructor

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 oncoproteins, transgenic mouse models, and tumour suppressor genes.

Prerequisite: One of BIOL 3L03, MED PHYS 3T03, PHYSICS 3T03

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.

Antirequisite: BIOCHEM 3BO3, 3BT3, 3DO3, 3GO3, BIOL 3X93, 3HH3 and registration in Level III or above of any Honours program; or permission of the instructor

MOL BIOL 4K03
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 2F03 and credit or registration in one of BIOLOGY 3G03, 3SS3, 3TT3 and registration in Level III or above of any Honours program; or permission of the instructor

Offered in alternate years.


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.

Antirequisite: BIOLOGY 2803 or HTH SCI 2K03

Through faculty of as of January 15, 2006
CHEM ENG 2F04  CHEMICAL ENGINEERING PRINCIPLES II
Combined 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 2004

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 Not offered in 2006-2007.

CHEM ENG 3B63  BIO-REACTION ENGINEERING
Kinetics of cellular processes, microbial processes and enzyme reactions including those of immobilized cells and enzymes. Cell culturing, Bioreactor design. Bioprocess development including downstream processing.
Three lectures; first term
Prerequisite: Registration in Level IV of any Chemical Engineering program; or CHEM ENG 2B03; or permission of the Department

CHEM ENG 3B6M  BIOSEPARATIONS ENGINEERING
Introduction to bioprocess separations 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, with 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 and MATH 2M06 or both MATH 2A03 and 2C03, or both MATH 2P04 and 2D04

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 both CHEM ENG 2F04 and 2D03; and credit or registration in CHEM ENG 3D03
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, or both MATH 2A03 and 2C03, or both MATH 2P04 and 2D04 and registration or credit in CHEM ENG 2F04 and 2D03; or a grade of at least B+ 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 and credit or registration in CHEM ENG 2A04 and 3C04

CHEM ENG 3M04  MASS TRANSFER AND STAGEWISE OPERATIONS
Stagewise operations, diffusion, mass transfer coefficients, distillation, differential contacting and absorption.
Three lectures, one tutorial (two hours); first term
Prerequisite: CHEM ENG 2F04

CHEM ENG 3O04  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 consult flow. Similitude, unsteady flow, measuring devices and fluid machinery.
Three lectures, one tutorial (three hours); first term
Prerequisite: MATH 2M06, or both MATH 2P04 and 2G04, or both MATH 2A03 and 2C03 (any of which may be taken concurrently); and registration in a Chemical Engineering, Materials Science, Materials Engineering or Engineering Physics (Nuclear Engineering and Energy Systems Stream) 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: MATH 2M06, or both MATH 2A03 and 2C03, or both MATH 2P04 and 2G04; and credit or registration in CHEM ENG 2A04, 3E04, 3H04, 3L04
Antirequisite: CHEM ENG 3P03

CHEM ENG 3Q03  INTRODUCTION TO POLYMER SCIENCE
An overview of important synthetic and natural polymers with emphasis on polymer structure, the chemistry of polymer formation. An introduction to polymer characterization.
Three lectures; second term
Prerequisite: One of CHEM 2A03, 2E03, 2A04, 2B04, 2G04, 2W04

CHEM ENG 4B03  POLYMER REACTION ENGINEERING
Three lectures; first term
Prerequisite: CHEM ENG 3K04

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 2A03, 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 3P03 or 3P04

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, 3M04, 3N04, 3P04 (or 3P04); and CHEM ENG 3G03 or 3O04

CHEM ENG 4K03  REACTOR DESIGN FOR HETEROGENEOUS 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 4M03 SEPARATIONS
Overview of separation processes, liquid-liquid extraction, supercritical fluid extraction, adsorption, filtration, membrane separation processes.
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 an emphasis on systems analysis, economics, equipment performance, uncertainty, flexibility and modeling, including use of tools. Students will work individually and in groups on problems-based projects.
Three lectures, one tutorial (two hours); first term
Prerequisite: CHEM ENG 3K04, 3M04, 3P03 or (SP04); and registration in 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 biomedical 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 3G03, ENG PHYS 3Q03 or MECH ENG 3O04

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 CHEM ENG 4N04; and 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 Biomedical Engineering

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, MATHS 3E04 or MECH ENG 3R03; and CHEM ENG 3O04 or MECH ENG 3O04

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 Biomedical Engineering, and a CA of at least 9.5.

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
**Courses**

If no prerequisite is listed, the course is open.

**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 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 CHEM 1R03

Corequisite: SCIENCE 1A00. Students registering in CHEM 1A03 must also register in SCIENCE 1A00 when completing their registration.

Antirequisite: CHEM 1E03

**CHEM 1A03** INTRODUCTORY CHEMISTRY II
An introduction to equilibria, chemical kinetics and organic chemistry.

Three lectures, one tutorial, one lab (three hours) every other week; second term

Prerequisite: CHEM 1A03 or 1E03

**CHEM 1E03** GENERAL CHEMISTRY FOR ENGINEERING I
An introduction to chemical principles for Engineering students, including reactivity, bonding, structure, energetics and electrochemistry.

Three lectures, one tutorial (one hour), one lab (three hours) every other week; first term

Prerequisite: Registration in a program in Engineering

Antirequisite: CHEM 1A03

**CHEM 1R03** GENERAL CHEMISTRY
A general introduction to chemistry, suitable for students without Grade 12 Chemistry U.

Three lectures, second term

Prerequisite: Grade 11 Chemistry SCH 3U

Not open to students with 80% or higher in Grade 12 Chemistry U. 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 CHEM 2P03 or 2R03

Antirequisite: CHEM 2N03

**CHEM 2B03** ORGANIC CHEMISTRY A
Bonding. Alkanes, alkyl halides, alkenes, alkenes, and alcohols. Stereochemistry. Reaction intermediates and reaction mechanisms.

Three lectures, one lab (three hours) every week; first term

Prerequisite: CHEM 1A03; and registration in an Honours Biochemistry program (with a grade of at least B+ in CHEM 1A03), an Honours Chemistry program, B.Sc. Physical Science or the Honours Science (Stream D) program

Antirequisite: CHEM 2E03, 2O3A, 2W2W

**CHEM 2B03** ORGANIC CHEMISTRY B

Three lectures, one lab (three hours) every week; second term

Prerequisite: CHEM 2B03

Antirequisite: CHEM 2O3B

**CHEM 2E03** INTRODUCTORY ORGANIC CHEMISTRY
An introduction to the chemistry of monofunctional aliphatic and aromatic compounds.

Three lectures, one tutorial; first term

Prerequisite: CHEM 1A03

Antirequisite: CHEM 2B03, 2O3A

**CHEM 2E03** is not a prerequisite for further courses in Organic Chemistry.

**CHEM 2I03** STRUCTURE AND REACTIONS OF THE MAIN GROUP ELEMENTS
Comparative chemistry of the 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 2W2W

**CHEM 2N03** BIO-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 2P03 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 1A03 with a grade of at least C- or registration in a Biochemical Engineering program, Honours Biochemistry, Honours Biology and Psychology or Honours Molecular Biology. Students with a grade of less than C- in CHEM 1A03 are encouraged to seek counselling before attempting this course. Students who receive special permission to register in this course after completing CHEM 2E03 will not retain credit for CHEM 2E03 on completion of this course.

Antirequisite: CHEM 2B03, 2E03

**CHEM 2B03** ORGANIC CHEMISTRY II
Nucleophilic substitutions at carbonyl centres, aromatic chemistry, carbodervatives, applications of spectroscopic techniques in organic chemistry.

Three lectures, one lab (three hours) every other week; one tutorial (two hours) every other week; second term

Prerequisite: CHEM 2A03

Antirequisite: CHEM 2B03

**CHEM 2P03** 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, first term

Prerequisite: CHEM 1A03, 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 2P03

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 1A03; and ARTS&SCI 1C06 or MATH 1A03

Antirequisite: CHEM 2P03, 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 103 or 1EO3, and registration in a program administered by the Department of Materials Science and Engineering

Antirequisite: CHEM 2I03, 3Q03

**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 2N03; and CHEM 2P03 or 2R03

Antirequisite: ENVIR SCI 3O05

**CHEM 3B0A** QUANTUM MECHANICS AND SPECTROSCOPY I
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 2P03; and PHYSICS 1B03 or 1BB3

Antirequisite: CHEM 3B03
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 3BA3; 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 2B03 or 2OB3
Antirequisite: CHEM 3F03

CHEM 3F03 BIO-ORGANIC CHEMISTRY
Topics in bio-organic chemistry focusing on catalysis in chemistry and nature.
Three lectures; one lab (three hours); second term
Prerequisite: CHEM 2B03 or 2OB3
Antirequisite: CHEM 3F03

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 3103 and one of CHEM 2BB3, 2E03, 2OB3: or registration in Level III or IV of a Chemical Engineering program

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 3Q03

CHEM 3Q03 INORGANIC CHEMISTRY
The properties, structures and reactions of inorganic compounds with emphasis on transition metal chemistry.
Three lectures; one lab (three hours); first term
Prerequisite: CHEM 2M03
Antirequisite: CHEM 2W2W

CHEM 3Z23 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 either pericyclic organic reactions or organic photochemistry.
Three lectures; one term
Prerequisite: CHEM 3D03 or 3F03

CHEM 4B03 CHEMICAL APPLICATIONS OF SPECTROSCOPY
Aspects of molecular spectroscopies 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, stoichiometry, electronic structure and properties of semiconductors and metals.
Three lectures; one term
Prerequisite: CHEM 3B03

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: One of CHEM 3D03, 3F03 or 3FF3

CHEM 4FP3 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
Enrolment 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 3A03; and CHEM 2PB3 or 2R03

CHEM 4P05 POLYMERIC 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 3BB3 or PHYSICS 3M3

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, electron deficient compounds, and applications of physical methods to inorganic structure determination.
Three lectures; one term
Prerequisite: CHEM 3Q03
CIVIL ENGINEERING

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 2E04 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: Credit or registration in CIV ENG 2P04.

CIV ENG 2E03 COMPUTER APPLICATIONS IN CIVIL ENGINEERING
Numerical techniques including error analysis, root finding, linear algebraic equations, curve fitting, integration, differentiation, and optimization. Numerical methods for structural analysis, use of numerical software for structural analysis. Two lectures, one tutorial; second term. Prerequisite: Credit or registration in CIV ENG 2P04.

CIV ENG 2E03 COMMUNICATIONS IN CIVIL ENGINEERING
Oral and written communication in context of civil engineering activities. A professional liaison program involving site visits. Two lectures, one tutorial (three hours); first term.

CIV ENG 2G04 ECOLOGICAL AND GEOLOGICAL ASPECTS OF CIVIL ENGINEERING
The relationship between human activities and their environment. Principles of ecological systems. Human alterations of the environment. Three lectures, one tutorial or one lab; second term. Prerequisite: Credit or registration in CIV ENG 2004. Antirequisite: GEO 3U03.

CIV ENG 2G04 FLUID MECHANICS
Fluid properties; flow of fluids in conduits, open channels, and natural waterways; properties of water and other fluids; work, energy, and momentum principles. Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term. Prerequisite: Credit or registration in CIV ENG 2P04. Antirequisite: CIV ENG 2G03.

CIV ENG 2G03 ENVIRONMENTAL ENGINEERING I
Chemical analysis of soils, identification and classification; compaction; seepageage; 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 2E04, 2P04.

CIV ENG 3B03 GEOLOGICAL 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, 2P04. Credit or registration in MATH 3J04.

CIV ENG 3J04 REINFORCED CONCRETE DESIGN
Analysis of uniaxial and multiaxial reinforcement; bending, shear, and torsion; design of structural members; stress analysis of reinforced concrete systems. Two lectures, one tutorial; second term. Prerequisite: Credit or registration in CIV ENG 3G03, 3P03.

CIV ENG 3K03 INTRODUCTION TO TRANSPORTATION ENGINEERING
The transportation impact study serves as the focus for group projects, and provides the context for application of material on traffic flow characteristics, capacity and flow theory, signalization, and urban transportation systems. Two lectures, one tutorial; first term.

CIV ENG 3L03 WATER QUALITY
Physical, chemical and biological characteristics of water, Stochastic processes, reaction kinetics and material balances; mathematical modelling in physical processes; water quality in rivers, lakes, and reservoirs. Two lectures, one tutorial; first term. Prerequisite: Credit or registration in CHEM ENG 2B03. Antirequisite: CIV ENG 3M04.

CIV ENG 3M03 MUNICIPAL HYDRAULICS
Analysis/design of urban drainage systems; analysis of wastewater collection systems; pumps. Two lectures, one tutorial or one lab; second term. Prerequisite: CIV ENG 2E04, 2P04; and credit or registration in MATH 3J04 or STATS 3J04. Antirequisite: CIV ENG 3M04.

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, one lab; first term. Prerequisite: CIV ENG 2E04, 2P04, MATHS 1M03. Antirequisite: ENGINEERING 3P03.

CIV ENG 3R03 PROJECT MANAGEMENT WITH CONSTRUCTION APPLICATIONS
An introduction to construction project management; tender documents, estimating, bidding, proposals, and construction contracts; project planning and management, cost and quality, risk analysis, safety management, and quality control. Two lectures, one tutorial; first term. Prerequisite: Registration in Level III or above of a Civil Engineering program.
CIV ENG 3503 STEEL STRUCTURES
Introduction to design in steel, tension and compression members, plate buckling aspects, beam instability, beam design, beam-column, bolted and
welded connections. Applications employing steel structures building code.
Two lectures, one tutorial; second term
Prerequisite: Credit or registration in CIV ENG 3G03, 3P03

CIV ENG 3H03 PHYSICO-CHEMICAL PROCESSES IN
WATER AND WASTEWATER TREATMENT
Water/waste water quality/characteristics; primary and secondary treat-
ment; emphasis is placed on physical and chemical unit processes in-
cluding coagulation, flocculation, sedimentation, filtration, precipitation;
advanced treatment processes, including ion exchange, chemical oxida-
tion, 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/legisla-
tion; energy and environmental audits; life cycle analysis; solid and haz-
ardous 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 4C03

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; bitum-
inous and concrete materials, flexible pavement design; concrete pave-
ment 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, the four-stage approach to modelling transportation
systems, discrete choice models and contextual factors such as land use.
Design units = 3.0
Three lectures; one term
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 anal-
ysis of frames with and without sway effects. Application of computer
programs. Design units = 0.0
Three lectures, one tutorial; first 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 drain-
age 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 4R04 DESIGN AND SYNTHESIS OF STRUCTURES
Structural design process, gravity and lateral loading requirements, struc-
tural performance criteria, choice of structural systems, Analysis and
practicality 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; second term
Prerequisite: CIV ENG 3G03, 3J04, 3S03

CIV ENG 4S04 FOUNDATION ENGINEERING
Principles of foundation design; bearing capacity, settlement and loca-
tion, footings, deep foundations, piles, group piles and drilled piles; re-
taining 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 OTHERS
TRUSTRUAL SYSTEMS
Bridge loading and analysis for load effects. Design of reinforced con-
crete 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 stu-
dent may be required to present a seminar, and will submit a final written
report before April 1. Design units = variable according to project
Two labs (three hours); both terms. The hours assigned can be freely
scheduled to suit those involved in a particular project and may include
computer classes, laboratory work, discussion or individual study.
Prerequisite: Registration in a final level of a Civil Engineering program,
and a SA of at least 9.5.
Enrolment is limited.

CLASSICS
WEB ADDRESS: http://www.humanities.mcmaster.ca/-classics/

Togo Salmon Hall, Room 706
Ext. 24311

Faculty as of January 15, 2006
Chair
Michele G. George

Professor:
Katharine M. D. Dunbabin/M.A., D. Phil. (Oxford)
Howard Jones/B.A. (London), M.A., Ph.D. (Indiana)

Associate Professors:
Claude Ellers/B.A. (Saskatchewan), M.A. (McMaster), D.Phil. (Oxford)
Michele George/B.A. (Toronto), M.A., Ph.D. (McMaster)
Evans Haley/A.B. (Dartmouth), Ph.D. (Columbia)

Assistant Professors:
Celtina Gray/B.A. (Vassar), M.A., Ph.D. (California-Berkeley)
Alexandra Patzleif/B.A. (McGill), M.A. (British Columbia), Ph.D. (North
Carolina-Chapel Hill)

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 2A03, 3L03, 3LL3, 3CC3, 3EE3, 3EE3, 3LL3, 3T03
   c) Ancient Philosophy
      CLASSICS 2P06, 4K03
   d) Classical Literature in Translation
      CLASSICS 2D03, 2E03, 3H03, 3EE3, 3T03, CLASSICS 3S03, 3T03
   e) Greek Language and Literature
      GREEK 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4AA3, 4B03, 4BB3
   f) Latin Language and Literature
      LATIN 1203, 1ZZ3, 2A03, 2AA3, 3A03, 3B03, 4AA3, 4B03, 4BB3
A study of the history and methodology of Greek and Roman archaeology illustrated with materials from excavated sites.

Three lectures; one term

A study of Greek and Roman mythology and literature with emphasis on the heroes and heroines of the Trojan War. Homer’s Odyssey and Vergil’s Aeneid will be read in translation.

Two lectures, one tutorial; one term

A study of the main themes of Classical mythology through the reading of post-classical writers and artists.

Two lectures, one tutorial; one term

The history of the Ancient Near East and Greece down to the end of the 5th century B.C., based on documentary and archaeological evidence.

Two lectures, one tutorial; one term

This course is administered by the Department of Philosophy.

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

A study 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

The architecture, sculpture, and painting of the Greek and Hellenistic world.

Three lectures; one term

The architecture, sculpture, and painting of the Roman world.

Three lectures; one term

The ancient Roman family, including social, economic and legal aspects.

Three lectures; one term

The study in translation of Herodotus, Thucydides, and other historical writers, with consideration of the evolution of their genre and their contributions to the development of historiography.

Three lectures; one term

The architecture, sculpture, and painting of the Greek and Roman world.

Three lectures; one term

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

The study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.

Three lectures; two terms
CLASSICS 3103 TOPICS IN GREEK AND ROMAN LITERATURE

Previous topics include: Greek and Roman Epic, Greek and Roman Ecology 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
Pre requisite: Six units of Classics
Cross-list: COMP LIT 3103
CLASSICS 3103 may be repeated, if on a different topic, to a total of six units.

CLASSICS 3L33 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
Pre requisite: One of CLASSICS 1L33, 1L33, 2L33, 3L33
Cross-list: HISTORY 3L33
CLASSICS 3M33 TOPICS IN ANCIENT 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
Pre requisite: One of CLASSICS 1L33, 2L33, 3L33, 3V33
Cross-list: HISTORY 3M33
CLASSICS 3S03 GREEK SANCTUARIES

Ancient Greek sanctuaries and their social and political context. Topics will include architecture and art, as well as activities such as sacrifice, athletic games, healing, and oracular consultation.

Three lectures; one term
Pre requisite: CLASSICS 1A03 or 2B03
Alternates with CLASSICS 3S03.

CLASSICS 3S03 THE ARCHAEOLGY 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
Pre requisite: CLASSICS 1A03 or 2C03
Alternates with CLASSICS 3S03.

CLASSICS 3T03 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
Pre requisite: CLASSICS 2H03 or six units of Classics
Cross-list: COMP LIT 3T03

CLASSICS 3Y03 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
Pre requisite: Registration in Level II or above of a Classics or Comparative Literature program or permission of the Department.
Cross-list: COMP LIT 3Y03

CLASSICS 4B03 SEMINAR IN CLASSICAL ARCHAEOLOGY

Consult the Department concerning the topic to be offered.

Seminar (two hours); one term
Pre requisite: Six units from CLASSICS 1A03, 3Q03, 3S03 and registration in Level III or IV of an Honours program in Classics (A); or permission of the Department
CLASSICS 4B03 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
Pre requisite: 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.

Pre requisite: Six units from CLASSICS 2K03, 2L03, 2L33, 3C03, 3CC3, 3E03, 3L33 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
Pre requisite: 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
Pre requisite: 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 Course
   GREEK 1Z03, 1Z23

   Intermediate Level Language Courses
   GREEK 2A03, 2A33

2. Students with Grade 12 Greek U should normally register in GREEK 2A03, but with special permission, may register in either GREEK 1Z03 or 1Z23.

Courses

GREEK 1Z03 BEGINNER'S INTENSIVE ANCIENT GREEK I

A rapid introduction to the basic grammar of Ancient Greek.

Three lectures; one term

Not open to graduates of Grade 12 Greek U, who must have special permission to register in the course.

GREEK 1Z23 BEGINNER'S INTENSIVE ANCIENT GREEK II

This course continues the study of the grammar of Ancient Greek begun in GREEK 1Z03.

Three lectures; one term

Pre requisite: GREEK 1Z03. Students with Grade 12 Greek U must obtain special permission to register in the course.

This course, with a grade of at least B-, is accepted as a prerequisite for admission to any Honours program in Classics, or, with a grade of at least C-, for admission to the B.A. program in Classics.

GREEK 2A03 INTERMEDIATE GREEK I

This course continues the study of Greek grammar begun in GREEK 1Z03 and 1Z23 and introduces students to the reading of simple passages from Greek authors.

Three lectures; one term

Pre requisite: One of Grade 12 Greek U, GREEK 1Z23. Students using this course as a Humanities requirement will register for GREEK 2A03 and 2A33.

GREEK 2A33 INTERMEDIATE GREEK II

A study of selected passages from Greek authors designed to develop further the student's proficiency in reading Greek. The course may also include grammatical exercises.

Three lectures; one term

Pre requisite: GREEK 2A03.

GREEK 3A03 GREEK HISTORIANS

Selected readings from Greek historical authors, such as Herodotus and Thucydides.

Three lectures; one term

Pre requisite: Six units of Level II Greek

GREEK 3B03 GREEK EPIC

Selected readings from Homer, Hesiod, and/or other Greek epic authors.

Three lectures; one term

Pre requisite: Six units of Level II Greek

GREEK 4A03 GREEK PROSE

Selected readings in one or more Greek prose authors.

Three lectures; one term

Pre requisite: Six units of Level II Greek
GREEK 4BB3
Selected readings from Greek tragedy and/or comedy.
Three lectures; one term
Prerequisite: Six units of Level II Greek.
Alternates with GREEK 3BB3.

GREEK 4BB3
TOPICS IN GREEK LITERATURE
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.

GREEK 4K03
INDEPENDENT STUDY IN GREEK
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 ... Notes:
1. Students should note that the Department has classified its Latin language courses under the following categories:
   Introductory Latin Language Course
   LATIN 1203, 1ZZ3
   Intermediate Latin Language Courses
   LATIN 2A03, 2A3

2. Students with Grade 12 Latin U should normally register in LATIN 2A03, but with special permission, may register in either LATIN 1203, 1ZZ3.

Courses
If no prerequisite is listed, the course is open.

LATIN 1203
BEGINNER'S INTENSIVE LATIN I
A rapid introduction to the basic grammar of Classical Latin.
Five hours (lectures and tutorials); one term
Not open to graduates of Grade 12 Latin U, who must obtain special permission to register in the course.

LATIN 12Z3
BEGINNER'S INTENSIVE LATIN II
This course continues the study of Latin grammar begun in LATIN 1203.
Five hours (lectures and tutorials); one term
Prerequisite: LATIN 1203. Students with Grade 12 Latin U must obtain special permission to register in the course.
This course, with a grade of at least B-, is accepted as a prerequisite for admission to any Honours program in Classics, or, with a grade of at least C-, for admission to the B.A. program in Classics.

LATIN 2A03
INTERMEDIATE LATIN I
This course continues the study of Latin grammar begun in LATIN 1203 and 12Z3 and introduces students to the reading of simple passages from Latin authors.
Three lectures; one term
Prerequisite: One of Grade 12 Latin U, LATIN 1ZZ3. Students using this course as a Humanities requirement will register for LATIN 2A03 and 2AA3.

LATIN 2AA3
INTERMEDIATE LATIN II
A study of selected passages from Latin authors designed to further the student's proficiency in reading Latin. Attention will be given to grammar and techniques of literary criticism.
Three lectures; one term
Prerequisite: LATIN 2A03

LATIN 3A03
LATIN HISTORIANS
Readings in selected Latin historians such as Sallust, Livy, and Tacitus.
Three lectures; one term
Prerequisite: LATIN 2A03, 2AA3

LATIN 3B03
LATIN EPIC
Readings from Vergil, and/or other epic authors.
Three lectures; one term
Prerequisite: LATIN 2A03, 2AA3
Alternates with LATIN 4BB3.

LATIN 4AA3
LATIN PROSE
Selected readings in one or more Latin prose authors.
Three lectures; one term
Prerequisite: Six units of Level II Latin

LATIN 4BB3
LATIN LOVE POETRY
Readings in Latin Love Poetry.
Three lectures; one term
Prerequisite: LATIN 2A03, 2AA3
Alternates with LATIN 3BB3.

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.

LATIN 4K03
INDEPENDENT STUDY IN LATIN
Selected readings from Latin authors supervised by a member of the Department.
Tutorials; one term
Prerequisite: Six units of Level II Latin; and registration in Level III or IV of any Honours program in Classics; and permission of the Department.
LATIN 4K03 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.degroote.mcmaster.ca
DeGroote School of Business, Room 104
Ext. 24433

Faculty as of January 15, 2006
Chair, Marketing, Strategic Market Leadership and Health Services Management
Kenneth R. Deal

Chair, Finance and Business Economics Area
Trevar Chamberlain

Chair, Accounting and Financial Management Services Area
Khalid Nair

Chair, Human Resources and Management Area
Willi Wiesner

Chair, Management Science and Information Systems Area
Mahmut Farbar

Professors
Prakash 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 Resource/Coordination) Ph.D. Program (Human Resources)
Amin Amarni/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 Baba/B.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-Berkeley), 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)
C. Sherman Cheung/B.S. (Louisiana State), M.S., M.D. (Illinois) (Finance and Business Economics)
Robert G. Cooper/B.Eng., M.Eng. (McGill), M.B.A., Ph.D. (Western Ontario) (Marketing)
Richard W. Deaves/B.A., M.A., Ph.D. (Toronto) (Finance and Business Economics)
Richard 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
Elke J. Kleinenschmidt/Dip. Ing. (Staatliche Ingenieurschule, Hannover), M.B.A., Ph.D. (McGill)/Marketing and International Business)
Claurence C.Y. Kwan/Ph.D. (Ottawa), M.B.A. (McMaster), Ph.D. (Toronto), P.Eng./Finance/CIBC Chair in Financial Markets
John W. Medoc/B.A. (New Brunswick), M.A., Ph.D. (Toronto)/Organizational Behaviour/Dean, Engineering and Management Programs
Dean C. Mountain/B.A. (McMaster), M.A., Ph.D. (Western Ontario)/Finance and Business Economics
Mahmud Parlar/B.Sc., M.Sc. (Middle East Technical University), Ph.D. (Waterloo)/Management Science/Chair, Management Science and Information Systems Area
William Richardsen/B. Sc., Ph.D., M.B.A. (McMaster)/Accounting and Financial Management Services Area
Joseph B. Rose/B.B.A. (Adelphi), M.B.A. (SUNY-Buffalo)/Industrial Relations
Mohamed M. Shenhata/B.Com., (Tanta), M.S. (Air-Shams), 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. Wesolowsky/B.A.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 Zeytinoglu/B.A., M.A. (Bogazici), M.S., Ph.D. (Pennsylvania)/Management and Industrial Relations

Associate Professors
Nick Bonits/B.A., Ph.D. (Western Ontario)/Strategic Market Leadership and Health Services Management/Dean, Undergraduate Programs
Y.C. Lillian Chan/B.B.A. (Chinese Univ. of Hong Kong), Ph.D. (Virginia Polytechnic Institute and State University)/Accounting
Narayr Chaturvedi/B.A. (Thammasat), M.B.A. (Drexel), Ph.D. (York)/Finance
Kenneth R. Deal/B.S., M.B.A., Ph.D. (SUNY-Buffalo)/Marketing and Management Science/Chair, Strategic Market Leadership and Health Services Management
Brian Detor/B.Sc. (Western Ontario), M.I.S., Ph.D. (Toronto)/Information Systems
Khaleel Hassanen/B.Sc. (Kuwait), M.A.Sc. (Toronto), Ph.D. (Waterloo), M.B.A. (Waterloo)/Accounting/Associate Director, Meric
Millaen Head/B.Math., M.Sc. (Waterloo), M.B.A., Ph.D. (McMaster)/Management Science/Information Systems/Associate Dean Academic
Rosemary Luo/B.Eng. (Business) (Beijing), M.A., Ph.D. (Western Ontario)/Finance
Ali R. Montazeri/H.N.D. (Teesside Polytechnic), M.Sc. (Southampton), Ph.D. (Waterloo)/Information Systems
S.M. Khalid Nairn, B.A., M.A. (Dhaka), 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)/Public Policy/Dean, Health Services Management Program
James H. Tiessen/B.Sc. (Alberta), M.Sc. (Guelph), Ph.D. (York)/International Business/Dean, B. A. Programs
Willi Wiesner/B.A. (Waterloo)/Human Resources/Chair, Human Resources and Management Area

Assistant Professors
Catherine Connelly/B.Com., (McMaster), M.Sc., Ph.D. (Queen's)/Organization Behaviour
Anna Danielova/B.Sc. (Yeravan Polytechnic Institute), M.S. (American University of Armenia), M.A., Ph.D. (Indiana)/Finance
Terry Flynn/B.A. (Carleton), M.S., Ph.D. (Syracuse)/Marketing
Maureen Hupfer/B.Com., M.A., Ph.D. (Alberta)/Marketing
Kirilardan Kanagaretnam/B.Sc (Sri Lanka), M.S.E.E. (Purdue), Ph.D. (Syracuse), C.M.A./Accounting and Financial Management Services Area
Peter Mu/B.Sc. (Hong Kong), M.B.A., Ph.D. (Toronto)/Finance
Emad Mohd/B.A. (Kuwait), M.B.A., Ph.D. (Georgia State)/Accounting

Devashish Pujari/R. Com., M.Com. (Kurukshetra), M.B.A. (Bradford)/ (Strategic Market Leadership and Health Services Management)
Glen Randall/B.A., M.B.A. (McMaster), Ph.D. (Toronto)/Marketing
Sourav Ray/B.Tech (India), M.S. (Texas), Ph.D. (Minnesota)/Accounting
Aaron Schall/B.A. (Redeemer), M.A., Ph.D. (Guelph)/Organizational Behaviour
Allred Seaman/B.B.A. Admin. (New Brunswick), Ph.D. (Queen's)/Accounting
John O'Naun/B.A., M.A., Ph.D. (Concordia)/Accounting
Kevin Tasa/B.Com. (Saskatchewan), M.Sc., Ph.D. (Toronto)/Human Resource Management
Patricia Wakofield/B.S. (Alberta), M.S. (Cornell), M.P.A. (New York), Ph.D. (Boston)/Marketing

Industry Professors
Paul K. Bates/Financial Management Services/Dean

Lecturers
Rita Cossa/H.B.A. (Wilfrid Laurier), M.B.A. (McMaster)/Marketing
Hsing-Tzu Hac/B.B.A. Finance (Temang)/Accounting
Teal McAteer-Early/B.Com, (Queen's), M.I.R., Ph.D. (Toronto)/Marketing and Business Policy
M. Neveal Malik/B.A. (Chandigarh), M.A. (Canberra)/Marketing
Marvin G. Ryder/B.A., B.Sc. (Carleton), M.B.A. (McMaster)/Marketing and Business Policy
Tina Sallsbury/B.Com., M.B.A. (McMaster)/Management Science and Information Systems
Linda Stockton/B.Sc. (McMaster)/Marketing
Peter Vilkas/B.Sc. E.E. (SUNY-Buffalo), M.B.A. (McMaster), Ph.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 2A93, 2B93, 2A93, 2FA3, 2MA3, 2QA3, 2BQ3, 2BC3, 2F3A, 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. Students taking COMMERCE 2A93, 2FA3, 2MA3 as Business Minor courses will also be required to have obtained a minimum grade of B- in ECON 1A00 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 take note that all prerequisites for these courses must also be satisfied. Students taking COMMERCE 2A93 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 1A00 or an average of at least 7.0 in ECON 1B03 and 1B83 as a prerequisite.
5. Graduates of McMaster’s Commerce programs or 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 4A93, 4A94, 4A13, with the permission of the Academic Programs Office. (See the Admission Requirements section of this Calendar under the heading Continuing Students).
6. These courses are available as ACC 500, ACC 501, ACC 502, through the School of Business, subject to sufficient enrolments and availability of qualified instructors.

Other than those graduates specified above, Commerce courses are not open to Continuing Students.
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 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 I.

COMMERCE 2AA3  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 2AB3  MANAGERIAL ACCOUNTING I
An introduction to concepts underlying the use of cost accounting information for managerial planning and control, and for inventory valuation. The nature and analysis of costs, and the usefulness and limitations of accounting data for decision-making, including ethical considerations, will be discussed. Prerequisite: COMMERCE 2AA3 and 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 2BA3  ORGANIZATIONAL BEHAVIOUR
The central objective of this course is to develop an understanding of human behaviour in organizations with a view to effective management of such behaviour. Prerequisite: Registration in any Commerce, Engineering and Management, Labour Studies or four or five-level non-Commerce program Antirequisite: KINESIOl 3L03 Enrolment is limited. (See Note 2 above.)

COMMERCE 2FA3  INTRODUCTION TO FINANCE
This course introduces the main instruments and institutions in the Canadian financial system. The basic concepts and models of modern financial theory are introduced through lectures and "hands-on" problem solving. Topics include: the time value of money, capital budgeting, the trade-off between risk and return and security valuation. Prerequisite: ECON 1A06 or 1B03; and one of MATH 1A03, 1B03, or 1N03; and COMMERCE 2AA3; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program. Students in a four- or five-level non-Commerce program must have at least B- in ECON 1A06 or 1B03. Not open to students with credit or registration in ECON 2103. Enrolment is limited. (See Note 2 above.)

COMMERCE 2MA3  INTRODUCTION TO MARKETING
This course introduces the conceptual underpinnings and operational facets of marketing with a primarily consumer (as opposed to industrial) focus. 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 2QA3  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. Prerequisite: Finite Math (or Mathematics of Data Management U or equivalent) or STATS 1L03; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program Antirequisite: ECON 2B03, STATS I CCC, 2B3, 3J04, 3N03, 3Y03 Enrolment is limited. (See Note 2 above.)

COMMERCE 2QB3  INFORMATION SYSTEMS IN MANAGEMENT
This course examines primarily how information systems are used 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 1SA3, 1MC5, 1SA3, 1TA3, 1Z3; ENGINEER 1D04, MATH 1A03, 1B06, 2A03, or four or five-level non-Commerce program or non-Engineering and Management program. Antirequisite: COMMERCE 3QB3 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 2SB3  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 3AB3  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 2AA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3AC3  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 3AB3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.) Antirequisite: COMMERCE 4AB3

COMMERCE 3BC3  HUMAN RESOURCE MANAGEMENT AND LABOUR RELATIONS
This course builds on COMMERCE 2BA3, focusing on human resource management and labour relations issues and practices from a general management education perspective. Prerequisite: COMMERCE 2BA3 or KINESIOl 3L03; and registration in any Commerce, Engineering and Management or four or five-level non-Commerce program. Antirequisite: COMMERCE 3BA3, 3BB3 Enrolment is limited. (See Note 2 above.)

COMMERCE 3FA3  MANAGERIAL FINANCE
This course examines various aspects of the financial management of the firm including the sources and methods of financing, capital structure, dividend policy, leasing, mergers and acquisitions, working capital management, effects of taxation on financial decisions and international aspects of finance. Prerequisite: COMMERCE 2FA3 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 3FB3  SECURITIES ANALYSIS
This course is concerned with the analysis of marketable securities, especially common stocks. Topics include: the institutional characteristics and operation of financial markets, securities analysis and valuation, investment characteristics and strategies to increase return. Prerequisite: COMMERCE 2FA3 or ECON 2103; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3FC3  INTERNATIONAL FINANCE
This course provides a framework for examining financial management decisions in an international setting. Issues examined include: foreign exchange risk management, multinational working capital management, foreign investment analysis and financing foreign operations. Prerequisite: COMMERCE 3FA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3NG  COMMERCE 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. Antirequisite: Successful completion of Level II Commerce.
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: COMMERCE 2MA3, 2QA3 and registration in any Commerce or Engineering and Management program; or COMMERCE 2MA3 and one of STATISTICAL METHODS 3QA3 or 3BB3 or 3BC3 and registration in any Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3MB3 CONSUMER BEHAVIOUR

This course examines why people buy, ways of satisfying consumer needs more effectively, and the creation of communications that will influence consumers.

Prerequisite: COMMERCE 2MA3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 3MC3 APPLIED MARKETING MANAGEMENT

This course builds upon material in COMMERCE 2MA3 but is more applied in nature and covers the 4Ps 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: COMMERCE 2MA3 and registration in any Commerce, Engineering and Management program or four or five level non-Commerce program. Enrolment is limited. (See Note 2 above.)

COMMERCE 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: COMMERCE 2QA3 and registration in any Commerce or Engineering and Management program; or one of STATISTICAL METHODS 3QA3, 3BB3, 3QC3 or 3Yc3 and registration in any Engineering and Management program.

COMMERCE 3OC3 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: COMMERCE 3OA3 and registration in any Commerce program.

Antirequisite: COMMERCE 4QA3, MECH ENG 4C03

COMMERCE 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: Credit or registration in COMMERCE 3AC3 or 3AA3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AC3 FINANCIAL ACCOUNTING IV

An advanced accounting course regarding 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.

Prerequisite: Credit or registration in COMMERCE 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AD3 INTRODUCTION TO AUDITING

An examination of the attest function in accounting including ethical, legal, and statutory influences in the development of auditing standards. Control structure and audit evidence will be examined.

Prerequisite: COMMERCE 3AS3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4AE3 ACCOUNTING INFORMATION SYSTEMS

This course emphasizes the understanding of the roles of accounting information and technology in managerial decision-making, operational support, stewardship, and organizational competitiveness. Applications of concepts will be emphasized.

Prerequisite: COMMERCE 3AS3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 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 COMMERCE 3AC3 or 4AB3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 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.egroote.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programs Office, MGD 104. COMMERCE 4AX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 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.)

COMMERCE 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: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 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 COMMERCE 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.)

COMMERCE 4BD3 SETTLEMENT OF INDUSTRIAL DISPUTES

The nature and the role of industrial conflict as well as the techniques which have been developed to control the incidence of conflict in union-management situations.

Prerequisite: One of COMMERCE 3BC3, LABR ST 2A03 or 2A06; and registration in any Commerce, Engineering and Management or Labour Studies program. COMMERCE 4BC3 is recommended. (B.Com. students - see Note 6 above.)

COMMERCE 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: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4BF3 LABOUR LAW AND POLICY

An analysis of the concepts and fundamentals of Canadian labour law and analysis of Canadian labour policy.

Prerequisite: COMMERCE 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 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 4BI3 TRAINING AND DEVELOPMENT

This course provides a framework for establishing, revising and examining training programs in organizations. Topics include: needs assessment, development of training objectives, planning and delivery of instruction, learning principles and evaluation of training.

Prerequisite: COMMERCE 3BB3 or 3BC3; and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
COMMERCE 4B J 3 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 4B K 3 THE MANAGEMENT OF TECHNOLOGY
An introduction to the innovative management of technology including the integration of the firm and technology strategy, external sourcing of technology and the internationalization of technology management.
Prerequisite: COMMERCE 2B A 3 registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4B X 3, if taken in January 1998 or 1999.

COMMERCE 4B L 3 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT
This course enhances students' knowledge on managing occupational health and safety, teaches research skills, and assists students in developing strategies for creating healthy workplaces.
Prerequisite: COMMERCE 3B C 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4B X 3, if the topic was Occupational Health and Safety (2004-2006).

COMMERCE 4B M 3 HUMAN RESOURCE PLANNING
This course provides an understanding of the essential elements of Human Resource Planning (HRP) processes in organizations. Students will acquire knowledge in analyzing, assessing and programming for human resource requirements of the organizational business plans and strategies.
Prerequisite: COMMERCE 3B C 3 and registration in any Commerce or Engineering and Management program.
Not open to students with credit in COMMERCE 4B X 3, if the topic was Strategic Human Resource Planning (2004-2005 and 2005-2006).

COMMERCE 4B X 3 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.degrootm.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programs Office, MGD 104. COMMERCE 4B X 3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4F A 3 APPLIED CORPORATE FINANCE
This course examines the application of financial theory to a variety of problems in corporate finance. The appropriate use of valuation principles and techniques, and the design of corporate strategies intended to create shareholder wealth, are considered.
Prerequisite: COMMERCE 3F A 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4F D 3 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 3F A 3 registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4F E 3 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 3F A 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4F F 3 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 3F A 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Antirequisite: COMMERCE 4F C 3

COMMERCE 4F G 3 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 3F A 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Antirequisite: COMMERCE 4F C 3

COMMERCE 4F H 3 MERGERS, ACQUISITIONS AND CORPORATE CONTROL
This course examines the process by which mergers and other types of corporate control transactions take place, and the role of restructuring shifts in resource allocation by corporations.
Prerequisite: COMMERCE 3F A 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4F J 3 TRADING IN FINANCIAL MARKETS
This course provides an understanding of the essential elements of trading financial securities - fixed income, equities, futures and options - focusing on trading strategies based on market analysis and risk measurement.
Prerequisite: COMMERCE 3F A 3 with a grade of at least B+; and registration in Honours Commerce or any Engineering and Management program. Enrollment is limited.

COMMERCE 4F K 3 FIXED INCOME ANALYSIS
This course provides an advanced treatment of investments in the field of fixed income analysis and upon making of individuals. These decisions include investment, retirement planning, debt and credit management, renting versus buying a home, insurance and risk management and personal income tax planning and strategies.
Prerequisite: COMMERCE 3F A 3 registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4F L 3 PERSONAL FINANCIAL MANAGEMENT
This course covers various topics that are relevant to the financial decision making of individuals. These decisions include investment, retirement planning, debt and credit management, renting versus buying a home, insurance and risk management and personal income tax planning and strategies.
Prerequisite: COMMERCE 3F A 3 registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in COMMERCE 4FX3, if the topic was Personal Financial Management (2004-2005 and 2005-2006).

COMMERCE 4F X 3 SPECIAL TOPICS IN FINANCE
Various topics in Finance are considered. They will vary depending upon recent developments in the field and upon the research interests of the instructor. The topics to be included are announced at the time of the course offering.
Prerequisite: Announced at time of offering.
For Information on course offerings, please refer to the School of Business web site at http://www.degrooto.mcmaster.ca/programs/commerce/courses.html or contact the Academic Programs Office, MGD 104. COMMERCE 4F X 3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4M C 3 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 3M C 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4M D 3 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 3M C 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)

COMMERCE 4M E 3 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 3M C 3 and registration in any Commerce or Engineering and Management program. (B.Com. students - see Note 6 above.)
Not open to students with credit in 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 mix. It will cover several areas relating to the institution of retailing, 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.)

COMMERCE 4PA3 BUSINESS POLICY: STRATEGIC MANAGEMENT
As the capstone to the program, this course is designed to unify the student's learning experience by exploring the formulation and implementation of corporate strategy.
Prerequisite: COMMERCE 3MC3 and registration in Level IV of a Commerce program or Level V of an Engineering and Management program.

COMMERCE 4QA3 OPERATIONS MODELLING AND ANALYSIS
A course that looks at productions and operations management as practiced in engineering and manufacturing industries and the services sector.
Prerequisite: One of STATS 2MA3, 3J04, 3N03, 3Y03 or equivalent; and registration in any Engineering and Management or Mechanical Engineering program.
Antirequisite: COMMERCE 3QC3

COMMERCE 4QB3 ANALYSIS OF PRODUCTION/OPERATIONS PROBLEMS
An examination of analytical approaches to problems in the field of production/operations. The course will provide in-depth coverage of a limited number of topics. Enterprise resource planning system SAP may be used to highlight some of the concepts covered in the course.
Prerequisite: One of COMMERCE 3QC3, 4QA3 or MECH ENG 4C03; and registration in any Commerce or Engineering and Management program.
(Commerce. students - see Note 6 above.)

COMMERCE 4QC3 MANAGERIAL DECISION MODELLING WITH SPREADSHEETS
This application-oriented course will cover several optimization modelling techniques that can be used to support managers and engineers in a wide variety of decision making situations in finance, marketing and production.
Prerequisite: COMMERCE 3QA3 and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)

COMMERCE 4QD3 DATABASE 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: COMMERCE 2QB3 and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)

COMMERCE 4QE3 TELECOMMUNICATION 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: COMMERCE 2QB3 and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)

Not open to students with credit in COMMERCE 4QX3, if the topic was Specific Topics in Business Data Communication (if taken in September 1997).

COMMERCE 4QF3 PROJECT MANAGEMENT
Topics include: project selection, project organization structures, life cycles, planning, estimation, budgeting, resource allocation, contracting, project management software, reporting and controlling issues and conflict management.
Prerequisite: COMMERCE 2BA3, 3QA3 and registration in a Commerce program; or registration in an Engineering and Management program. (Commerce. students - see Note 6 above.)

COMMERCE 4QH3 MANAGEMENT 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: COMMERCE 2OB3 and registration in any Commerce program; or registration in any Engineering and Management program. (Commerce. students - see Note 6 above.)

COMMERCE 4QX3 SPECIAL TOPICS IN MANAGEMENT SCIENCE AND 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.degrootedmcmaster.ca/programs/commerces/courses.html or contact the Academic Programs Office, MG0 104. COMMERCE 4QX3 may be repeated, if on a different topic, to a total of six units.

COMMERCE 4SA3 INTERNATIONAL BUSINESS
The key features of, and trends in, the global business environment. The implications of cultural and political differences. Comparative operational practices and multinational management.
Prerequisite: COMMERCE 3MC3 and registration in Level IV of a Commerce program or Level V of any Engineering and Management program
Antirequisite: COMMERCE 4PE3

COMMERCE 4SB3 INTRODUCTION TO CANADIAN TAXATION
The principles of Canadian federal income taxation are examined in detail, emphasizing the application of both statute and common law to individuals' and businesses' situations.
Prerequisite: Credit or registration in COMMERCE 3AB3 and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)
Antirequisite: COMMERCE 4PB3

COMMERCE 4SC3 ADVANCED CANADIAN TAXATION
This course continues the study of Canadian federal income taxation with an in-depth coverage of selected provisions of the Income Tax Act pertaining to business activities, particularly the activities of corporations.
Prerequisite: COMMERCE 4SB3 or 4PB3; and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)
Antirequisite: COMMERCE 4PC3

COMMERCE 4SD3 COMMERCIAL LAW
This course emphasizes those areas of law which are most relevant to business activity. Particular attention is given to the law relating to contracts and business organizations. Other areas of study include: sources of law, the judicial process, real and personal property, torts, agency, credit and negotiable instruments.
Prerequisite: Registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)
Antirequisite: COMMERCE 4PD3

COMMERCE 4SE3 ENTREPRENEURSHIP
The problems and experiences encountered in starting and developing new enterprises will be studied. A cornerstone of the course is the development of a detailed business plan for a local entrepreneur.
Prerequisite: COMMERCE 3FA3; and COMMERCE 3MA3 or 3MC3; and registration in any Commerce or Engineering and Management program. (Commerce. students - see Note 6 above.)

COMMERCE 4SF3 JAPANESE BUSINESS
An introduction to Japan's business system. The approach is integrative, as the course examines Japan's economic history, culture, politics, industrial policy, management practices, advertising and doing business with Japan.
Prerequisite: Registration in any Commerce, Japanese Studies or Engineering and Management program. (Commerce. students - see Note 6 above.)
Cross-list: JAPAN ST 4S03
COMMERCe 45Y3 INDEPENDENT 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 8 above.)

COURSES FOR PROFESSIONAL DESIGNATION...

COMMERCe 4AG3 ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AH3 ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AB ADVANCED AUDITING
This course introduces the student to the field of EDP auditing through lectures, readings and hands-on experience with EDP audit software. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AC3 ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AC4 ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AD3 ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AE3 ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AF3 ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AH1 ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AG1 ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AH2 ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AI ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AJ ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AK ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AL ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.

COMMERCe 4AM ADVANCED ACCOUNTING TOPICS
This course extends 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: COMMERCE 4AC3, 4AF3; 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.

COMMERCe 4AN ADVANCED 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 developed in earlier courses as well as on the technical skills and breadth of knowledge obtained in earlier auditing courses. Prerequisite: COMMERCE 4AC3, 4AD3; 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.
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 PERFORMATIVITV
An introduction to the study of performative ways of communication as such as storytelling, gesture, movement, dress. Students will learn to analyze the relationship of 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 cultural identities performed or constructed in complex, historical and social contexts. Students will discover 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 2I03 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 of a program in Communication Studies
Cross-list: ART HIST 2I03
This course is administered by the School of the Arts.
CMST 2J03 POLITICAL ECONOMY OF THE MEDIA
A comparative examination of changing patterns of ownership and control of the mass media in light of globalization, technological changes, government policy, market restructuring, and corporate consolidation.
Three lectures; one term
Prerequisite: Registration in Level II or above of a program in Communication Studies
CMST 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 and tutorials); one term
Prerequisite: Registration in a program in Communication Studies or Sociology
Cross-list: SOCIOI 2L03
This course is administered by the Department of Sociology.
Enrolment is limited.
CMST 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, Culture Studies and Critical Theory or English
Cross-list: COMP LIT 2M03, CSCT 2M03, ENGLISH 2M03
This course is administered by the Department of English and Cultural Studies.
CMST 2M23 MODERN COUNTERCULTURES
An exploration of a variety of cultural forms (e.g., literature, art, photography, film, music) produced by avant-gardes and counter-cultural groups from the mid-19th century to the present. Areas of investigation may include surrealism, futurism, the beats, the sixtys, situationism, and punk.
Three hours; one term
Prerequisite: Registration in a program in Communication Studies, Comparative Literature, Culture Studies and Critical Theory or English
Cross-list: COMP LIT 2M23, CSCT 2M23, ENGLISH 2M23
This course is administered by the Department of English and Cultural Studies.
CMST 2N03 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 of a program in Communication Studies
Cross-list: ART HIST 2N03, MMEDIA 2N03
CMST 2O03 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 of a program in Communication Studies
Cross-list: ART HIST 2O03, PHIL 2O03
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, 1AA3 (or 1A06); or THTR&FLM 1A03, 1B03
Cross-list: COMP LIT 2P03, THTR&FLM 2P03
Antirequisite: DRAMA 2P03
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 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: MUSIC 2R03
This course is administered by the School of the Arts.
CMST 2R33 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: Registration in Level II or above
Cross-list: MUSIC 2R33
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 of a program in Theatre and Film Studies or Communication Studies (Culture Studies or Performance Studies Streams)
Cross-list: THTR&FLM 2S03
Antirequisite: DRAMA 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 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: LINGUIST 2A03
Antirequisite: ANTHROP 2A03

This course is administered by the Department of Linguistics and Languages.

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 of a program in Theatre and Film Studies or Communication Studies (Cultural Studies Stream)
Cross-list: ART HIST 2G03; THTR&FLM 2F03
Antirequisite: CMST 2X06

This course is administered by the Theatre & Film program. Enrollment is limited to 150 students.

CMST 2Y03 THE ANCIENT WORLD IN FILM

The emphasis is on myth (e.g. Amazon, Hercules and history (slaves revolt, banquets, decadent emperors) studied via Greek and Latin accounts (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 2Z03

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 0.5 and permission of the Committee of Instruction.

CMST 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 modalities such as film, television, advertising, et cetera.

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, 2103, THTR&FLM 1B03 or WOMEN ST 1A06 (or 1A03 and 1A03)
Cross-list: THTR&FLM 3P03; WOMEN ST 3BB3

Not open to students with credit or registration in WOMEN ST 3BB3 if taken in 2001-2002.

This course is administered by Women’s Studies.

CMST 3C03 MEDIA AND SOCIAL ISSUES

An analysis of relationships between mass media and modern society. Topics may include ideology and agenda-setting in the media, representations of social problems (e.g., homelessness, violence), moral panics, media scandals, or public ceremonies.

Three lectures; one term
Prerequisite: Registration in Level III or above of a Communication Studies program or in Sociology program
Cross-list: SOCIO 3C03
Enrolment is limited.

This course is administered by the Department of Sociology.

CMST 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, 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, CSSCT 3CC3, ENGLISH 3C03, THTR&FLM 3P03

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

A study of some theoretical issues concerning the identification, analysis and evaluation of arguments.

Three hours (lectures and discussion); one term
Prerequisite: One of ARTS&SCI 1B06, CMST 2W03, HUMAN 2C03 or PHILOS 2B03; 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 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 Linguistics and Languages
Cross-list: LINGUIST 3X03
Antirequisite: ANTHROP 3X03

This course is administered by the Department of Linguistics and Languages.
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 groups); one term
Prerequisite: Registration in Level III or above of a program in Communication Studies.

CMST 3I03 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 AGENCIES 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: 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 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 2D03, 3A03, CMST 2G03, 2P03, 2S03, THTR&FLM 2G03, 2P03, 2S03.
Cross-list: ART HIST 3L03, THTR&FLM 3I03.
Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCE, if taken in 2001-2002, or credit in THTR&FLM 2E03.
The course is offered in alternate years.
This course is administered by Theatre & Film.

CMST 3M03 THEATRE AND COMMUNITY DEVELOPMENT
Students will explore different approaches to community-based theatre generated in a range of social and cultural milieus and will analyze 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.
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3N03 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 2Z03 or POL SCI 2Z03; and registration in Level III or above.
Cross-list: POL SCI 3M03.
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 3O03 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 or Peace Studies.
Cross-list: PEACE ST 3N03.
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 3R03 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.
Cross-list: THTR&FLM 3R03.
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.
Cross-list: COMP Lit 3V03, THTR&FLM 3Q03.
Offered on an irregular rotation basis.
This course is administered by the School of the Arts.

CMST 3U03 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: SOTA 3D03.
This course is administered by the School of the Arts.

CMST 3V03 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: CMST 2S03 or 2X03.
Cross-list: THTR&FLM 3N03.
Offered in alternate years.
This course is administered by the School of the Arts.

CMST 3W03 WOMEN IN A MULTICULTURAL SOCIETY
An interdisciplinary exploration of the experiences of women in different sub-cultures 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 (or 1A03 and 1A03) is recommended.
Cross-list: WOMEN ST 3D03.
This course is administered by Women’s Studies.
CMST 3XX3 | 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.
Two lectures, plus one weekly screening; one term
Prerequisite: CMST 2XX3
Cross-list: ART HIST 3XX3, 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: PHIL 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 projects, in consultation with a faculty advisor. Includes 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 (Performance Studies or Cultural Studies Stream)
Enrolment is limited.

CMST 4CC3 | 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 (Performance Studies or Cultural Studies Stream)
Students may take only one of CMST 4CC3, 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 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 (Mass Communication Stream)
Enrolment is limited.

CMST 4FF3 | STUDIES IN FILM
Senior seminar; An examination of selected films.
Seminar (two hours); one term
Prerequisite: CMST 2GG3 and registration in Level III or IV of a program in Communication Studies. CMST 2X03 is recommended.
Cross-list: THTR&FLM 4E03
Enrolment is limited. Priority will be given first to students registered in Level III or 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
The 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, 1A04 and six units of Linguistics courses above Level I; or permission of the Department of Linguistics and Languages
Cross-list: LINGUIST 4E03
Antirequisite: ANTHROP 4GL3
This course is administered by the Department of Linguistics and Languages.

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, 1A04 and six units of Linguistics courses above Level I; or permission of the Department of Linguistics and Languages
Cross-list: LINGUIST 4D03
Offered in alternate years.

This course is administered by the Department of Linguistics and Languages.

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 Counsellor for Communication Studies
Cross-list: LINGUIST 4L23
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 2BB3 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 placed on gate-keeping, agenda-setting and headline transformation.
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 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  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, 1A3 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 Linguistics and Languages.

CMST 4503  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, 1A3 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 Linguistics and Languages.

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 3X03
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 Linguistics and Languages.

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 1B03, 1S03, 1T00
Enrollment 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 1BE3
Enrollment is limited.

MMEDIA 1BE3  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
Prerequisite: Registration in the Software Engineering and Game Design program
Antirequisite: MMEDIA 1B03
Enrollment 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
Prerequisite: Registration in the Combined Honours in Multimedia program
Enrollment 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
Prerequisite: MMEDIA 1A03 and registration in the Software Engineering and Game Design program
Antirequisite: MMEDIA 2BE3
Enrollment 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
Prerequisite: MMEDIA 1BE3 and registration in the Software Engineering and Game Design program
Antirequisite: MMEDIA 2B03
Enrollment is limited.

MMEDIA 2C03  COMPUTER ARCHITECTURE FOR MULTIMEDIA
This course covers fundamentals of microcomputers, operating systems, and multimedia peripherals with emphasis on: diagnostic knowledge of hardware; operating systems for multimedia development; media acquisition hardware; standards for connecting media devices; computing history.
One lecture (two hours), one tutorial; one term
Prerequisite: Registration in the Combined Honours in Multimedia program
Enrollment 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 stylesheets and programs to transform the data within the context of an original project.
One lecture (two hours), one tutorial; one term
Prerequisite: One of MMEDIA 1A03, 1B03, 1C03, 2J03 or registration in the Honours Linguistic Cognitive Science program
Enrollment is limited.

MMEDIA 2F03  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
Prerequisite: MMEDIA 1A03 or 1B03
Enrollment is limited.

MMEDIA 2G03  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. Students will be introduced to desktop publishing.
Three lectures; one term
Prerequisite: Registration in Level II or above of a program in Art History, Communication Studies or Multimedia. Prior completion of ART HIST 1A03 and 1A3 is recommended.
Cross-list: ART HIST 2F03, CMST 2N03

MMEDIA 2J03  INTRODUCTION TO MIDI AND COMPUTER MUSIC
Basic electroacoustic theory; introduction to digital music composition techniques, MIDI applications; computer music notation; aesthetics of music composition. Students produce at least one original work. Experience with computer music composition not 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: MUSIC 2G03
Enrollment 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
Prerequisite: Registration in the Combined Honours in Multimedia program
Antirequisite: MMEDIA 2HE3
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
Three hours; one term
Prerequisite: Registration in Level III or IV of the Combined Honours in Multimedia program

MMEDIA 3C03  ADVANCED MEDI 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 3Z03
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 3K03.

MMEDIA 3E03  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 or the Honours Linguistic Cognitive Science 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 current examples. Readings may cover theories and techniques of animation, computer architecture, 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 critical 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.
One lecture (two hours), one lab (one hour every week); one term
Prerequisite: MMEDIA 2D03 or 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 IV 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.)
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, 2006**

**Director**
John C. Stout

**Professors**
Joseph Adamson/B.A. (Trent), M.A., Ph.D. (Toronto)
Nasrin Rahimpour/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; Comparative Literature)
Iris Bruce (Linguistics and Languages)
Nina Kolesnikoff (Linguistics and Languages)
John C. Stout (French)
Jean Wilson (Comparative Literature; Linguistics and Languages)

**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**

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This course will offer a grounding in reading literary texts from a range of contemporary critical approaches. Three hours; one term.

**Prerequisite:** Registration in Level II or above.

This course is administered by the Department of English and Cultural Studies.

**COMP LIT 2A03**
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 2A03A**
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 2B03**
A comparative study of key motifs in selected North and South American literary traditions which may include magic realism, the Gothic, poetry, fantasy and metatext. Three lectures; one term.

**Prerequisite:** Registration in Level II or above.

**COMP LIT 2C03**
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 2D03**
A 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 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 2D06, 2D07

This course is administered by the School of the Arts.

**COMP LIT 2E03**
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 English Studies.

**Cross-list:** CMST 2M03, CSCT 2M03, ENGLISH 2M03

This course is administered by the Department of English and Cultural Studies.

**COMP LIT 2E03E**
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.

**Prerequisite:** Registration in a program in Communication Studies, Comparative Literature, Cultural Studies and Critical Theory or English Studies.

**Cross-list:** CMST 2M03, CSCT 2M03, ENGLISH 2M03

This course is administered by the Department of English and Cultural Studies.

**COMP LIT 2F03**
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 2G03**
An examination of narratives from the Hebrew Bible, Intertextual 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 2V03

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 3H03
This course is administered by the Department of Classics.

COMP LIT 2J03  TWENTIETH-CENTURY GERMAN FILM AND FICTION
A study of literary and cinematic representations and appropriations of German culture from the Weimar Republic to the present.
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  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 or Women's Studies
Cross-list: CSCT 3A03, ENGLISH 3A03, WOMEN ST 3H03
This course is administered by the Department of English and Cultural Studies.

COMP LIT 3B03  NORTHPROP 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

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 3GG3  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 3H13  WORLD POETRY
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 II, 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, Saïre. 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 Sailhood, 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 3J13  THE FAIRY TALE
An examination of fairy tales from a variety of cultures and historical periods. Students will also explore theories of the folk tale 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 Fairy Tale.

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

COMP LIT 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, 2X06, DRAMA 2X06, THTR&FLM 2F03
Cross-list: CMST 3C03, CSCT 3CC3, ENGLISH 3C03, THTR&FLM 3F03
This course is administered by the Department of English and Cultural Studies.

COMP LIT 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.
COMP LIT 3MM3  THE LITERATURE OF ISRAEL AND PALESTINE
Through the study of relevant literature and film, with a focus on contempo-
rary 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
Cross-list: PEACE ST 3MM3

COMP LIT 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.

COMP LIT 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 ST 3NN3
Offered in alternate years.

COMP LIT 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.

COMP LIT 3Q03  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 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.

COMP LIT 3R06  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 Level III or IV of a Comparative Literature program
Cross-list: CSCT 3R06, ENGLISH 3R06, PEACE ST 3E06
This course is administered by the Department of English and Cultural Studies.

COMP LIT 3RR3  CRITICAL RACE STUDIES
This course examines contemporary debates in critical race theory in an
attempt to critically deconstruct 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 or Women's Studies
Cross-list: CSCT 3A03, ENGLISH 3A03, PEACE ST 3A03, WOMEN ST 3H03
This course is administered by the Department of English and Cultural Studies.

COMP LIT 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

COMP LIT 3T03  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: COMP LIT 2H03 or six units of Classics
Cross-list: CLASSICS 3T03
This course is administered by the Department of Classics.

COMP LIT 3V03  TOPICS IN NATIONAL CINEMAS I
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;
and registration in Level III or IV of a Comparative Literature program
Cross-list: CMST 3T03, THTR&FLM 3T03 (formerly DRAMA 3T03)
Offered on an irregular rotation basis.
This course is administered by the Department of the Arts.

COMP LIT 3W03  INTERNATIONAL WOMEN WRITERS
A critical analysis of a selection of literary works by women authors from
across the globe, with an emphasis on theories of gender and sexuality.
Two hours; one term
Prerequisite: Registration in Level II or above
Cross-list: WOMEN ST 3W03

COMP LIT 3Y03  CLASSICAL LITERATURE AND BEYOND
A study of representative texts from the Greek and Roman literary tradi-
tions 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 or the Chair of Classics
Cross-list: CLASSICS 3Y03
This course is administered by the Department of Classics.

COMP LIT 4A03  EUROPEAN ROMANTICISM
A study of selected literary texts of European Romanticism, including wom-
men'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 4A03

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 topic 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
emphasis on 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 Linguistics and Languages.

COMP LIT 4J03  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, THTR&FLM 4J03
Offered on an irregular rotation basis.

This course is administered by the Department of Linguistics and Languages.

COMP LIT 4T03  SPECIAL TOPICS

Previous topics include: Lesbian and Gay Literature, Postmodern Fiction. Consult the Office of Interdisciplinary Studies concerning topic 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.

COMP SCIENCE

(SEE ELECTRICAL AND COMPUTER ENGINEERING)

COMPUTER SCIENCE

(SEE COMPUTING AND SOFTWARE)

WEB ADDRESS: http://www.cos.mcmaster.ca
Information Technology Building, Room 202
Ext. 24614

Faculty as of January 15, 2006

Acting Chair

Martin von Mohrenschildt

Professors

Ivan Bruna/Dipl. Ing. (CVUT, Prague), RNDr (Charles, Prague), Ph.D. (CVUT, Prague)


Franziska Frankel/M.Sc., R.N.R. (Charles, Prague), Ph.D. (Toronto)

Ryszard Janicki/M.Sc. (Warsaw), Ph.D., D.Hab. (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.

Sanchez 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 Trefyak/M.Sc., Ph.D. (Loránd Eötvös)

Jeffery I. Zucker/B.Sc. (Wilfrid Laurier), Ph.D. (Stanford)

Associate Professors

Antoine Deza/Ph.D. (Ecole Nationale des Ponts et Chaussées, Paris), Ph.D. (Tokyo Institute of Technology)

Douglas G. Down/B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Illinois-Urbana)

Wolfram Kahl/M.Sc. (Oxford), Dr. rer. nat. (University of the German Armed Forces, Munich)

COMP SCI 1A03  INTRODUCTION TO PROGRAMMING

Introduction to disciplined programming; programming environments; debugging; imperative programming constructs; values and types; libraries; file input-output. Computer Science concepts are illustrated.

Three lectures, one tutorial; one term
Prerequisite: Credit or registration in one of MATH 1A03, 1B03, 1C03, ARTS&SCI 1D06. COMP SCI 1A03 is recommended

COMP SCI 1M03  INTRODUCTION TO COMPUTER AND SOFTWARE USE FOR BUSINESS

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
Prerequisite: Registration in the School of Business and one Grade 12 U or M Mathematics credit; or one of MATH 1K03, 1K04, STATS 1A03, 1A13, 1B03, ARTS&SCI 1D06. COMP SCI 1M03 is recommended

COMP SCI 1M13  COMPUTER BASED PROBLEM SOLVING

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
Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U

COMP SCI 1S03  COMPUTING FUNDAMENTALS

Overview of the computer as a tool for problem solving with emphasis on design of sequential programs for problem solving. Topics covered include: organization of microcomputers (hardware and operating systems); data representation; communications and networks; the Internet and World Wide Web; application packages.

Three lectures, one tutorial; one term
Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U

Not open to students with credit or registration in COMP SCI 1A03, 1M03, 1C03, 1T03.
COMP SCI 1TA3 ELEMENTARY COMPUTING AND COMPUTER USE
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
Antirequisite: COMP SCI 1BA3, MMEDIA 1A03
Not open to students with credit or registration in Business I, COMP SCI 1MA3, 1MC3, 1SA3 or HUMAN 2E03.

COMP SCI 2CA3 COMPUTER ARCHITECTURE AND ORGANIZATION
Computer design: RISC/CISC, instruction sets, memory hierarchy; parallelism: instruction level, software level, multi-threading; storage systems; RAID levels, errors/failures, networks, clusters.
Three lectures; second term
Prerequisite: COMP SCI 2MF3
Antirequisite: COMP SCI 3MG3, SFWR ENG 3GA3

COMP SCI 2CS3 COMMUNICATION SKILLS
Oral and written presentation skills; document types and structure; software documentation for the user; formulating and presenting proposals.
Three lectures; first term
Prerequisite: Registration in Level II or above
Antirequisite: SFWR ENG 3I03

COMP SCI 2ME3 SOFTWARE DESIGN FUNDAMENTALS
Software development models; modularization; information hiding; specification and abstraction; software requirements; software maintenance; metrics; testing theory and strategies; documentation.
Three lectures; second term
Prerequisite: COMP SCI 2SC3
Antirequisite: SFWR ENG 2A4A

COMP SCI 2MF3 DIGITAL SYSTEMS AND SYSTEMS PROGRAMMING
Basic computer technology: gates, registers, memory; machine programming; arithmetic: representation, arithmetic/logic unit, floating point systems, system component details: CPU, memory, I/O devices; pipelining.
Three lectures; one tutorial; first term
Prerequisite: COMP SCI 1MD3
Antirequisite: COMP ENG 2D14, ELEC ENG 2D14, SFWR ENG 2D3, SFWR ENG 3F03

COMP SCI 2MJ3 THEORY OF COMPUTATION
Finite state machines, regular languages, regular expressions, applications of regular languages, grammars, context-free languages, models of computation, introduction to complexity theory.
Three lectures; two (hours); first term
Prerequisite: COMP SCI 1FG3

COMP SCI 2003 OBJECT ORIENTED PROGRAMMING
The object oriented approach to software: classes, objects, fields, methods; modelling and problem decomposition techniques using classes; concurrency, threads, synchronization, communication; inheritance; interface documentation; design documentation.
Three lectures; one tutorial; second term
Prerequisite: COMP SCI 2SC3

COMP SCI 2SC3 IMPERATIVE PROGRAMMING AND BASIC DATA STRUCTURES
Disciplined programming in the C language; problem decomposition; iteration and recursion; dynamic memory allocation; design, use and implementation of elementary fixed-size and dynamic data structures.
Three lectures; one tutorial; first term
Prerequisite: COMP SCI 1MD3
Antirequisite: COMP SCI 2S14, ELEC ENG 2S14, SFWR ENG 2S03

COMP SCI 3CB3 SYSTEM ARCHITECTURE FOR INTERACTIVE APPLICATIONS
A second course in computer architecture with special emphasis on the implementation of virtual-machine language processors (e.g. Forth, Java) and their use for implementing server-client software architecture.
Three lectures; one term
Prerequisite: COMP SCI 2MF3; and registration in Level III or above of a Computer Science program or in Level III of B.Sc. Mathematical Science

COMP SCI 3CN3 COMPUTER NETWORKS AND SECURITY
Networked computer systems: physical media, TCP/IP protocols, switching methods; net layering and components: data link, network, transport; application: wireless, ubiquitous; secure systems: protocols, perimeter defences, access control issues, retrofitting.
Three lectures; one lab; second term
Prerequisite: COMP SCI 3IS3, 3MH3
Antirequisite: SFWR ENG 4C03

COMP SCI 3DA3 DATA STRUCTURES AND ALGORITHMS
Abstract data structures; implementation of dense and sparse structures; hashing; sorting; dynamic programming; greedy algorithms; graph algorithms; complexity; organization of libraries.
Three lectures; first term
Prerequisite: Credit or registration in COMP SCI 2SC3
Antirequisite: COMP ENG 2S14, COMP SCI 2MD3, ELEC ENG 2S14, SFWR ENG 2C03

COMP SCI 3OB3 DATA BASES
Data models, relational databases; SQL; integrity; security; object-oriented and other databases; data storage; query processing; transactions; concurrency control; recovery; distributed and parallel database architectures.
Three lectures; second term
Prerequisite: Credit or registration in COMP SCI 2CA3 or 3MH3
Antirequisite: SFWR ENG 2B03, 2B04, 3K04

COMP SCI 3EA3 SOFTWARE SPECIFICATIONS AND CORRECTNESS (EFFECTIVE 2007-2008)
Formal specifications in software development; formal methods; functional and relational specifications; completeness and consistency of specifications; verification; validation; presentation of information; tool supported verification.
Three lectures; first term
Prerequisite: COMP SCI 2ME3
Antirequisite: SFWR ENG 3A04

COMP SCI 3I03 SYMBOLIC PROCESSING AND LOGIC PROGRAMMING
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
Prerequisite: COMP SCI 2MD3

COMP SCI 3IS3 INFORMATION SECURITY
Basic principles of information security; threats and defences; cryptography; introduction to network security and security management.
Three lectures; first term
Prerequisite: Credit or registration in COMP SCI 2MJ3

COMP SCI 3MG3 COMPUTER SYSTEM ARCHITECTURE
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
Prerequisite: COMP SCI 2MD3, 2MF3
Antirequisite: COMP SCI 2CA3, SFWR ENG 3G03; 3GA3

COMP SCI 3MH3 PRINCIPLES OF OPERATING SYSTEMS (2006-2007 ONLY)
Concepts of operating systems; process coordination, memory management, file systems; introduction to distributed systems and computer networks. Involves group projects.
Three lectures; one term
Prerequisite: COMP SCI 3MG3
Antirequisite: COMP SCI 3SH3, 4SH3
COMP SCI 3M3 OPERATING SYSTEMS (EFFECTIVE 2007-2008)
Processes and threads, synchronization and communication; scheduling, memory management; file systems; resource protection; structure of operating systems; distributed file systems; networking.
Three lectures; first term
Prerequisite: COMP SCI 2CA3
Antirequisite: COMP SCI 4SH3, 4SH4, SFWR ENG 3BB4, 3SH3

COMP SCI 3M3 ORGANIZATION OF PROGRAMMING LANGUAGES (2006-2007 ONLY)
A comparative study of programming languages, emphasizing functional languages. Introduction to formal methods of language definition.
Three lectures; one term
Prerequisite: COMP SCI 2MD3, 2M3J

COMP SCI 3M3 PRINCIPLES OF PROGRAMMING LANGUAGES (EFFECTIVE 2007-2008)
Design space of programming languages: abstraction and modularization concepts and mechanisms; programming in non-procedural (functional and logic) paradigms; introduction to programming language semantics.
Three lectures; second term
Prerequisite: COMP SCI 2003, 2SC3

COMP SCI 3E3 DESIGN OF VISUAL PROGRAMMING ENVIRONMENTS
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
Prerequisite: COMP SCI 2SC3
Corequisite: COMP SCI 2M3D
Not offered in 2006-2007

COMP SCI 3M3 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 2D3 or ELEC ENG 2D4; and one of COMP ENG 3SL4, SFWR ENG 3K04, 3L04, 3M04
Cross-list: SFWR ENG 3SH3
Antirequisite: COMP ENG 4SN4, COMP SCI 3M3H, 4SH3

COMP SCI 3S3 SOFTWARE REQUIREMENTS
Requirements models; requirements gathering techniques; functional and non-functional requirements; requirements validation; requirements management; legal and ethical issues.
Three lectures; first term
Prerequisite: COMP SCI 3EA3
Antirequisite: SFWR ENG 3R03
First offered in 2007-2008

COMP SCI 3T3 AUTOMATA, COMPUTATION AND LANGUAGES
Three lectures; one term
Prerequisite: COMP SCI 2MD3, 2M3J; or permission of the instructor
Antirequisite: SFWR ENG 3R03
Last offered in 2006-2007

COMP SCI 4A3 SOFTWARE ARCHITECTURE
Software architecture concepts: architectural styles; design patterns, components, libraries, configurations; modeling languages; software re-engineering.
Three lectures; second term
Prerequisite: Credit or registration in COMP SCI 3S3R3
First offered in 2006-2007

COMP SCI 4C3 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 3M3H or SFWR ENG 3BB4

COMP SCI 4C3 DISTRIBUTED SYSTEM ARCHITECTURES (2006-2008 ONLY)
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 3M3H or SFWR ENG 3G03; or credit or registration in either PHYSICS 4D06 or both PHYSICS 4D0A and 4D3B

COMP SCI 4C3 DISTRIBUTED COMPUTER SYSTEMS (EFFECTIVE 2008-2009)
Distributed operating systems: deadlock, casual/concurrent events, multi-threading, group communications; distributed computers: multi-processing, multi-computers, middleware, reliability, distributed services; r-tier architecture, WWW systems; special systems: real-time, multimedia aware, grid-computing.
Three lectures, one lab (three hours); first term
Prerequisite: Credit or registration in COMP SCI 3M3H. Completion of COMP SCI 3CN3 is recommended.

COMP SCI 4E3 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: COMP SCI 2MD3
Antirequisite: SFWR ENG 3H03, 4M03

COMP SCI 4H3 HUMAN COMPUTER INTERACTION
Computer-human interface design: principles, types, models, human factors: ergonomics, physiological issues, cognitive engineering, task analysis, hardware, GUI evaluations: usability, surveys, ethnographic, practical examples; data visualization.
Three lectures; first term
Prerequisite: Credit or registration in COMP SCI 3MH3 or SFWR ENG 3BB4
Antirequisite: SFWR ENG 4D03

COMP SCI 4I3 ARTIFICIAL INTELLIGENCE AND KNOWLEDGE-BASED SYSTEMS
AI disciplines: perception, 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 4M3 INTRODUCTION TO SCIENTIFIC COMPUTING (2006-2008 ONLY)
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, data fitting, solving differential equations, and continuous optimization.
Three lectures; one term
Prerequisite: COMP SCI 3MG3, MATH 2A03, 2R03
Antirequisite: SFWR ENG 3X03

COMP SCI 4M3 SCIENTIFIC COMPUTATION (EFFECTIVE 2008-2009)
Number representations and computer arithmetic; linear systems; linear least square; regression; root finding; Minima-Maxima; Interpolation; Integration.
Three lectures; second term
Prerequisite: COMP SCI 2CA3 or 3MG3; and MATH 2A03, 2R03
Antirequisite: SFWR ENG 3X03

COMP SCI 4T3 SYNTAX-BASED TOOLS AND COMPILERS
Lexical analysis, syntax analysis, type checking; syntax-directed translation, attribute grammars; compiler structure; implications of computer architecture; mapping of programming language concepts; code generation and optimization.
Three lectures; second term
Prerequisite: COMP SCI 3M3H or SFWR ENG 3E03

COMP SCI 4T3 RECURSIVE FUNCTION THEORY AND COMPUTABILITY
Recursive and primitive recursive functions, computability, decidability and undecidability, Church-Turing Thesis.
Three lectures; one term
Prerequisite: COMP SCI 3M3J 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 2Q04 or 2R03

COMP SCI 4TE3  CONTINUOUS OPTIMIZATION ALGORITHMS
Fundamental algorithms and duality concepts of continuous optimization. Motivation, applicability, information requirements and computational cost of the algorithms is discussed. Practical problems will illustrate the power of continuous optimization techniques.
Three lectures; one term
Prerequisite: MATH 2R03; and one of MATH 2A03, 2M06 or 2Q04
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. Pre-processing and post-processing.
Three lectures; one term
Prerequisite: SFWR ENG 3H03; or COMP SCI 4EB3 and one of COM- MERC 2Q03, ECON 2B03, STATS 1CC3; or permission of the instructor.

COMP SCI 4WW3  WEB SYSTEMS AND WEB COMPUTING
World wide web as networks: protocols, clients/servers and social issues; programming systems: markups, scripts, styles; platform technologies; WWW services: standard systems, browser-based, security issues, examples.
Three lectures; first term
Prerequisite: Credit or registration in COMP SCI 3M03. Completion of COMP SCI 3G03 is recommended.

COMP SCI 4Z03  DIRECTED READINGS
Directed readings in an area of computer science of interest to the student and the instructor.
Prerequisite: Permission of the Chair of the Department and registration in Level IV of an Honours program in Computer Science. 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.

COMP SCI 4ZP6  CAPSTONE PROJECT
Students, in teams of two to four students, undertake a substantial project in an area of computer science by performing each step of the software life cycle. The lecture component presents an introduction to software management and project management.
Lecture component in Term 1, weekly tutorials; two terms
Prerequisite: Registration in Level IV of Honours Computer Science

SOFTWARE ENGINEERING ...

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 others.

Software Engineering is an 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 2DM3, 2S03
Corequisite: COMP SCI 2ME3, SFWR ENG 2A04

SFWR ENG 2DA3  DIGITAL SYSTEM PRINCIPLES AND LOGIC CO-DESIGN FOR SOFTWARE ENGINEERING
Systematic design procedures; combinatorial circuit design; design of sequential machines; redundancy, binary number representations and arith- metic, organization of large logic circuits. Introduction to logic simulators. Software/hardware co-design.
Three lectures, one lab (three hours every other week); first term
Prerequisite: Registration in a Software Engineering Corequisite: SFWR ENG 2DM3
Antirequisite: COMP ENG 2DM3

SFWR ENG 2DA4  SOFTWARE DESIGN II - LARGE SYSTEM DESIGN
Software design processes, design and architecture of large systems, design for change and expansion; Documentation, inspection; Increment- al 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, 2003
Antirequisite: COMP SCI 35A3 (Effective 2007-2008)

SFWR ENG 2DB4  SOFTWARE DESIGN III - CONCURRENT SYSTEM DESIGN
Processes, threads, concurrency; Synchronization mechanisms, resource management and sharing; Objects and concurrency; Design, architecture and testing of concurrent systems.
Three lectures, one tutorial (two hours); second term
Prerequisite: SFWR ENG 2A04, 2003
Antirequisite: COMP SCI 3M03 (Effective 2007-2008)

SFWR ENG 3DX3  DYNAMIC MODELS AND CONTROL OF PHYSICAL SYSTEMS
Modelling of dynamic continuous physical phenomena in both continuous and discrete time. Control theory, stability analysis and feedback control design. Application of computer control to continuous processes. Data analysis, empirical modelling.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 2X03
Antirequisite: ENGINEER 3L03

SFWR ENG 2003  DATA STRUCTURES AND ALGORITHMS
Data structures: queues, stacks, lists, heaps, 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 2DM3, 2203
Antirequisite: COMP ENG 2S14, COMP SCI 2MD3, 3D03, ELEC ENG 2S14, SFWR ENG 2F03

SFWR ENG 2F03  DISCRETE MATHEMATICS AND LOGIC I
Syntax and semantics of formal languages; propositional logic; proof systems; sets; functions, relations, and algebra; graphs and trees; finite state machines; software engineering applications.
Three lectures, one tutorial (one hour); first term
Prerequisite: MATH 1H03
Antirequisite: SFWR ENG 2E03, 2F03

SFWR ENG 2F14  DISCRETE MATHEMATICS AND LOGIC II
First-order logic; proof by induction; definition by recursion; models of computation; computational limits and complexity; higher-order logic; soft- ware engineering applications.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 2DM3
Antirequisite: SFWR ENG 2E03, 2F03

SFWR ENG 2X03  INTRODUCTION TO MATHEMATICAL MODELLING OF SYSTEMS
Linear systems, signals, filters; sampling theorem; state and frequency domain: simple input-output systems; the relation of discrete and con- tinuous space; introduction to mathematical models of systems.
Three lectures, one tutorial (one hour); second term
Prerequisite: MATH 1H03, 1NN3; and registration in MATH 2M06 or credit in MATH 2P04

SFWR ENG 2S03  PRINCIPLES OF PROGRAMMING
Fundamental concepts of imperative programming languages; (Asser- tion, Assignment, Control flow, iteration, recursion, exceptions); Data representations; Basic concepts of operating systems; Composing and analyzing small programs.
Three lectures, one tutorial (one hour); first term
Prerequisite: ENGINEER 1D04
Antirequisite: COMP ENG 2SH4, COMP SCI 2SC3

SFWR ENG 3A04  SOFTWER DESIGN I - LARGE SYSTEM DESIGN
Software design processes, 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 2AA4, 2003
Antirequisite: COMP SCI 3EA3 (Effective 2007-2008)

SFWR ENG 3BB4  SOFTWARE DESIGN II - CONCURRENT SYSTEM DESIGN
Processes, threads, concurrency; Synchronization mechanisms, resource management and sharing; Objects and concurrency; Design, architecture and testing of concurrent systems.
Three lectures, one tutorial (two hours); second term
Prerequisite: SFWR ENG 3A04, 2003
Antirequisite: COMP SCI 3M03 (Effective 2007-2008)

SFWR ENG 3DX3  DYNAMIC MODELS AND CONTROL OF PHYSICAL SYSTEMS
Modelling of dynamic continuous physical phenomena in both continuous and discrete time. Control theory, stability analysis and feedback control design. Application of computer control to continuous processes. Data analysis, empirical modelling.
Three lectures, one tutorial (one hour); second term
Prerequisite: SFWR ENG 3X03
Antirequisite: ENGINEER 3L03
SFWR ENG 3E03  
**DESIGN AND SELECTION OF PROGRAMMING LANGUAGES**

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 2AA4, 2E03
Antirequisite: COMP SCI 3M13 (Effective 2007-2008)

SFWR ENG 3F03  
**MACHINE-LEVEL COMPUTER PROGRAMMING**

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 2DA3, 3AQ4, 3GAS
Antirequisite: COMP ENG 3JU3, COMP SCI 3F13, 3M13

SFWR ENG 3G03  
**COMPUTER ARCHITECTURE AND GRAPHICS PROCESSORS**

Measures of performance; instruction set architecture, computer arithmetic, datapath and control, pipelining, memory hierarchy, I/O systems, basics of multiprocessor systems, multimedia extensions and graphics processors.

Three lectures, one tutorial (two hours every other week); first term.

Prerequisite: SFWR ENG 2D03 or 2DA3
Antirequisite: COMP ENG 4S04, COMP SCI 2CA3, 3MG3, SFWR ENG 3G03

SFWR ENG 3GB3  
**4D MODELLING FOR VIRTUAL REALITY**


Three lectures, one tutorial (two hours every other week); first term.

Prerequisite: MMEDIA 2BE3 and registration in Software Engineering and Game Design

SFWR ENG 3GC3  
**REAL-TIME ANIMATION FOR COMPUTER GAMES**


Three lectures, one tutorial (two hours every other week); second term.

Prerequisite: MMEDIA 2HE3, SFWR ENG 3GB3 and registration in Software Engineering and Game Design

SFWR ENG 3IO3  
**COMMUNICATION SKILLS**

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 1IO3 or 1C04
Antirequisite: COMP SCI 2CS3

SFWR ENG 3K04  
**SOFTWARE DEVELOPMENT FOR COMPUTER ENGINEERING**


Three lectures, one lab (three hours); first term.

Prerequisite: One of COMP ENG 2S14, ELEC ENG 2S14, SFWR ENG 2K03
Antirequisite: COMP SCI 3E03

SFWR ENG 3M04  
**SOFTWARE DEVELOPMENT FOR ELECTRICAL ENGINEERING**


Three lectures, one lab (three hours); first term.

Prerequisite: COMP ENG 2S14 or ELEC ENG 2S14

SFWR ENG 3RA3  
**SOFTWARE REQUIREMENTS AND SECURITY CONSIDERATIONS**


Three lectures, one tutorial (one hour); second term.

Prerequisite: SFWR ENG 3A04
Antirequisite: COMP SCI 4E03, SFWR ENG 3P03, 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 3T03  
**SOFTWARE TESTING AND DESIGN OF COMPUTER 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; second term.

Prerequisite: COMP ENG 2D14 or ELEC ENG 2D14; and one of COMP ENG 3S14, SFWR ENG 3K04, 3L04, 4M04
Cross-list: COMP SCI 3B03

Antirequisite: COMP ENG 3S04, COMP SCI 3M03, 4SH3

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 ENG 3K04, COMP SCI 4M03

SFWR ENG 4A03  
**REAL-TIME SYSTEMS AND CONTROL APPLICATIONS**


Three lectures, one lab (three hours every other week); first term.

Prerequisite: SFWR ENG 3B04, 3X03
Antirequisite: SFWR ENG 4A03, 4GA3

SFWR ENG 4C03  
**SOFTWARE DESIGN AND COMPUTER SECURITY**

Physical networks, networks, 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 3B04
Antirequisite: COMP SCI 3CN3

SFWR ENG 4D03  
**DESIGN OF HUMAN COMPUTER INTERFACES**


Three lectures, one tutorial (one hour); first term.

Prerequisite: SFWR ENG 3B04
Antirequisite: COMP SCI 4F03

SFWR ENG 4E03  
**PERFORMANCE ANALYSIS OF COMPUTER SYSTEMS**

Use of queueing models and simulation to predict computer system performance and find bottlenecks in a system. Types of models, distributions. Markov models. Modelling storage and network behaviour, locks, critical sections, concurrency. Introduction to analytical system reliability.

Three lectures, one tutorial (one hour); first term.

Prerequisite: SFWR ENG 3B04, STAT 3N03 or 3Y03 is recommended.

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 3M03 or 3GA3; and SFWR ENG 3B04

SFWR ENG 4G06  
**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, seminar); two terms.

Prerequisite: Registration in final level of a Software Engineering program.
Antirequisite: SFWR ENG 4G03, 4GP6, 4H03
CULTURAL STUDIES AND CRITICAL THEORY

COURSES

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 Chester New Hall, Room 321.

Courses

If no prerequisite is listed, the course is open.

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

This course explores the concept of popular culture through an examination of specific cultural forms, with emphasis on analytic skills informed by cultural and critical theory.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: 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; two terms
Prerequisite: Registration in a program in Cultural Studies and Critical Theory or Women's Studies
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 or Cultural Studies and Critical Theory
Cross-list: CMST 2M03, COMP LIT 2E03, ENGLISH 2M03

CSCT 2P03 MODERNITY/POSTMODERNITY/VISUALITY

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 Cultural Studies and Critical Theory
Cross-list: ENGLISH 2P03

CSCT 2S03 SPECTACULAR BODIES

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: ENGLISH 2S03

CSCT 3A03 CRITICAL RACE STUDIES

This course examines contemporary debates in critical race theory in an attempt critically to 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, Peace Studies or Women's Studies
Cross-list: COMP LIT 3R03, ENGLISH 3A03, PEACE ST 3A03, WOMEN ST 3H03

CSCT 3A03 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 or Women's Studies
Cross-list: COMP LIT 3A03, ENGLISH 3AA3, WOMEN ST 3H03
This course examines selected issues in contemporary critical theory. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: ENGLISH 313, TOPICS IN PROSE, if the topic was The Cyborg in Fiction and Critical Theory.

CSCT 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, Cultural Studies and Critical Theory or Theatre & Film Studies. It is recommended that students should already have completed THTR&FLM 2F03.
Cross-list: CMST 3CC3, COMP LIT 3103, ENGLISH 3CC3, THTR&FLM 3R03

CSCT 3D03 SCIENCE FICTION
An examination of a number of standard science fiction tropes such as time travel, lost worlds, utopias/dystopias, totalitarian societies, alien races and post holocaust societies.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: ENGLISH 3D03
Not open to students with credit in ENGLISH 313, TOPICS IN PROSE, if the topic was Science Fiction.

CSCT 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: ENGLISH 3EE3
Not open to students with credit in ENGLISH 313, TOPICS IN PROSE, if the topic was African American Fiction.

CSCT 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 a program in Comparative Literature or Cultural Studies and Critical Theory
Cross-list: COMP LIT 3Q03, ENGLISH 3Q03

CSCT 3Q03 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 or Cultural Studies and Critical Theory
Cross-list: COMP LIT 3Q03, ENGLISH 3Q03

CSCT 3R06 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, globalisation, race, gender, ethnicity, nation, language and representation.
Three hours; two terms
Prerequisite: Registration in a program in Comparative Literature, Cultural Studies and Critical Theory or Peace Studies
Cross-list: COMP LIT 3R06, ENGLISH 3R06, PEACE ST 3E06

CSCT 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: ENGLISH 3W03, INDIG ST 3D03, PEACE ST 3W03
This course is administered by Indigenous Studies.

CSCT 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: ENGLISH 3X03, INDIG ST 3E03, PEACE ST 3X03
This course is administered by Indigenous Studies.

CSCT 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: ENGLISH 3Y03
Not open to students with credit in ENGLISH 313, TOPICS IN PROSE, if the topic was Children’s Literature.

CSCT 3Y03 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: ENGLISH 3YY3

CSCT 4X03 HONOURS ESSAY
In consultation with members of the Cultural Studies and Critical Theory program and the English and Cultural Studies 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 CSCT 4X03 should contact the faculty member chairing the CSCT 4X03 committee early in first term.
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Enrolment is limited. 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 when possible. 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 1980s
This course will focus on the ideologically related struggles of 1980s 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
A study of selected texts by Americans and/or Canadians of Asian origin with a focus on race, ethnicity, gender, sexuality, class, immigration, multiculturalism, transnationalism and diaspora.
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.

CSCT 4EM3 MODERNISM AND EMPIRE
An examination of the formalistic, ideological and political relationship between British modernism and postcolonial studies through reading literary texts and cultural-historical contexts of modernism.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4EM3
Enrolment is limited. Departmental permission required.

CSCT 4FR3 FANTASIES OF THE ORIENT IN EIGHTEENTH-CENTURY BRITAIN
This course explores how eighteenth-century England registered and imagined "the other" through "the Orient", as well as how the Orient shaped emerging literary genres and modes.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4FR3
Antirequisite: ENGLISH 4F03
Enrolment is limited. Departmental permission required.

CSCT 4FT3 THE FAIRY TALE
A study of the fairy tales from the structuralist, psychoanalytic and socio- logical 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 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 4ID3 DISLOCATION AND BELONGING: CANADIAN WRITINGS OF IMMIGRATION AND DIASPORA
This course examines by and about people who have moved between cultural locations to consider questions of cultural and cross-cultural identity.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4ID3
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.
This course is administered by Women's Studies.

CSCT 4LM3 EIGHTEENTH-CENTURY MACHINE LIFE
This seminar will explore how metaphors and constructions of the machine pushed the boundaries of what it meant to be human during the eighteenth century.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4LM3
Enrolment is limited. Departmental permission required.

CSCT 4MO3 MODERNISM AND THE POLITICS OF FORM
Reading of modernist texts in the light of the contested relationship of formal/technical experimentation with the politics of race, gender, colonialism and other modes of power relations.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4MO3
Enrolment is limited. Departmental permission required.

CSCT 4ON3 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 a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4ON3
Enrolment is limited. Departmental permission required.

CSCT 4OP3 THE "OPRAH EFFECT"
This seminar considers the influence of Oprah Winfrey at various sites of cultural contestation: television, magazine publication, women's body images, entrepreneurship, celebrity activism, race, "self-help."
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4OP3
Enrolment is limited. Departmental permission required.

CSCT 4PA3 THE "OPTICAL UNCONSCIOUS": AESTHETICS IN THE AGE OF PHOTOGRAPHY
This seminar engages a series of contemporary debates in aesthetic theory, organized around the question of photography and the problems of visual representation.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4PA3
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 popular 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 4PC3
Antirequisite: COMP LIT 4C03, 4F03
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, genre 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 4SF3
**SCIENCE FICTION TOMORROW OR THE DAY AFTER**
This seminar will examine science fiction based in the present or near future in the context of artificial intelligence theory, economic possibilities and biology.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4SF3
Enrolment is limited. Departmental permission required.

### CSCT 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.
Seminar (two hours); one term
Prerequisite: Registration in Level IV of a Combined Honours program in Cultural Studies and Critical Theory
Cross-list: ENGLISH 4SS3
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
**WOMAN AND THE NATION IN INDIAN POPULAR CINEMA**
An examination of Indian popular cinema (Bollywood) and its construction of the nation through representations of women. Themes may include: partition, religion, sexuality, minority, caste, diaspora.
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.

### CSCT 4WL3
**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 4WL3
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.

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### ECONOMICS

**WEB ADDRESS:** http://socserv.mcmaster.ca/econ/

**Kenneth Taylor Hall, Room 426**
**Ext. 22765**

### Faculty of January 15, 2006

**Chair**
Michael R. Veal

**Associate Chair**
Stephen H. G. Jones

**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., B.A., M.A., Ph.D. (Toronto), D.U. (Ottawa), D. Hon.
C. (Louv), D Litt. (Nipissing), LL.D. (Toronto)
Jeremiah E. Hurley/B.A. (John Carroll), M.A., Ph.D. (Wisconsin-Madison)
Atif A. Kubursi/B.A., (American University, Beirut), M.S., Ph.D. (Purdue)
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 related to job and promotion; unemployment; job loss and workplace closures; and work-sharing.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3
Cross-list: LABR-ST 2A03

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; and one of STATS 1L03 or Grade 12 Mathematics of Data Management U.
Antirequisite: COMMERCE 2S03, ECON 3C06, GEOG 2S03, HTH SCI 1F03, POL 2C03, STAT 2R03, STAT 2Y03, STATS 1A03
Not open to students with credit in registration in ARTS & SCI 2R06, CHEM 4C03, HTH SCI 2A03, SOCSCI 3H06, STATS 1C03, 2C03, 2R03, 3Y03, or if COMMERCE 2A03 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 sharing.
Three lectures; one term
Prerequisite: ECON 1A06; or ECON 1B03 and 1BB3
Cross-list: JAPAN ST 2C03

ECON 2CC3  HEALTH ECONOMICS AND ITS POLICY
Economic analysis of health and health care, with a special emphasis on policy issues in the Canadian health care system.
Three hours (lecture and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HEALTHST 2C03
Not open to students registered in an Economics program or with credit or registration in ECON 2G03, 2L03 or 3L03. (See Note 5 above.) Students excluded from ECON 2CC3 or those wishing to do further work in Health Economics are referred to ECON 3E03.

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, MATH 1K03 or equivalent; and credit or registration in MATH 1M03 or equivalent
Antirequisite: ECON 2L03

ECON 2G03  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 2L03; 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, Calculus and Introductory Calculus U, MATH 1K03 or equivalent. Students without credit in MATH 1M03 or equivalent are strongly advised to take it concurrently with ECON 2H03.
Antirequisite: ECON 2M06
ECON 2H03 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 2003 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 1B03
Not open to students with credit or registration in COMMERC 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 1B03
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 2M03 PUBLIC POLICY TOWARD BUSINESS
The economic effects of federal competition policy and the regulation of business by all levels of government.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03
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 unions and the state.
Three lectures; one term
Prerequisite: ECON 1A06 or 1B03 and 1B03
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, 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 the public sector, market failure, theory of public goods, incentive mechanisms, logic of group decisions and the political process, theory of benefit-cost analysis, intergovernmental fiscal relations, government budgeting.
Three lectures; one term
Prerequisite: 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 2803 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, MATH 1B03 or STAT 1L03; and MATH 1M03 or equivalent; and a grade of at least C in each of ECON 2G03 or 2X03, 2G03 or 2L03, 2H03 or 2M06.
Not open to students with credit or registration in MATH 2A03, 2X03 or 2M06.
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 3HH3 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 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 3L03 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.
ECON 3L03 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.
ECON 3M03 INTRODUCTION TO GAME THEORY
An introduction to the theory of games, including strategic, extensive and coalition 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.
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

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

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

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 economics.
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, COMMERCLE 2G33, GEO 2S03, GEOG 2L33, 2N03, POL SCI 2F05, 3N06; PSYCH 2G03, 2R03, 2R33, 2R83, SOC SCI 2J03, SOCIOL 2Y03, 3H06, STATS 1C03, 2D03, 2R06 or another course that is approved by a departmental counselor as equivalent to ECON 2B03.

NATURAL RESOURCES
Competitive and socially optimal management and exploitation of nonrenewable resources; market failure as illustrated by mineral cattels, 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

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 2C03, 2G03, 2L06, 2X03, HEALTHST 2C03; ECON 2B03 or another course in statistics is recommended.

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 session will be announced in January.
Three hours (seminars); one term
Prerequisite: ECON 2GGS, 2H33, 3F03; and ECON 3U03 or 3O06; and registration in an Honours Economics program

SELECTED TOPICS
Topics will vary from year to year depending on student interests and faculty availability. Students should consult the Department on topics to be offered.
Three hours; one term
Prerequisite: Permission of the Department

ECONOMIC MODELS 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 STAT 2D03 and 2M03 (or 2M06)

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

DIRECTED RESEARCH II
As per ECON 4M06.
Prerequisite: Permission of the Department

ADVANCED ECONOMIC THEORY I
Mathematically oriented approaches to the analysis of the behaviour of individual consumers, workers and firms.
Three lectures; one term
Prerequisite: A grade of at least C in one of ECON 3G03, MATH 2Q04, 2X03 (or 2A03); and a grade of at least C in each of ECON 2G03 (or 2X03), 2G06 (or 2L06), 2H03, 2H13 (or 2M06)
Antirequisite: ECON 3A03

ADVANCED ECONOMIC THEORY II
Analysis of dynamic macroeconomic models including models of endogenous growth and other selected topics.
Three lectures; one term
Prerequisite: A grade of at least C in one of ECON 3G03, MATH 2Q04, 2X03 (or 2A03); and a grade of at least C in each of ECON 2G03 (or 2X03), 2G06 (or 2L06), 2H03, 2H13 (or 2M06)
Antirequisite: ECON 3A03

ELECTRICAL AND
COMPUTER ENGINEERING

WEB ADDRESS: http://www.ece.mcmaster.ca
Information Technology Building, Room A111
Ext. 24347

Faculty as of January 15, 2006

Chair
K. Max Wong

Associate Chair (Undergraduate Programs)
James P. Reilly

Associate Chair (Graduate Studies)
T. Kirubarajan

Distinguished University Professor
Simon Haykin

Professors
David W. Capson
Peter M. Smith
Barbara Szabados
Ted H. Szymanski
Terry D. Todd
Koen Max Woywod
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Assistant Professors
Laurel Carney
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Mark Haacke
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T. Davidson
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T.R. Field
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ELECTRICAL AND COMPUTER ENGINEERING

COMP ENG 2SI4 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, COMP ENG 2084
Antirequisite: COMP SCI 2MD3, 2C3, 3DA4, ELEC ENG 2S14, SFWR ENG 2C03, 2C04

COMP ENG 3DJ4 DIGITAL SYSTEMS DESIGN
CAD tools for digital circuits; hardware description language; programmable logic and applications; algorithmic state 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 2DI4 or ELEC ENG 2DI4
Antirequisite: COMP ENG 3DP4, PHYSICS 4D06, 4D3, SFWR ENG 3F03

COMP ENG 3DQ4 DIGITAL SYSTEMS DESIGN
Advanced design methods of digital systems including modeling, simulation, synthesis and verification using hardware description languages; timing analysis and hardware debugging; implementation of computer peripherals in programmable devices.

Two lectures, one tutorial, one lab (three hours) every week; first term
Prerequisite: COMP ENG 2DI4

COMP ENG 3DN4 COMPUTER ORGANIZATION
Instruction set design, computer arithmetic, assembly language, controller and datapath design, cache and memory systems, input-output systems, networks interrupts and exceptions, pipelining, performance and cost analysis, computer architecture history and a survey of advanced architectures.

Three lectures, one tutorial; second term
Prerequisite: COMP ENG 3DQ4

COMP ENG 3SS4 COMPUTER-AIDED ENGINEERING
Numerical analysis; linear and nonlinear systems, least squares and QR factorization; minimization; 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
Antirequisite: COMP ENG 3SK4, SFWR ENG 3X03

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 3T04

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 3D14

COMP ENG 4DM4 COMPUTER ARCHITECTURE
Overview of CISC/RISC microprocessors; performance metrics; instruction set design; processor and memory acceleration techniques; pipelining; scheduling; instruction level parallelism; memory hierarchies; multiprocessor structures; storage systems; interconnection networks.

Three lectures, one tutorial, one lab every other week; first term
Prerequisite: COMP ENG 3D4 or 3D14
Antirequisite: SFWR ENG 3G03, 3GA3

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 interconnects.

Three lectures, one tutorial, one lab every other week; second term
Prerequisite: COMP ENG 4DK4

COMP ENG 4DS4 EMBEDDED SYSTEMS
Embedded processor architectures and SOC organization; EDA tools for hardware/software co-design; co-verification and testability; interfacing; co-processors, soft processors and ASSP design; real-time systems; applications.

Three lectures, one tutorial, one lab every other week; second term
Prerequisite: COMP ENG 3DQ4
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 2C14 or 2C15
Antirequisite: ELEC ENG 2E14

ELEC ENG 2F1H  ELECTROMAGNETICS I
Transmission lines, electrostatics, current and conductors, the steady magnetic field; Faraday's law.
Three lectures, one tutorial; second term
Prerequisite: ELEC ENG 2C14 or 2C15; and PHYSICS 1E03
Antirequisite: ELEC ENG 3F14

ELEC 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: COMP ENG 2SH4, ENGINEER 1D04
Antirequisite: COMP ENG 2S14, COMP SCI 2MD3, 2SC3, 3DA3, SFWR ENG 2C03, 2C04

ELEC ENG 3B15  SEMICONDUCTOR 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 2C14; and ELEC ENG 2E14 or 2E15

ELEC ENG 3F14  ELECTROMAGNETIC FIELDS
Electromagnetics, magnetostatics, 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 2P04, 2C04
Antirequisite: ELEC ENG 2F1H, 3F14

ELEC ENG 3F15  ELECTRONICS II
Electromagnetics, magnetostatics, time-varying fields, uniform plane waves, plane wave reflection and dispersion, guided waves, radiation.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 2F1H
Antirequisite: ELEC ENG 3F14

ELEC ENG 3P14  POWER DEVICES AND SYSTEMS
Power circuits; transformers; magnetic circuits; three phase connections; single phase motors; polyphase machines; synchronous generators and motors, induction motors; dc motors; design of industrial systems.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 2C14 or 2C15; and ELEC ENG 2C14 or 2C15

ELEC ENG 3T14  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 2C14 or 2C15
Antirequisite: MECH EN 1S30

ELEC ENG 3T24  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

ELECTRICAL AND COMPUTER ENGINEERING

COMP ENG 4E1K3  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 3E1J4
Antirequisite: ELEC ENG 4E1K3

COMP ENG 4O15  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 including an oral presentation and written report.
Lectures, tutorials, one capstone project; first term
Prerequisite: Registration in Level IV or V of any Electrical or Computer Engineering program

COMP ENG 4O1J3  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 4O1J3

COMP ENG 4T1L4  DIGITAL SIGNAL PROCESSING
Classical filter theory; DFT and FFT; FIR and IIR digital filters; effects of finite precision; implementation of DSP systems; adaptive filtering; spectral analysis, signal compression.
Three lectures, one tutorial, one lab every other week; first term
Prerequisite: ELEC ENG 2T1P4, 2TQ4
Antirequisite: ELEC ENG 4T1L4

COMP ENG 4T1N3  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 2T1P4, 2TQ4
Antirequisite: ELEC ENG 4T1N3

Course Information

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.

Department Note:

ELECTRICAL ENGINEERING
ELEC ENG 3TR4 COMMUNICATION SYSTEMS
Review of continuous-time signals and systems; analysis and implementa-
tion 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, 3TO4; 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 mod-
els 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 trans-
ducers; 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 3EJ4, ENGINEER 3N03 or PHYSICS 3B06
Antirequisite: ELEC ENG 4EL3

ELEC ENG 4BE4 MEDICAL ROBOTICS
Fundamentals of robotics and tele robotics; feedback from the environ-
ment using sensors and machine vision; application of robotics to medi-
cine 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 3TO4
Antirequisite: COMP ENG 4TN3

ELEC ENG 4BI5 BIOMEDICAL DESIGN PROJECT
The design process; establishing objectives; preliminary design; plan-
ning; scheduling; decision matrices; modelling tools; economic impact;
optimization methods; reliability; safety; a term project composed of small
teachs of students including an oral presentation and written report.
Three lectures, two tutorials, one capstone project; first term
Prerequisite: Registration in Level IV Electrical and Biomedical Engineering
Antirequisite: COMP ENG 4014, 4015, ELEC ENG 4BI4, 4014, 4015

ELEC ENG 4C14 CONTROL SYSTEM DESIGN
Design of linear control systems using classical and state-space tech-
niques; performance limitation; sampled-data control; nonlinear systems;
multi-input multi-output control systems.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3TP4

ELEC ENG 4EM3 PHOTONIC DEVICES AND SYSTEMS
Fundamentals of light. Optical fibers and their propagation characteris-
tics. Lasers and photo-diodes. Optical amplifiers and modulators. Photonic
networks.
Two lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3EJ4

ELEC ENG 4F14 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, 3FK4

ELEC ENG 4O15 ENGINEERING DESIGN
The design process; establishing objectives; preliminary design; planning;
scheduling; decision matrices; modelling tools; economic impact; optimiza-
tion methods; reliability; safety; a term project composed of small teams of
students including an oral presentation and written report.
Lectures, tutorials, one capstone project; second term
Prerequisite: Registration in Level IV or V of any Electrical or Computer
Engineering program
Antirequisite: COMP ENG 4O14, ELEC ENG 4B14, 4B15, 4O14

ELEC ENG 4OJ3 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 Engi-
neering faculty member, inclusion on the Dean's Honour List, registration
in Level IV or V or permission of the Instructor
Antirequisite: COMP ENG 4OJ3

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 3P14

ELEC ENG 4TX4 DIGITAL COMMUNICATIONS SYSTEMS
Digital modulation systems, intersymbol interference, equalization, synchro-
nization; ASK, FSK, PSK, MSK, optimal receiver, noncoherent detection;
introduction to information theory; entropy, source coding, mutual informa-
tion, channel capacity.
Three lectures, one tutorial, one lab every other week; second term
Prerequisite: ELEC ENG 3TR4

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
One hour, first week; first term
Prerequisite: Registration in any Engineering program
Antirequisite: SCIENCE 1A00, NURSING 1A00
This course must be successfully completed before registering in Level
II Engineering.

ENGINEER 1C03 ENGINEERING DESIGN AND GRAPHICS
Graphical visualization and communication; technical sketching, 2D and
3D computer-aided design; use of solid modelling software.
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 pro-
gress. 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 1EE0 INTRODUCTION TO THE
ENGINEERING CO-OP PROGRAM
Orientation to Engineering Co-op programs and the workplace; self-as-
sessment and goal setting; application procedures and materials; occupa-
tional 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 including ethics, health and safety,
roles and responsibilities to society, engineering communication; design
skills; group design projects.
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: electrodynamics, electric currents, circuits and transients, 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  FOUR MONTH CO-OP EXPERIENCE I

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 year.

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 Engineering.
Antirequisite: ENGINEER 2V04, ENG PHYS 2H04, MECH ENG 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 2Q04.
Antirequisite: ENGINEER 3M03.

ENGINEER 2P04  ENGINEERING MECHANICS 'A'

Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behavior of simple members under axial force, bending and torsion. Principal stresses; deflection of beams; statistical indeterminacy.

Three lectures, plus one unit comprising tutorials or lectures devoted to applications, at the discretion of the instructor; first term.
Prerequisite: PHYSICS 1E03.
Antirequisite: MECH ENG 2P04.

ENGINEER 3E00  FOUR MONTH CO-OP EXPERIENCE II

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 year.

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, 2M33 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.

Two lectures, one tutorial; second term.
Prerequisite: Registration in Level III or above of any Engineering program except Engineering and Society.
Antirequisite: ENGINEER 4H03, ENG PHYS 2S03, 4C03.

ENGINEER 4B03  ENGINEERING ECONOMICS


Three lectures (hours); applications, discussions; second term.
Prerequisite: Registration in Level IV or V of an Engineering program.
Antirequisite: CHEM ENG 4N04, ENGINEER 2S03.
Not open to students registered in an Engineering and Management program.

ENGINEER 4E00  EIGHT MONTH CO-OP EXPERIENCE

Eight months of full-time employment in a professional environment.
Prerequisite: ENGINEER 1E00.
Not open to students in their final year.

ENGINEER 4E08  TWELVE MONTH CO-OP EXPERIENCE

Twelve months of full-time employment in a professional environment.
Prerequisite: ENGINEER 1E00.
Not open to students in their final year.

ENGINEER 4E09  SIXTEEN MONTH CO-OP EXPERIENCE

Sixteen months of full-time employment in a professional environment.
Prerequisite: ENGINEER 1E00.
Not open to students in their final year.

ENGINEER 4E10  FOUR MONTH CO-OP EXPERIENCE II

Minimum of 15 weeks of full-time employment in a professional environment.
Prerequisite: ENGINEER 3E00.
Not open to students in their final year.

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 2S03, 4C03.

ENGINEER 4I03  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 modeling 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 dewatering and disinfection.

Two lectures, one tutorial (two hours); second term.
Prerequisite: One of CHEM ENG 3G04, CIV ENG 3M04 or MECH ENG 3P04; 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
John W. Medcalf/B.A., (New Brunswick), M.A., Ph.D. (Toronto)

Courses

<table>
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<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENGRG MGT 2A02</td>
<td>COMMUNICATION SKILLS</td>
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<td>ENGRG MGT 2B03</td>
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<td>ENGRG MGT 3A01</td>
<td>PROJECT MANAGEMENT</td>
</tr>
<tr>
<td>ENGRG MGT 3B01</td>
<td>AND TEAMWORK SKILLS</td>
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Project Management: project phases; project scheduling; scheduling software; project monitoring; teamwork evaluation. Teamwork Skills: working in groups, communicating in groups. Leadership: leading a group, negotiating.

One seminar, one term.
Prerequisite: One of CHEM ENG 2G03, CIV ENG 2C03 or ENGRG MGT 2A02; and registration in any Engineering and Management program.
ENGG 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; one term
Prerequisite: ENGG MGT 3A01 and registration in any Engineering and Management program

ENGG MGT 5B03  ENGINEERING AND MANAGEMENT PROJECTS
Capstone course: Students work in multidisciplinary teams to solve an engineering and management problem encountered during summer work experience. Written and oral communications are assessed. Guidelines include 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: ENGG MGT 4A01 and registration in any Engineering and Management program

ENGMGT 6A00  COORDINATION OF ENGINNEERING AND MANAGEMENT PROJECTS
The faculty lead the students in the development of the project. The course is open. Three hours (lectures, discussion, group work); first term
Prerequisite: ENGG MGT 5B03

ENGSOCTY 2Y03 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

ENGSOCTY 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: ENGSOCTY 2Y03

ENGSOCTY 3Z03 ENGINEERING AND MANAGEMENT PROJECTS
Case studies in history and technology, from antiquity to modern times, with a special emphasis on the cultural aspects of technology, are addressed. The focus is on sustainability and the natural environment. Three hours (lectures, discussion, group projects, seminars); first term
Prerequisite: Registration in Level V of an Engineering and Society program

ENGSOCTY 4X03 INQUIRY IN AN ENGINEERING CONTEXT II
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 should have implications for the practicing engineer.
Prerequisite: ENGSOCTY 3Y03

ENGSOCTY 4Z03 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 VI of an Engineering and Society 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., M. A. Sc. (Toronto), Ph. D. (Duke), P. Eng.

Operating Committee, as of July 1, 2005:
Chair
B. Baetz (Civil Engineering)

M. Eliebadi (Dean of Engineering)
P. M. Smith (Associate Dean of Engineering)
I. Bruce (Electrical and Computer Engineering)
D. Conochie (Materials Science and Engineering)
K. Garay (Women's Studies)
A. Kittai (Engineering Physics) - Term 2
A. Knights (Engineering Physics) - Term 1
J. Main (Civil Engineering (Structural/Geotechnical) and Society, Student)
J. Peng (Computing and Software)
K. Sharma (Civil Engineering (Structural/Geotechnical) and Society, Student)
H. Sheardown (Chemical Physics and Society, Student)
E. Sourense (Engineering Physics and Society, Student)
B. Statham (Engineering Physics and Society, Student)
S. Veldhuis (Mechanical Engineering and Society)
J. Wagemans (Engineering Physics and Society, Student)

Courses
If no prerequisite is listed, the course is open.

ENGSOCTY 2X03 INQUIRY IN AN ENGINEERING CONTEXT I
An inquiry is a non-disciplinary approach to the study of issues of public concern. In terms of the design process, inquiry focuses on the problem definition stage, in which formulating questions, researching underlying issues, and analyzing opposing arguments are essential. The course involves teaching how to use the university and community resources in research, how to write a research paper, and how to express ideas orally. The theme for 2006-2007 is sustainable society.
Three hours (lectures, discussion, group work); second term
Prerequisite: Registration in any Engineering and Society program

ENGSOCTY 2Y03 CASE STUDIES IN HISTORY AND TECHNOLOGY
History and philosophy of technology, from antiquity to modern times, with a special emphasis on the cultural aspects of technology, are addressed on a case study basis.
Three hours (lectures, discussion, group work); first term
Prerequisite: Registration in any Engineering and Society program

ENGSOCTY 3X03 INQUIRY IN AN ENGINEERING CONTEXT II
This inquiry course builds on the skills developed in previous courses, focusing on a specific issue related to the role of engineering and technology in society. The course is devoted to the study of one topic such as 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: ENGSOCTY 2X03

ENGSOCTY 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: ENGSOCTY 2Y03

ENGSOCTY 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

ENGSOCTY 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 should have implications for the practicing engineer.
Prerequisite: ENGSOCTY 3Y03

ENGSOCTY 4Z03 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 VI 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, 2006
Chair
Paul E. Jessop

Professors
Alexander A. Bezcz/B.Sc., M.Sc., Ph.D. (Leningrad State)
Harold K. Haugan/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)
Adrian H. Kittai/B.Eng. (McMaster), Ph.D. (Cornell), P. Eng.
Rafeal Keilman/Ph.D. (MIT), Ph.D. (Cornell)
Peter Mascher/M.Eng., Ph.D. (Technical University of Graz), P.Eng.
David A. Thompson/B.Sc., Ph.D. (Reading), C.Eng.
Chang Q. Xu/B.Sc., M. Sc. (University of Science and Technology of China), B.Eng. (Tokyo)

Adjunct Associate Professor
Glenn D. Harvel/B. Eng., M. Eng., Ph.D. (McMaster)

Assistant Professors
Andrew P. Knights/B.Sc. (DeMontfort), Ph.D. (East Anglia)
Ray R. LaPierre/B.Sc. (Dalhousie), M.Eng., Ph.D. (McMaster)
Qiyin Fang/B.Sc. (Nankai), M. Sc., Ph.D. (East Carolina)

Adjunct Professors
Denis J. Corr/B.Sc., Ph.D. (Queen's, Belfast)
Nikola K. Popov/B.Eng. (Knik and Metaloji), M. Sc. (Belgrade), Ph.D. (Zagreb)
Vctor G. Snell/B.Sc. (Manitoba), M. Sc., Ph.D. (Toronto)

Associate Members
Chun Y. Ching/Ph.D. (Mechanical Engineering) B.S. (Purdue), Ph.D. (Syracuse)
M. Jamal Deen/Electrical and Computer Engineering) B. Sc. (Guyana), M. Sc., Ph.D. (Case Western Reserve)
Asker M. Hadara/Electrical and Computer Engineering) B. Eng. (Memorial), Ph.D. (Stanford)
Joseph E. Heyward (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 Huizenga (Medicine) B.Sc., M.Sc., Ph.D. (Groningen)
Peter Kruse (Chemistry) Dipl. Chem. (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.
Rolf O. Louf (Chemical Engineering) B.Sc., M.Sc. (Ain Shams), Ph.D. (Western Ontario), M.B.A. (Toronto)
Skipper Poehlman (Computing and Software) B.S. (Niagara), B.S. (Brook), M.Sc., Ph.D. (McMaster), P.Eng.
Kalachev Saravanamuttu (Chemistry) B.Sc., Ph.D. (McGill)

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 and 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
Prerequisite: Registration in Level II Engineering Physics
Cross-list: PHYSICS 2H04
Antirequisite: ENGINEER 2H03, 2W04, MATHS 2B03

ENG PHYS 2QM3 INTRODUCTION TO QUANTUM MECHANICS
Wave-particle duality, uncertainty principle, hydrogen atom, Schrödinger equation for ID systems, barriers and tunnelling, probability, properties of insulators, semiconductors and metals. Examples from experiments.
Three lectures; second term
Prerequisite: Registration in an Engineering Physics or Materials Engineering program

ENG PHYS 2Z03 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
Prerequisite: Registration in an Engineering Physics program
Antirequisite: ENGINEER 4A03, 4H03

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. Natures 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
Prerequisite: ENG PHYS 2A03 or 2A04; and ENG PHYS 2E04

ENG PHYS 3E53 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 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 2Q03 or PHYSICS 3V03
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; first term
Prerequisite: Registration in an Engineering Physics program

ENG PHYS 3H03 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); second term
Prerequisite: Credit or registration in MATH 2M06; or MATH 2P04 and 2Q04

ENG PHYS 3K03 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; second term
Prerequisite: ENG PHYS 3F03 or credit or registration in ENG PHYS 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 I in any Engineering program
Antirequisite: BIOLOGY 2A03, 3U03, 3U06, 3U13, 4G06

ENG PHYS 4A05 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 thermal hydraulics; 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: ENG PHYS 3F03, MATLS 3Q03
Antirequisite: ENG PHYS 3P03

ENG PHYS 4E03 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 3E03

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 3P03 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 defense 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 9.5

ENG PHYS 4K03 OPTICAL COMMUNICATIONS SYSTEMS
Three lectures; first term
Prerequisite: Registration in Level IV or V of any Engineering or Physics program
Antirequisite: PHOTONIC 4K03

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: ENG PHYS 3C03
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 magneto-resistance, superconductivity, and piezoelectricity in devices will be studied.
Two lectures; both terms
Prerequisite: ENG PHYS 3F03 or 4E03; and credit or registration in ENG PHYS 3P03 or 4E03

ENG PHYS 4N03 ADVANCED NUCLEAR ENGINEERING
Three lectures; second term
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
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 3D05

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

ENGINEERING TECHNOLOGY (GENERAL)
Students currently in the Bachelor of Technology Degree Program in Manufacturing Engineering Technology should contact the School of Technology for advice on course selection and continuation in the degree program.

ENGLISH AND CULTURAL STUDIES

WEB ADDRESS: http://www.humanities.mcmaster.ca/~english/

Chester New Hall, Room 521
Ext. 24491

Faculty as of January 15, 2006

Chair
Mary O'Connor

Distinguished University Professor
James King/B.A. (Toronto), M.A., Ph.D. (Princeton), F.R.S.C.

Professors
Joseph Adamson/B.A. (Trent), M.A., Ph.D. (Toronto)
David L. Clark/B.A., M.A., Ph.D. (Western Ontario)
Henry Groulx/B.S. (Maine), M.A. (Appalachian State), D. Arts (Carnegie-Mellon)/Global Television Network Chair in Communications
Donald C. Goeling/B.A. (Queen's), M.A., Ph.D. (McMaster)
Mary E. O'Connor/B.A. (McGill), M.A., Ph.D. (Toronto)
Helen M. Dolovich/B.A., M.A., Ph.D. (Toronto)
Nasrin Rahimieh/B.A., M.A. (Dalhousie), Ph.D. (Alberta)
Mary Silcox/B.A. (Western Ontario), M.A., Ph.D. (Queen's)
Peter Walmsley/B.A., M.A., Ph.D. (Cambridge)
Lorraine Y. 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., Ph.D. (Carleton)
Melinda Gough/B.A. (McGill), M.A., Ph.D. (Yale)
Roger L. Hyman/B.A. (York), M.A., Ph.D. (Toronto)
Grace Keeler/B.A. (Regina), M.A., Ph.D. (Western Ontario)
Susie O'Brien/B.A., M.A. (Queensland), Ph.D. (Queen's)
Anne Savage/B.A. (Calgary), Ph.D. (London)
Imre Szeman/B.A., M.A. (Toronto), Ph.D. (Queens)

Assistant Professors
Sarah Brophy/B.A. (Wilfrid Laurier), M.A., Ph.D. (McMaster)
Chandima Chakraborty/B.A. (Calcutta), M.A., Ph.D. (Jawaharlal Nehru), Ph.D. (York)
ENGLISH AND CULTURAL STUDIES

Catherine Grisé/B.A. (Trent), M.A., Ph.D. (Western Ontario)
Saikat Majumdar/B.A. (Calcutta), M.A. (Jacaypur), M.F.A. (Bowling Green State), Ph.D. (Rutgers)
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 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

ENGLISH 1A33 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

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 1B03

ENGLISH 1BB3 CULTURAL STUDIES AND CONSUMER CULTURE
An overview of the development of cultural studies as an interdisciplinary field. An introduction to 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

ENGLISH 1C06 A HISTORY OF ENGLISH LITERATURE
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

ENGLISH 2A03 CONTEMPORARY CRITICAL APPROACHES TO LITERATURE
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 Comparative Literature.
Cross-list: COMP LIT 2F03

ENGLISH 2B06 THE DEVELOPMENT OF ENGLISH DRAMA
English drama from the medieval period to the close of the 18th century (excluding Shakespeare).
Three hours; two terms
Prerequisite: Registration in a program in English. Students registered in a program in Theatre & Film may apply to the Department for permission to take this course.

ENGLISH 2C03 CONTEMPORARY CANADIAN FICTION
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 Level II or above.
Not open to students with credit in registration in ENGLISH 2G06.

ENGLISH 2D03 CREATIVE WRITING INQUIRY
A creative writing seminar and workshop based on the Inquiry model of self-directed research and collaboration. Students will exercise their creative talents in a variety of genres and work independently and in groups to develop critical skills and problem solving techniques.
Three hours; one term
Prerequisite: Registration in a program in English

ENGLISH 2E03 TWENTIETH-CENTURY BRITISH LITERATURE
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 Level II or above.
Not open to students with credit in registration in ENGLISH 2I06.

ENGLISH 2F03 STUDIES IN AMERICAN LITERATURE
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 Level II or above.
Not open to students with credit in registration in ENGLISH 2I06.

ENGLISH 2G06 CANADIAN LITERATURE
Major aspects of the development of Canadian literature from the late 18th century to the mid-20th century. French-Canadian work in translation will be used for comparative purposes.
Three hours; two terms
Prerequisite: Registration in a program in English

ENGLISH 2H06 AMERICAN LITERATURE
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

ENGLISH 2I06 MODERN BRITISH LITERATURE
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

ENGLISH 2J03 CONTEMPORARY POPULAR CULTURE
This course explores the concept of popular culture through an examination of specific cultural forms, with an emphasis on analytic skills informed by cultural and critical theory.
Three hours; one term
Prerequisite: Registration in Level II or above.
Cross-list: CSCT 2J03
**ENGLISH 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; two terms
Prerequisite: Registration in a program in English or Women’s Studies
Cross-list: CSCT 2K06, WOMEN ST 2K06

**ENGLISH 2L03 SHAKESPEARE: SELECTED PLAYS**
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.

**ENGLISH 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 or English
Cross-list: CMST 2M03, COMP LIT 2E03, CSCT 2M03

**ENGLISH 2M03 MODERN COUNTERCULTURES**
An exploration of a variety of cultural forms (e.g. literature, art, photography, film, music) produced by avant-gardes 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
Prerequisite: Registration in a program in Communication Studies, Comparative Literature or English
Cross-list: CMST 2M03, COMP LIT 2E03, CSCT 2M03

**ENGLISH 2N03 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 (or 1A03 and 1A3) is recommended.
Cross-list: WOMEN ST 2L03
This course is administered by Women’s Studies.

**ENGLISH 2P03 MODERNITY/POSTMODERNITY/VISUALITY**
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
Cross-list: CSCT 2P03

**ENGLISH 2R03 MONSTERS AND MAGIC**
An examination of texts that explore the monstrous and magical, from Beowulf to the 17th century, considering their relationship to their own and our culture. Early texts will be read in modern versions.
Three hours; one term
Prerequisite: Registration in Level II or above

**ENGLISH 2S03 SPECTACULAR BODIES**
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

**ENGLISH 3A03 CRITICAL RACE STUDIES**
This course examines contemporary debates in critical race theory in an attempt to critically decode the operations of race in literary and cultural texts.
Three hours; one term
Prerequisite: Registration in a program in Comparative Literature, English or Women's Studies
Cross-list: COMP LIT 3R03, CSCT 3A03, PEACE STUDIES 3A03, WOMEN ST 3H03

**ENGLISH 3A03 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 feminisms, queer, and masculinity studies.
Three hours; one term
Prerequisite: Registration in a program in Comparative Literature, English or Women's Studies
Cross-list: COMP LIT 3A03, CSCT 3A03, WOMEN ST 3H03

**ENGLISH 3B03 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 3B03
Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was The Cyborg in Fiction and Critical Theory.

**ENGLISH 3C06 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

**ENGLISH 3C03 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 have completed THTR&FLM 2F03.
Cross-list: CMST 3C03, COMP LIT 3L03, CSCT 3C03, THTR&FLM 3R03

**ENGLISH 3D03 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 holocaust societies.
Three lectures; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3D03
Not open to students with credit in ENGLISH 3X03, TOPICS IN DRAMA, if the topic was Science Fiction.

**ENGLISH 3D03 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 3X03, TOPICS IN DRAMA, if the topic was Contemporary Canadian Drama.

**ENGLISH 3E03 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 3E03
Not open to students with credit in ENGLISH 3I13, TOPICS IN PROSE, if the topic was African American Fiction.

**ENGLISH 3G06 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

**ENGLISH 3H03 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 3I13, TOPICS IN PROSE, if the topic was Jane Austen.

**ENGLISH 3I06 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 or English
Cross-list: COMP LIT 3J06
ENGLISH 3J06
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

ENGLISH 3K06
SHAKESPEARE
An extensive critical reading and discussion of selected plays.
Three hours; two terms
Prerequisite: Registration in a program in English.

ENGLISH 3L06
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.

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.

ENGLISH 3N06
THE BRITISH NOVEL
This course will trace the history of English fiction to the 20th century and, we 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.

ENGLISH 3Q03
THE HISTORY OF CRITICAL THEORY
A survey of the main developments of 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 English.

ENGLISH 3R06
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; one term
Prerequisite: Registration in a program in English.

ENGLISH 3S03
BIBLICAL TRADITIONS IN LITERATURE
A study of the influence of the Bible on Western literature, especially English. Approaches may include the study of symbolism, imagery, typology, doctrinal themes and narrative structures.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: COMP LIT 3R06, CSCT 3R06, PEACE ST 3Q06

ENGLISH 3U03
NEANDERTHALS AND NUKE
An exploration of the emerging world view after World War II through a consideration of approximately six novels.
Three lectures; one term
Prerequisite: Registration in Level II or above
Not open to students with credit in ENGLISH 3J03, TOPICS IN PROSE, if the topic was The British Novel After World War II.

ENGLISH 3V06
STUDIES IN 17TH-CENTURY LITERATURE
A detailed examination of poets and prose-writers 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

ENGLISH 3W03
CONTEMPORARY NATIVE LITERATURE IN CANADA
A study of significant works by Native writers who give voices 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 YOUTH CULTURE
An examination of contemporary youth culture through dominant representations of identity. Themes include: violence, sexuality, age, gender, technology, music and dance, countercultures, subcultures, public/private space. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3Y03

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

ENGLISH 3Z03
CONTEMPORARY YOUTH CULTURE
An examination of contemporary youth culture through dominant representations of identity. Themes include: violence, sexuality, age, gender, technology, music and dance, countercultures, subcultures, public/private space. Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: CSCT 3Y03

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.
Prerequisite: Six units in Level IV or above.
Cross-list: CSCT 3Y03

ENGLISH 4AR3
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 an Honours program in English
Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English
Enrolment is limited. Departmental permission required.

ENGLISH 4AR3
RHECTORIC, 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 an Honours program in English
Enrolment is limited. Departmental permission required.

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 when possible. 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 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 an Honours program in English
Enrolment is limited. Departmental permission required.

ENGLISH 4AR3
RHECTORIC, 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 an Honours program in English
Enrolment is limited. Departmental permission required.
ENGLISH 4AS3 THE AESTHETICS OF SEX IN THE 1890s
This 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 an Honours program in English Cross-list: CSCT 4AS3
Enrolment is limited. Departmental permission required.

ENGLISH 4AW3 ASIAN AMERICAN WRITING
A study of selected texts by Americans and/or Canadians of Asian origin with a focus on race, ethnicity, gender, sexuality, class, immigration, multiculturalism, transnationalism and diaspora. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4AW3
Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English Cross-list: CSCT 4BB3
Enrolment is limited. Departmental permission required.

ENGLISH 4BL3 THE BIBLE AND LITERATURE
A critical discussion of the Bible's overall narrative structure, the typological correspondences between Old and New Testaments and the use made of the Bible by poets and other artists. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4CB3 READING THE BESTSELLER: CONTEMPORARY BRITISH FICTION
An exploration of possible critical vocabularies for the analysis of recent British fiction in light of how bestseller lists, prices, publicity and media adaptability now shape the writing, marketing, and reading of fiction. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4CB3
Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English Cross-list: CSCT 4CF3
Enrolment is limited. Departmental permission required.

ENGLISH 4EM3 MODERNISM AND EMPIRE
An examination of the formalist, ideological and political relationship between British modernism and postcolonial studies through reading literary texts and cultural-historical contexts of modernism. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4EM3
Enrolment is limited. Departmental permission required.

ENGLISH 4FR3 FANTASIES OF THE ORIENT IN EIGHTEENTH-CENTURY BRITAIN
This course explores how eighteenth-century England registered and imagined "the other" through "the Orient", as well as how the Orient shaped emerging literary genres and modes. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4FR3
Antirequisite: ENGLISH 4F03
Enrolment is limited. Departmental permission required.

ENGLISH 4FT3 THE FAIRY TALE
A study of the fairy tale from the structuralist, psychoanalytic, and so-
ciological points of view, concentrating on the tales of the Brothers Grimm in transition and considering the importance of fairy tales in acculturation and their symbolic significance. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4FT3
Enrolment is limited. Departmental permission required.

ENGLISH 4FW3 FORMS OF CREATIVE WRITING
This seminar will combine a hands-on study of form with an opportunity for students to exercise and focus their own creative energies. In any given year, the course will concentrate on verse or fictional form. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4GW3 GOOD WOMEN, BAD GIRLS
This seminar explores representations of feminine virtue and vice with examples drawn from early sagas, epic, tales, hagiography, drama, miracle stories, and romance. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English Enrolment is limited. Departmental permission required.

ENGLISH 4HD3 DISLOCATION AND BELONGING: CANADIAN WRITINGS OF IMMIGRATION AND DIASPORA
This course examines works by and about people who have moved between cultural locations to consider questions of cultural and cross-cultural identity. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4HD3
Enrolment is limited. Departmental permission required.

ENGLISH 4HJ3 CROSSING BORDERS: GLOBAL FEMINISMS
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 an Honours program in English Cross-list: CSCT 4HJ3, WOMEN ST 4HJ3
Enrolment is limited. Departmental permission required.

ENGLISH 4JM3 EIGHTeenth-CENTury MACHINE LIFE
This seminar will explore how metaphors and constructions of the machine pushed the boundaries of what it meant to be human during the eighteenth century. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4JM3
Enrolment is limited. Departmental permission required.

ENGLISH 4K3 MODERNISM AND THE POLITICS OF FORM
Reading of modernist texts in the light of the contested relationship of formal/technical experimentation with the politics of race, gender, colonialism and other modes of power relations. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4K3
Enrolment is limited. Departmental permission required.

ENGLISH 4L3 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 4L3
Enrolment is limited. Departmental permission required.
ENGLISH 4OP3 THE "OPRAH EFFECT"
This seminar considers the influence of Oprah Winfrey at various sites of cultural contestation: television, magazine publication, women's body images, entrepreneurship, celebrity activism, race, "self-help." Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4OP3
Enrolment is limited. Departmental permission required.

ENGLISH 4PA3 THE "OPTICAL UNCONSCIOUS"; AESTHETICS IN THE AGE OF PHOTOGRAPHY
This seminar engages a series of contemporary debates in aesthetic theory, organized around the question of photography and the problems of visual representation. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4PA3
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). Seminar (two hours); one term
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 4QM3 SHAKESPEARE'S APPRENTICESHIP: MORAL PLAYS AND THE QUEEN'S MEN
This course will examine some of the popular plays the young Shakespeare would have seen, focusing on playing spaces, character types and cultural attitudes. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4QM3
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 Cross-list: CSCT 4RD3
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 Cross-list: CSCT 4RM3
Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English Cross-list: CSCT 4RR3
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 Cross-list: CSCT 4SC3
Enrolment is limited. Departmental permission required.

ENGLISH 4SF3 SCIENCE FICTION TOMORROW OR THE DAY AFTER
This seminar will examine science fiction based in the present or near future in the context of artificial intelligence theory, economic possibilities and biology. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4SF3
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. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4SS3
Enrolment is limited. Departmental permission required.

ENGLISH 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 an Honours program in English Cross-list: CSCT 4TS3
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, 1565-1656
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 4WC3
Enrolment is limited. Departmental permission required.

ENGLISH 4WL3 WOMAN AND THE NATION IN INDIAN POPULAR CINEMA
An examination of Indian popular cinema (Bollywood) and its construction of the nation through representations of women. Themes may include: partition, religion, sexuality, minority, caste, diaspora. Seminar (two hours); one term
Prerequisite: Registration in Level IV of an Honours program in English Cross-list: CSCT 4WL3
Enrolment is limited. Departmental permission required.

ENGLISH 4WL5 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 an Honours program in English Cross-list: CSCT 4WL5
Enrolment is limited. Departmental permission required.

ENGLISH 4WN3 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 4WN3
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 1C03**  
**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 3A03**  
**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

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**FRENCH**

**WEB ADDRESS:** http://www.humanities.mcmaster.ca/~french

**Togo Salmon Hall, Room 612**  
Ext. 24470

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**Faculty as of January 15, 2006**

**Chair**  
Michael Kliffer

**Professors**  
Marie-Madeleine Ahmad/L'as L., M. ès L., D. de l'U. (Paris-Sorbonne)
Caroline Bayard/L ès L., M. ès L. (Toulouse), M.A., Ph.D. (Toronto)
Suzanne Crosta/B.A., M.A. (McMaster), Ph.D. (Toronto)
Madeleine Jeay/L ès L. (Bordeaux), M.A., Ph.D. (Montréal)

**Associate Professors**  
Michael Kliffer/B.A. (British Columbia), M.A. (Michigan), Ph.D. (Cornell)
Gabriel Moyal/B.A. (McGill), M.A., Ph.D. (Toronto)
Anna 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. Rush/B.A. (Toronto), M.A., Ph.D. (California-Los Angeles)
Stéphane Posthumus/B.A. (Calvin College), M.A. (Queen’s), Ph.D. (Western Ontario)
Alexandre Sévigny/B.A. (York), M.A., Ph.D. (Toronto)
Hélène Trépanier/B.A. (McGill), M.A. (Laval), D.E.S., D. ès L. (Geneva)
Muriel Walker/L ès L., M. ès L. (Bordeaux), M.A., Ph.D. (Toronto)

**Program Coordinator, Continuing Education**  

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**ENTRY INTO LEVEL I COURSES AND FRENCH PROGRAMS**

<table>
<thead>
<tr>
<th>NO FRENCH OR NO GR 12 FRENCH</th>
<th>GR 12 FRENCH &lt; 80%</th>
<th>GR 12 FRENCH &gt; 80%</th>
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<tbody>
<tr>
<td>1Z06</td>
<td>Grade of at least A-</td>
<td>1N06</td>
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<tr>
<td>2Z06</td>
<td>Grade of at least B+</td>
<td>2A06</td>
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<tr>
<td>2M06</td>
<td>B.A. French</td>
<td>Hons French</td>
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**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 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 with a grade of less than 80% or FRENCH 1Z06 with a grade of at least A-.  
Antirequisite: FRENCH 1A06, 1B06, 2Z06

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**FRENCH 1Z06**  
**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 2Z06.  
Five hours (including three computer labs); two terms  
Antirequisite: Grade 12 Core French U. Not open to Francophones.  
Enrolment is limited.  
Students with prior knowledge of the language, as determined by a placement test, may be required to enrol 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 2B23**  
**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 2F03**  
**SURVEY OF FRENCH LITERATURE**  
Examination of a representative sampling of texts from various periods and genres.  
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 (Saussure, 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 2J03**  
**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 2L3 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 analysis.
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 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 treatises 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 forms and spelling from a historical point of view.
Three hours; one term
Prerequisite: FRENCH 2B03 Alternates with FRENCH 3SS3.
FRENCH 3AA3 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 3BB3 CONTEMPORARY QUEBEC THEATRE
Contemporary experimental theatre and representative playwrights such as Marcel Dube 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 3CC3 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; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.
FRENCH 3F03 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'Actualite.
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 2B03. FRENCH 2H03 and/or LINGUISTIC 1A03 and 1A03 (or 1A06) are recommended.
FRENCH 3K03 10TH-CENTURY FRENCH LITERATURE I
The early 10th century with emphasis on Montesquieu, Marivaux 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 3KK3 REVOLUTIONARY LITERATURE BEFORE THE REVOLUTION: VOLTAIRE, ROUSSEAU, AND BEAUMARCHAIS
Texts representing the main aspects of Enlightenment thought and literature from Candide to the Revolution.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06.
FRENCH 3QQ3 17TH-CENTURY FRENCH LITERATURE I
A study of selected plays by Corneille, Moliere and Racine.
Three hours; one term
Prerequisite: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06.
FRENCH 3QQ3 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 I, excluding FRENCH 2M06 and 2Z06.
FRENCH 3SS3 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 2B03 Alternates with FRENCH 3AA3.
FRENCH 3W03 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: Six units of French above Level I, excluding FRENCH 2M06 and 2Z06.
Antirequisite: FRENCH 2W03
FRENCH 3Z03 AFRICAN AND CARIBBEAN FRENCH LITERATURES
Three hours; one term
Prerequisite: One of FRENCH 1A06, 2M06 or registration in a French program.
FRENCH 4A03 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, 3CC3; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.
An examination of various aspects of second language acquisition as applied to the teaching of French, with special emphasis on psycholinguistic and cognitive scientific factors. Seminar (two hours); one term

Prerequisite: FRENCH 2H03 or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4F03 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 I, excluding FRENCH 2M06 and 2Z06

FRENCH 4F03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4H03 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 or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

FRENCH 4H03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4I03 TOPICS IN FRENCH POETRY
Previous topics include: Poets and Humour, Love Poetry, Women Poets, Polites maudits. Consult the Department concerning topic to be offered. Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4I03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4I3 FRENCH SOCIOLINGUISTICS
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

FRENCH 4J03 FRENCH LITERATURE OF THE RENAISSANCE
Characteristic themes of Renaissance humanism as they appear in the works of Rabelais, Montaigne, and selected poets.

Three hours; one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4JL3 TOPICS IN FRENCH AFRICAN AND CARIBBEAN FRENCH LITERATURES
Previous topics include: Contemporary Caribbean Writers, Literature of Senegal. Consult the Department concerning topic to be offered. Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4JL3 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4JM3 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 I, excluding FRENCH 2M06 and 2Z06

Enrolment is limited.

FRENCH 4JN03 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 I, excluding FRENCH 2M06 and 2Z06

FRENCH 4JN03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4Q03 TOPICS IN 17TH-CENTURY FRENCH LITERATURE
Previous topics include: Corneille, Racine, Moléire. Consult the Department concerning topic to be offered. Seminar (two hours); one term

Prerequisite: FRENCH 3Q03

FRENCH 4Q03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited

FRENCH 4R05 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 1206 and registration in any Level IV Honours Program or permission of the French Department

Antirequisite: FRENCH 2B03, 2BB3, 3C03

Not open to students registered in a program in French.

FRENCH 4S03 MEDIEVAL 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 4T03 INDEPENDENT STUDY
The student will prepare under the supervision of a faculty member a research paper involving independent research in an area of study in which the student has already demonstrated a high level of basic knowledge. Registration in Level IV of an Honours program in French and permission of the FRENCH 4T03 Committee

FRENCH 4U03 TOPICS IN FRENCH-CANADIAN LITERATURE
Previous topics include: Fiction and Postmodern Cultural Theories, Women Writers of Quebec. Consult the Department concerning topic to be offered. Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4U03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.

FRENCH 4WV3 20TH-CENTURY FRENCH LITERATURE II
Aspects of the development of 20th-century literature since the Second World War.

Three hours; one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

Antirequisite: FRENCH 2WW3

FRENCH 4W3 LINGUISTICS AND LITERATURE
General linguistics applied to literary analysis. Includes narrative structures, pragmatics and sign theory. Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06; or registration in Level III or IV of the Honours Linguistic Cognitive Science program. Students not registered in a program in French should have communicative competence in French.

Enrolment is limited.

FRENCH 4Y03 TOPICS IN 20TH-CENTURY FRENCH LITERATURE
Previous topics include: Women's Writing, The Essay, Gay and Lesbian Novel in France. Consult the Department concerning topic to be offered. Seminar (two hours); one term

Prerequisite: 12 units of French above Level I, excluding FRENCH 2M06 and 2Z06

FRENCH 4Y03 may be repeated, if on a different topic, to a total of six units. Enrolment is limited.
Faculty of January 15, 2006

**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. Dickin/M.A. (Cambridge), D.Phil. (Oxford)
John J. Drake/M.A. (Oxford), M.Sc. (McMaster)
John D. Eyles/B.A. (Western Ontario), M.Sc. (McMaster), Ph.D. (McMaster)
Carolyn H. Eyles/B.Sc. (East Anglia), M.Sc., Ph.D. (Toronto)
Frederick L. Hall/A.B. (Amherst), M.Sc., M.I.T., Ph.D. (Chicago)/Professor of Civil Engineering and Engineering Mechanics
Richard S. Harris/B.A. (Cambridge), M.A. (Ohio), Ph.D. (Queen's)
Parsons S. Koaran/B.Sc. (Athens), M.A., M.Sc., Ph.D. (McMaster)
Senior Canada Research Chair
Kao-Lee Liao/B.Sc. (National Taiwan), M.A. (Kansas State), Ph.D. (Clark)
William A. Morris/B.Sc. (Leeds), Ph.D. (Open University)
Ming-ko Woo/M.A. (Hong Kong), Ph.D. (British Columbia)

**Associate Professors**
Altaf Arain/B.E. (Pakistan), M.S., Ph.D. (Arizona)
Joe Boyce/B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)
Bruce Newbold/B.A., Ph.D. (McMaster)
Edwar Reinhirdt/B.A., Ph.D. (Carleton)
W. Jack Rink/B.Sc., Ph.D. (Florida State)
James Smith/B.Sc., M.Sc (Guelph), Ph.D. (Waterloo)
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**
Paulin Coulibaly/B.Sc., M.A.Sc. (Nice), Ph.D. (Laval)
Antonio Paiz/B.Sc. (Mexico), M.Sc., Ph.D. (Tohoku)
Darren Scott/B.A., M.A. (Western Ontario), M.Sc., Ph.D. (McMaster)
Greg Slater/B.Sc., M.Sc., Ph.D. (Toronto)/Canada Research Chair

**Associate Members**
Patricia Chow-Fraser (Biology) B.Sc., M.Sc. (Waterloo), Ph.D. (Toronto)
Fran Scott (Clinical Epidemiology and Biostatistics) B.Sc. (Toronto)
John C. Weaver (History) B.A., (Queen's), M.A., Ph.D. (Ottawa)

**Lecturers**
Walter Peace/M.A., Ph.D. (McMaster)
Susan Vajoczki/M.Sc. (McMaster)

School Notes:
1. The Honours Earth and Environmental Sciences programs allow students to select a specialist stream in geology (formerly biogeosciences), 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 I 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

**ENVR SC 1A03**
**ATMOSPHERE AND HYDROSPHERE**
An Introduction to the processes involved in weather, climate and surface waters with a focus on the human impacts of these processes. Two lectures, one tutorial, one lab (one hour); second term

**ENVR 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

**ENVR 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

**GEO 1H03**
**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 scale. Two lectures, one lab (one hour); second term

**GEO 2A03**
**INTRODUCTION TO ENVIRONMENTAL ISSUES**
An introduction to issues, perspectives and models in environmental studies at local, regional, national and international scales. Two lectures, one lab (two hours); one term

Prerequisite: One of ENVR SC 1A03, 1B03, 1G03, GEO 1H03, 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 ENVR 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 ENVR SC 1A03, 1B03, 1G03

**GEO 2E03**
**EARTH HISTORY**
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: ENVR SC 1G03

**GEO 2G03**
**EARTH SURFACE PROCESSES**
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: ENVR SC 1A03 or 1G03

**GEO 2GG3**
**NATURAL DISASTERS**
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

**GEO 2HA3**
**LOCATIONAL ANALYSIS**
Spatial location theory and spatial analysis methods as related to the siting of resources, manufacturing, and service activities. Two lectures, one lab (two hours); one term

Prerequisite: GEO 1H03 or 1HU3

**GEO 2HB3**
**URBAN ECONOMIC GEOGRAPHY**
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 1HU3

**GEO 2HC3**
**CANADA**
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
GE0 2HD3  URBAN HISTORICAL GEOGRAPHY
The historical development of cities with particular reference to old world origins, and focusing on North America since 1850.
Two lectures, one lab (two hours); one term

GE0 2HG3  POPULATION, SOCIETIES, AGING AND THE ENVIRONMENT
Differential growth of human populations and their changing age and sex structures with an emphasis on birth and death processes. The connections between population structures and processes and various aspects of environments and societies including aging are emphasized.
Three lectures; one term
Prerequisite: Registration in Level II or above

GE0 2HR3  RESEARCH METHODS IN SOCIAL GEOGRAPHY
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 1 HS3 or 1 HU3

ANTHROP 2Z03, CMST 2A03, GERONTOL 2C03, HEALTHST 2B03, SOCIOLOG 2Z03

GE0 2HU3  THE UNITED STATES OF AMERICA
The physical and economic geography of the United States.
Three lectures; one term
Prerequisite: Registration in Level II or above

GE0 2HY3  CITIES IN A CHANGING WORLD
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 1 HS3 or 1 HU3

GE0 2IO3  GIS AND DIGITAL CARTOGRAPHY
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 1 A03, 1B03, 1D03, SOC SCI 2J03, STATS 1C03

GE0 2K03  OPTICAL CRYSTALLOGRAPHY AND MINERALOGY
Introduction to crystallography, optical theory, and the polarizing microscope. Identification of minerals in igneous and sedimentary rocks and discussion of their structure and chemistry.
Two lectures, one lab (two hours); one term
Prerequisite: ENVIR SCI 1G03

GE0 2MM3  GEMSTONES: ORIGINS AND CHARACTERISTICS
An examination of gemstones focusing on their geologic origin, mineralogy, colour, chemistry, economic value and historical significance.
Three lectures; one term
Prerequisite: Registration in Level II or above

GE0 2Q03  INTRODUCTION TO ENVIRONMENTAL GEOCHEMISTRY
Chemical principles applied to the understanding of processes in aquatic and environmental systems.
Two lectures, one lab (three hours); one term
Prerequisite: CHEM 1A03 or above

GE0 2W03  PHYSICAL HYDROLOGY: SURFACE
Hydrological processes including precipitation, snowmelt, slope runoff, streamflow and hydrological data analysis.
Two lectures, one lab (two hours); one term
Prerequisite: One of MATH 1A03, 1B03, 1D03, SOC SCI 2J03, STATS 1C03; and one of ENVIR SCI 1A03, 1B03, 1G03

GE0 3AO3  ENVIRONMENTAL POLICY AND PLANNING
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

GE0 3AA3  GEOSCIENCE EXPLORERS AND ADVENTURERS
An examination of the discoveries made by geoscience explorers of modern times including those made on the moon and 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

GE0 3CC3  EARTH'S CHANGING CLIMATE
The earth's climatic history including natural causes of past climate change and human influences on climate will be explored.
Three lectures; one term
Prerequisite: Registration in Level III or above

GE0 3DD3  GEOARCHAEOLOGY OF THE UNDERWATER REALM
Methods in underwater exploration; geosaurichological 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

GE0 3EO3  SEDIMENTARY ENVIRONMENTS
Sedimentary processes, stratigraphy and depositional environments of classic and carbonate systems.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2EO3

GE0 3FE3  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 2EO3 and registration in Level III or above of an Honours program in the School of Geography and Earth Sciences

GE0 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 1A06, 1B03, GEO 1 HS3, 1 HU3

GE0 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 1 HU3

GE0 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

GE0 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 1 HS3 or 1 HU3; and one of COMMERCE 2A03, HTH SCI 1F03, 2A03, KINESIOL 3C03, MATH 1A03, 1B03, 1D03, SOC SCI 2J03, STATS 1A03, 1C03; and registration in Level III or above

GE0 3HH3  GEOGRAPHY OF HEALTH AND HEALTH CARE
An understanding of traditions in health geography and an exploration of the determinants of health including the social environment, the physical environment and health care services.
Three lectures; one term
Prerequisite: GEO 1 HS3 or 1 HU3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 3H3</td>
<td>GEOGRAPHY OF JAPAN</td>
<td>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 II or above</td>
</tr>
<tr>
<td>GEO 3H3</td>
<td>GEOGRAPHY OF SELECTED WORLD REGION</td>
<td>The study of an area outside of North America which will include topics in physical and human geography. Three lectures; one term GEO 3H3 may be repeated, if on a different topic, with permission of the School of Geography and Earth Sciences during March Counselling.</td>
</tr>
<tr>
<td>GEO 3H3</td>
<td>GEOGRAPHY OF PLANNING</td>
<td>A review of historical and contemporary approaches to city and regional planning problems. One lecture (three hours); one term Prerequisite: One of GEO 2H3A, 2H3B, 2H3C</td>
</tr>
<tr>
<td>GEO 3H3</td>
<td>URBAN ISSUES IN THEORY AND PRACTICE</td>
<td>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</td>
</tr>
<tr>
<td>GEO 3H3</td>
<td>URBAN SOCIAL GEOGRAPHY</td>
<td>The sociological 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 2H3D, GEO 2HR3 and 2HY3 are recommended.</td>
</tr>
<tr>
<td>GEO 3I0</td>
<td>APPLIED GIS (GEOGRAPHIC INFORMATION SYSTEMS)</td>
<td>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 2I03</td>
</tr>
<tr>
<td>GEO 3J0</td>
<td>CLIMATE CHANGE AND ECOSYSTEM IMPACTS</td>
<td>Past, present, and future climate change is examined in terms of the underlying physical and global biogeochemical processes. The Kyoto Protocol and its impacts of climate change on ecosystems are examined. Two lectures, one lab (two hours); one term Prerequisite: One of BIOLOGY 2F03, GEO 2B03, 2C03 Antirequisite: GEO 3B03</td>
</tr>
<tr>
<td>GEO 3K0</td>
<td>PETROLOGY</td>
<td>Introduction to igneous and metamorphic petrology, including thin section examination of rock suites, use of phase diagrams in petrology, and classification of petrology. Two lectures, one lab (two hours); one term Prerequisite: GEO 2K03</td>
</tr>
<tr>
<td>GEO 3L0</td>
<td>PHYSICAL AND CHEMICAL PROCESSES IN FRESHWATER ENVIRONMENTS</td>
<td>A multidisciplinary course emphasizing the interactions of chemical, physical, geologic, 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 2F03; and one of GEO 2E03, 2G03, 2W03; and permission of the School of Geography and Earth Sciences. Application must be received by March 31st of the academic year prior to registration. Antirequisite: GEO 4L03 Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.</td>
</tr>
<tr>
<td>GEO 3MN</td>
<td>NORTHERN ENVIRONMENTS</td>
<td>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</td>
</tr>
<tr>
<td>GEO 3O3</td>
<td>ORGANIC CONTAMINANTS IN THE ENVIRONMENT</td>
<td>Primary factors controlling the distribution, transport and fate of organic compounds in the environment. Topics include sources, partitioning processes (adsorption, volatilization, dissolution), transport, degradation (biotic, abiotic), and analytical techniques. Two lectures, one lab (three hours); one term Prerequisite: GEO 2O3 or registration in an Honours Chemistry program</td>
</tr>
<tr>
<td>GEO 3P03</td>
<td>ENVIRONMENTAL PALEONTOLOGY</td>
<td>Palaeontology as a paleoenvironmental indicator; important fossil groups, palaeoecology and taphonomy will be emphasized. Two lectures, one lab (three hours); one term Prerequisite: GEO 2E03</td>
</tr>
<tr>
<td>GEO 3Q03</td>
<td>ENVIRONMENTAL RECONSTRUCTION USING STABLE ISOTOPES</td>
<td>Principles of stable isotope geochemistry and its application to modern and fossil environmental reconstructions. Topics include isotope stratigraphy and its application to palaeodendrochronology, palaeoceanography and palaeoecology. Two lectures; one lab (three hours); one term Prerequisite: GEO 2E03</td>
</tr>
<tr>
<td>GEO 3R03</td>
<td>RESEARCH DESIGN AND DISSEMINATION</td>
<td>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</td>
</tr>
<tr>
<td>GEO 3S03</td>
<td>GEOSTATISTICS</td>
<td>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: SOC SCI 2J03 or STATS 1C03</td>
</tr>
<tr>
<td>GEO 3U0</td>
<td>ENVIRONMENTAL SYSTEMS</td>
<td>Use of simple numerical models applied to solving environmental problems related to anthropogenic perturbations. Introduction to STELLA numerical simulator; study of the problem &quot;what if&quot; scenarios. One lecture (three hours); one term Prerequisite: MATH 1A03, 1B03; and registration in B.Sc. Geoscience, or any Level III Honours program in the Faculties of Science and Engineering. Antirequisite: CIV ENG 2J04</td>
</tr>
<tr>
<td>GEO 3V0</td>
<td>ENVIRONMENTAL GEOPHYSICS</td>
<td>Introduction to principles and application 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: ENVIR SC 1G03, PHYSICS 1B03</td>
</tr>
<tr>
<td>GEO 3W0</td>
<td>PHYSICAL HYDROGEOLOGY</td>
<td>Mechanics 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, 1D03, 1K03, 1M03, 1N03</td>
</tr>
<tr>
<td>GEO 3Y0</td>
<td>REMOTE SENSING</td>
<td>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</td>
</tr>
<tr>
<td>GEO 3Z0</td>
<td>STRUCTURAL GEOLOGY</td>
<td>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</td>
</tr>
<tr>
<td>GEO 4A0</td>
<td>ENVIRONMENTAL ASSESSMENT</td>
<td>Methods and policy issues involved in the production and the appraisal of environmental impact assessments. Two lectures, one lab; one term Prerequisite: GEO 2A03; 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</td>
</tr>
<tr>
<td>GEO 4B0</td>
<td>WATERSHED ECOHYDROLOGY</td>
<td>Course that emphasizes a watershed ecosystems approach to interactions of hydrological, ecological and biogeochemical processes in the study of the natural hydrological function and response to disturbance of stream, riparian and wetland ecosystems. A mandatory field trip will occur. One lecture (two hours), one lab (two hours); one term Prerequisite: One of GEO 2W03, 3B03, 3J03</td>
</tr>
<tr>
<td>GEO 4C0</td>
<td>ADVANCED PHYSICAL CLIMATOLOGY</td>
<td>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</td>
</tr>
</tbody>
</table>
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 3R03 and registration in Level IV of an Honours pro-
gram in the School of Geography and Earth Sciences
Antirequisite: GEO 4R06

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 3HD3
Cross-list: CIV ENG 4H03

GEO 4E03 COASTAL ENVIRONMENTS
Coastal systems and their response to sea level change with an empha-
sis on the Holocene. A mandatory 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 sci-
ences 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 submit-
ted 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. pro-
gram 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 offer-
ings. 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. pro-
gram 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 offer-
ings. 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: HEALTHST 4E03

GEO 4H03 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 2HD3, 2HY3, 3HT3

GEO 4H03 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 4H23 URBAN HOUSING
The geography of housing, including the effects of land development,
construction, municipal planning and public policy on the urban land-
scape of housing and homelessness.
One lecture/seminar; one term
Prerequisite: GEO 3H23

GEO 4I03 ADVANCED GIS
(geographic information systems)
Advanced methods in GIS using ARCGIS. 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 3G03

GEO 4I03 ENVIRONMENTAL ISOTOPIC GEOCHEMISTRY
Application of isotopic analysis to answer current questions in earth
sciences, geochemistry, hydrogeology and microbiology. Topics include
analytical techniques, principles of isotopic fractionation and applica-
tions of light and transition metal isotopes to environmental systems.
Two lectures, one lab (three hours); one term
Prerequisite: GEO 3C03

GEO 4I06 SENIOR THESIS
Students will select research topics and prepare a thesis either individu-
ally 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 8.5 or higher; and permission of the instructor. Students
intending to enrol in this course must submit an application to the instruc-
tor 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 require-
ment. Antirequisite: GEO 4CC3
Enrollment is limited. See the heading Limited Enrolment Courses In the
Faculty of Science section of the Calendar.

GEO 4S03 SPATIAL STATISTICS
This course explores concepts and methods in visualisation, exploration
and modelling of point pattern, spatially continuous data and areal 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.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E03 and credit or registration in GEO 3K03

GEO 4V03 HYDROLOGIC MODELLING
Principles of numerical modelling and examination of selected hydrologic
models including deterministic, conceptual and statistical models.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2W03 or 3W03

GEO 4V03 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 and oil and gas
exploration.
Two lectures, one lab (two hours); one term
Prerequisite: GEO 2E03, 3V03
Antirequisite: GEO 4Z23

GERMAN
(SEE LINGUISTICS AND LANGUAGES, GERMAN)
GERONTOLOGY

WEB ADDRESS: http://www.socsci.mcmaster.ca/gerontology
Kenneth Taylor Hall, Room 226
Ext. 24449

Faculty as of January 15, 2006

Director
Margaret A. Denton

professors
Margaret A. Denton/Sociology B.A., M.A., Ph.D. (McMaster)
Eilen B. Ryan/Psychiatry B.A., M.A. (Brown), Ph.D. (Michigan)

associate professor
Anja Joshi/B.A., M.A. (Dalhousie)

Adjunct Associate professor
Sherry Dupuis/ (Waterloo) 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 GritGreg/Economics M.A. (ENSAE), Ph.D. (EHESS)
Martin Herings/Political Science B.A., M.A. (Philips Universitat Marburg, Germany), Ph.D. (Johns Hopkins)

Associate members
Jane Aronson/Social Work B.Sc. (New University of Ulster), B.S.W., M.S.W. (McGill), Ph.D. (Toronto)
Alan G. Bienen/English and Cultural Studies B.A. (Rhodes, South Africa), M.A., D.Phil. (Oxford)
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 McNelley/Psychiatry and Behavioural Neurosciences B.A., M.A., Ph.D. (Waterloo)
Jenny Ploeg/Nursing B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), P.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 advised 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 3C03.
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) 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
If no prerequisite is listed, the course is open.

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
Antirequisite: 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 4SS3

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 practices); one term
Prerequisite: Registration in any Gerontology program
Antirequisite: ANTHROP 2Z33, CMST 2A03, GEO 2HR3, GERONTOL 3C03, HEALTH 2B03, SOCIAL 2Z03

GERONTOL 2D03 SOCIAL ASPECTS OF AGING
Examines issues in aging from a multidisciplinary perspective including social constructionism, self identity, and a feminist perspective of aging.
Three hours (lectures and discussions); 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, 2A06

GERONTOL 2E03 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
Prerequisite: Registration in any Gerontology program. (See Note 2 above.)
Antirequisite: GERONTOL 4B03
Enrolment is limited.

GERONTOL 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
Prerequisite: GERONTOL 1A03 or 1A06
This course may be taken by undergraduate students registered in a non-Gerontology program. However, enrolment 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 GERONTOL 3C03, if the topic was Aging and Health Care Systems.

GERONTOL 3B03 GERONTOLOGY FIELD OBSERVATION
Directed observation of 40 hours in an approved field setting and a weekly seminar focusing on the integration of theoretical knowledge and observation.
Approximately four hours field observation per week, and two hours weekly seminar; one term
Prerequisite: Registration in Level III or IV of any Gerontology program. (See Note 2 above.)

GERONTOL 3B03 ADVANCED GERONTOLOGY PLACEMENT
A supervised experience linking classroom knowledge to a practice setting. Seminars focus on the integration of theoretical knowledge and observation.
Placement consists of approximately 60 hours of contact time.
Six weeks field practicum per week, and two hours bi-weekly seminar; one term
Prerequisite: GERONTOL 3C03 and registration in Level III or IV of any Gerontology program and permission of the instructor. (See Note 2 above.)

GERONTOL 3D03 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 one of GERONTOL 1A03, 1A06 and registration in any Health Studies 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.
GERONTOL 3E03 INDEPENDENT STUDY IN GERONTOLOGY I
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. GERONTOL 3E03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 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 Summer Session. One term. Prerequisite: GERONTOL 3B03 and registration in Level III or IV of any Gerontology program; or GERONTOL 1A03 or 1A08 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, enrolment for such students is limited.

GERONTOL 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 components); one term. Prerequisite: GERONTOL 1A03 or 1A06. This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 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. Prerequisite: Registration in any Gerontology program. GERONTOL 3I03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 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. Prerequisite: Registration in Level III or IV of any Gerontology program; or with permission of the instructor, registration in a Labour Studies program or GERONTOL 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, enrolment for such students is limited.

GERONTOL 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, but 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: GERONTOL 1A03 or 1A06. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.

GERONTOL 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: GERONTOL 1A03 or 1A06. This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited. Not open to students with credit in GERONTOL 3L03, if the topic was Long-term Care Facilities: Issues and Challenges.

GERONTOL 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 components); one term. Prerequisite: GERONTOL 1A03 or 1A06. Antirequisite: SOCIOLO 3C03. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.

GERONTOL 3N03 AGING AND MENTAL HEALTH
This course will examine the topic of mental health from a variety of perspectives. Terms, definitions, theories, assessment protocols and interventions related to mental health in older adults will be explored. Three hours (lectures and discussions); one term. Prerequisite: GERONTOL 1A03 or 1A06. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.

GERONTOL 3O03 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: SOCIOLO 3I03, 3003.

GERONTOL 3P03 APPLIED TOPICS IN GERONTOLOGY
Topics may vary from year to year. Possible topics include care management, ethical issues in aging, interventions for dementia, living environments, or program evaluation. Three hours (lectures and discussion); one term. Prerequisite: GERONTOL 1A03 or 1A06. GERONTOL 3P03 may be repeated, if on a different topic, to a total of six units. This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3Q03 INDEPENDENT STUDY IN GERONTOLOGY I
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. This investigation could take several forms such as library 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 4C03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 3R03 SPECIAL TOPICS IN GERONTOLOGY
Topics may vary from year to year. Possible topics include care management, ethical issues in aging, interventions for dementia, living environments, or program evaluation. Three hours (lectures and discussion); one term. Prerequisite: GERONTOL 1A03 or 1A06. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.

GERONTOL 3S03 AGING AND MENTAL HEALTH
This course will examine the topic of mental health from a variety of perspectives. Terms, definitions, theories, assessment protocols and interventions related to mental health in older adults will be explored. Three hours (lectures and discussions); one term. Prerequisite: GERONTOL 1A03 or 1A06. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.

GERONTOL 3T03 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: SOCIOLO 3I03, 3003.

GERONTOL 3U03 APPLIED TOPICS IN GERONTOLOGY
Topics may vary from year to year. Possible topics include care management, ethical issues in aging, interventions for dementia, living environments, or program evaluation. Three hours (lectures and discussion); one term. Prerequisite: GERONTOL 1A03 or 1A06. GERONTOL 3U03 may be repeated, if on a different topic, to a total of six units. This course may be taken as elective credit by undergraduate students registered in a non-Gerontology program. However, enrolment for such students is limited.

GERONTOL 3V03 INDEPENDENT STUDY IN GERONTOLOGY I
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. This investigation could take several forms such as library 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 4C03 may be repeated, if on a different topic, to a total of six units.

GERONTOL 4C03 SPECIAL TOPICS IN GERONTOLOGY
Topics may vary from year to year. Possible topics include care management, ethical issues in aging, interventions for dementia, living environments, or program evaluation. Three hours (lectures and discussion); one term. Prerequisite: GERONTOL 1A03 or 1A06. Not open to students with credit in GERONTOL 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, enrolment for such students is limited.
GERONTOL 4103 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, enrolment for such students is limited.
Not open to students with credit in GERONTOL 4003, if the topic was Aging and Health.
GERONTOL 4103 AGING AND DISABILITY
Multidisciplinary models of successful aging are applied to older adults with mobility, sensory, and cognitive impairments. Psychological, communicative, 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 4003, if the topic was Aging and Disability.
GERONTOL 4593 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: SOCIOLOG 4513
GERONTOL 4593 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
Antirequisite: POL SCI 4A03, SOC WORK 4A03, 4L03, 4V03

GREEK
(SEE CLASSICS, GREEK)

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/bhsc

Michael G. DeGroote Centre for Learning and Discovery, Room 3308
Ext. 22815

Assistant Dean, Bachelor of Health Sciences (Honours)
Delswarth G. Harness/ 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/bhsc

Courses

HTH SCI 1E03 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, 1E03

Note: Students entering the B.H.Sc. (Honours) program after completion of Level I in another program may be required to complete HTH SCI 2D06 at the discretion of the Assistant Dean of the program.

HTH SCI 1G03 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, two tutorials; one term
Prerequisite: Credit or co-registration in BIOLOGY 1A03 or HTH SCI 1106
Note: Not open to students with credit or registration in PSYCH 1A03.

HTH SCI 1I06 CELLULAR AND MOLECULAR SYSTEMS AND PRACTICUM IN HEALTH SCIENCES
A critical examination of essential concepts in biological systems with specific reference to cellular and molecular investigations. An opportunity to investigate various elements of core health science courses in a laboratory setting.
Two practicums per week (two hours each), one tutorial; two terms
Prerequisite: Grade 12 Biology and registration in Health Sciences I Corequisite: SCIENCE 1A00. Students registering in HTH SCI 1I06 must also register in SCIENCE 1A00 when completing their registration.
Not open to students with credit or registration in BIOLOGY 1A03.

HTH SCI 2A03 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
Antirequisite: HTH SCI 1F03

HTH SCI 2D06 INQUIRY II
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 and will use a problem-based format to introduce major illness categories.
Three hours; two terms
Prerequisite: Permission of the Assistant Dean, B.H.Sc. (Honours) Program
Note: This course is restricted to Level II B.H.Sc. (Honours) transfer students only.

HTH SCI 2E03 INQUIRY III
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: HTH SCI 1E03 and 1E03; or HTH SCI 1E06

HTH SCI 2F03 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
Antirequisite: BIOLOGY 1U03, 3K03, 3U03, 3UU3, HTH SCI 1D06, 1H03, 2L03, KINESIOLOGY 1A06, 1X06, 1Y03, 1Y03

HTH SCI 2F03 HUMAN PHYSIOLOGY AND ANATOMY II
A continuation of HTH SCI 2F03 with an examination of the immune, Cardiovascular, Respiratory, Gastrointestinal and Uro-Genital Systems.
Two lectures, one tutorial, one lab; one term
Prerequisite: HTH SCI 2F03
Antirequisite: BIOLOGY 1U03, 3K03, 3U03, 3UU3, HTH SCI 1D06, 1H03, 2L03, KINESIOLOGY 1A06, 1X06, 1Y03, 1Y03

HTH SCI 2G03 EPIDEMILOGY
This course examines concepts of health from molecular, clinical, population to societal perspectives.
Two lectures, one tutorial; one term
Prerequisite: STATISTICS 1C03 or registration in Level II of the B.H.Sc. (Honours) program

HTH SCI 2J03 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: HTH SCI 1G03 or PSYCH 1A03
Corequisite: HTH SCI 2A03 or STATISTICS 1C03
Antirequisite: KINESIOLOGY 2G03
An examination of the relationship between cell structure and function in eukaryotic (primarily) cells.

This course will offer both a theoretical and experiential introduction to tutorials

This course examines basic genetic issues including cytogenetics, eukaryotic (primarily) cell groups, dynamics and processes. Learning will be facilitated in large and small groups. One term

This course will build on knowledge of the immune system and focus on -

An introduction to human pathology with emphasis on the mechanisms of pathological injury and the morphologic changes induced to occur in cells and tissues.

This course will offer both a theoretical and experiential introduction to group dynamics and processes. Learning will be facilitated in large and small groups.

One term

This is a thesis-based research project conducted under the direction and supervision of a member of the Faculty. Arrangements to enrol in HTH SCI 4A09, including approval of the supervisor and a co-supervisor, must be made before the end of March in Level III.

This course reviews how health care is different from other goods and services, how governments have responded to these differences, and the role of governments in health care delivery. Arrangements to register in HTH SCI 4B06 including agreement of supervisor must be made before the end of March in Level III.

An opportunity to explore pedagogy as it relates to best practice in education. An introduction to critical appraisal of the medical literature.

Students learn methods to determine internal validity of various research designs to judge the strength of evidence for the effectiveness of an intervention, a diagnostic test, a screening program, a prognostic or risk factor and of systematic reviews.

This course will examine mechanisms of immune to brain communication, shared molecules and their role in the CNS; how interactions between the immune system and the brain impact CNS function, and the role of immune-brain communication in CNS diseases.

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HEALTH SCIENCES

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, 1CC7

**HTH SCI 1B03**  HUMAN BIOCHEMISTRY II
DNA replications, 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, 1CC7

**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/tutorials: two terms
Prerequisite: Registration in the Midwifery Education program

**HTH SCI 1C07**  INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE I
Through a small group, self-directed problem-based learning format, students will apply principles of cellular biology, biochemistry and health and life-long learning. This course will consist of three units to be taken over two terms self-study; one term
Prerequisite: Registration in the Midwifery Education program

**HTH SCI 1D06**  ANATOMY AND PHYSIOLOGY
This course covers basic concepts of human structure and function, genetics and embryology through lectures, demonstrations and appropriate laboratory assignments.

**HTH SCI 1E06**  HUMAN PHYSIOLOGY AND ANATOMY I
A study of anatomy and physiology of the communication and locomotion systems and the systems maintaining homeostasis. Lecture (two hours), lab or tutorial (three hours); two terms
Prerequisite: Registration in Level I of the B.Sc.N. (A) or (D) Stream or permission of the instructor
Antirequisite: BIOLOGY 1J03, 2A03, 3U03, HTH SCI 2F03, 2FF3, KINESIOLOGY 1A06, 1X06, 1Y03, 1YY3

**HTH SCI 1F06**  HUMAN PHYSIOLOGY AND ANATOMY II
Study of gross anatomy providing an overview of tissues and organs of the major body systems. This self-study course is required for Nursing students who have been granted advanced credit for all of the required physiology. Independent study (two hours lecture equivalent; four hours lab equivalent); one term
Prerequisite: Registration in the Midwifery Education program

**HTH SCI 1G06**  LIVING SCIENCES FOR CLINICAL PRACTICE
This course provides an overview of basic concepts relating to chemistry, biochemistry and microbiology. Content areas will include practical applications of clinical chemistry, specimen collection, related disease etiologies and pathologies, and the significance of laboratory values.
One lecture (three hours) one lab (two hours); one term
Prerequisite: Registration in the Midwifery Education program

**HTH SCI 1H06**  HUMAN ANATOMY
Study of gross anatomy providing an overview of tissues and organs of the major body systems. This self-study course is required for Nursing students who have been granted advanced credit for all of the required physiology. Independent study (two hours lecture equivalent; four hours lab equivalent); one term
Prerequisite: Registration in the B.Sc.N. program and permission of the instructor

**HTH SCI 1I06**  HUMAN ANATOMY
Study of gross anatomy providing an overview of tissues and organs of the major body systems. This self-study course is required for Nursing students who have been granted advanced credit for all of the required physiology. Independent study (two hours lecture equivalent; four hours lab equivalent); one term
Prerequisite: Registration in the B.Sc.N. program and permission of the instructor

**HTH SCI 1J06**  HUMAN PATHOPHYSIOLOGY II
This course is designed to take a more in depth look at the principles underlying the pathophysiology of the various body systems. One lecture, one tutorial, one lab; one term
Prerequisite: HTH SCI 4K03

**HTH SCI 2K03**  HUMAN PATHOPHYSIOLOGY II
This course is designed to take a more in depth look at the principles underlying the pathophysiology of the various body systems. One lecture, one tutorial, one lab; one term
Prerequisite: HTH SCI 4K03

**HTH SCI 4K03**  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: BIOLOGY 2B03 or HTH SCI 2K03; and registration in Level III

**HTH SCI 4L06**  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 4M03**  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 health and neurologically impaired populations.
Two lectures, one lab; one term
Prerequisite: HTH SCI 2F03, 2FF3

**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

**HTH SCI 4X03**  COLLABORATION AND PEER TUTORING
An important part of our responsibility in the program is to develop a learning community that incorporates the concept 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 3003, 300Q, INQUIRY 3003, 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) ...

**HTH SCI 2F03**  INTEGRATED BIOLOGICAL BASES OF NURSING PRACTICE II
Students will integrate concepts of pathophysiology and will apply 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: HTH SCI 1C07
Antirequisite: HTH SCI 2A02, 2B06, 2B22, 2CC2, 2DD2, 2H03, 2H23
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 1A03, 1B03 (or 1A06), 1H03, 1H3 (or 1H06) 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

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 1A03, 1B03 (or 1A06), 1H03, 1H3 (or 1H06) 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

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, WOMEN ST 2H03
This course is administered by Women's Studies.

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
Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 1D06, 1H03, 1H06, 2F03, KINESIOLOGY 1A06, 1X06, 1Y03, 1YY3

ANATOMY AND PHYSIOLOGY II: HOMEOSTASIS
An examination of structure-function relationships in the human body systems that are responsible for maintaining normal internal physiological conditions despite a changing environment. The systems covered include: cardiovascular, respiratory, Immunology, gastrointestinal, nutrition, uro-genital, and renal.
Two lectures (one hour), clinical problem presentation (one hour), one lab (two hours); one term
Prerequisite: Registration in Chemical Engineering and Bioengineering or Electrical and Biomedical Engineering
Antirequisite: BIOLOGY 1J03, 3U03, 3U03, HTH SCI 1D06, 1H06, 1H3, 2F03, KINESIOLOGY 1A06, 1X06, 1Y03, 1YY3

REPRODUCTIVE PHYSIOLOGY
This course emphasizes intrinsic and extrinsic methods of regulation of reproduction and also provides the basis for understanding alterations from normal mechanisms leading to the influence of medical conditions.
One tutorial (three hours); term one
Prerequisite: HTH SCI 1D06
Antirequisite: MIDWIF 2D03

HEALTH, SCIENCE AND SOCIETY
This course provides an introduction to a number of macrohealth issues including determinants of health, 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), (B) or (D); or Level I or II of the B.Sc.N. (B); or registration in Level II of the Midwifery Education program; or permission of the instructor

INTRODUCTION TO RESEARCH METHODS AND CRITICAL APPRAISAL
Introduction to the principles of clinical research and statistical inference, with particular emphasis on critical assessment of research evidence (both qualitative and quantitative) as presented in the health sciences literature related to 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 any stream of the B.Sc.N program; 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, 3M03

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 any stream 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.

ADVANCED LEADERSHIP AND MANAGEMENT IN HEALTH CARE ORGANIZATIONS
This advanced course builds upon HTH SCI 4E06 content. It integrates theories and research in leadership and management to enhance health care provider's knowledge of key issues in today's workplace. Offered in tutorial or distance format.
Tutorial or equivalent (four hours), independent study in an organization (six hours); one term
Prerequisite: HTH SCI 4E06
Antirequisite: NURSING 4D06

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 (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 4B06

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.
Lecture/problem-based tutorials (three hours); one term
Prerequisite: HTH SCI 3B03; and registration in Level III or IV of any stream of the B.Sc.N. program; and permission of the instructor
Antirequisite: COLLAB 4H03, NURSING 4H03

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 team dynamics applied in the health care environment. Distance education and tutorial formats.
Problem-based tutorial or equivalent (three hours); one term
Prerequisite: Health care professional and permission of the instructor
Antirequisite: NURSING 4I03

RESEARCH PROJECT
Students participate in a research study. Concepts of research design, implementation and dissemination of results are applied in the current workplace environment. Enrolment in tutorial format is limited.
Approximately two hours per week; one term
Prerequisite: HTH SCI 3C04 and registration in Level IV of any stream of the B.Sc.N. program; and permission of the instructor
Antirequisite: HTH SCI 4L04

POVERTY AND HOMELESSNESS
This course investigates poverty and homelessness and the disproportionate number of health and social issues facing marginalized groups. It explores the issues of poverty in Canada and places specific emphasis on poverty in our local community of Hamilton-Wentworth.
Tutorial groups, independent reading (three hours), individual or group service learning projects (three hours); one term
Prerequisite: HTH SCI 3B03 and registration in Level III or IV of any stream of the B.Sc.N. program; and permission of the instructor
Not open to students with credit in NURSING 4G03 if the topic was Poverty and Homelessness.

HEALTH SCIENCE CONFLICT MANAGEMENT IN HEALTH CARE ORGANIZATIONS
An introduction to the types and processes of conflict in health care organizations. Exploration and application of theories and principles of conflict and negotiation in the health care environment. Offered in both tutorial and distance format.
Tutorial (three hours); one term
Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor
Antirequisite: NURSING 4E03
HEALTH STUDIES

WEB ADDRESS: http://www.socsci.mcmaster.ca/healthst/

Faculty as of January 15, 2006

Director
Roy Cain

Associate Professors
Ivy Bourgeault (Sociology) B.Sc. (Alberta) M.Sc., Ph. D. (Toronto)

Assistant Professors
Alina Gildiner (Political Science) B.Sc., M.Sc., Ph. D. (Toronto)
James Gilllett (Sociology) B.A. (Calgary), M.A., Ph.D. (McMaster)
Celia Rothenberg (Religious Studies) B.A. (Wellesley), M.A. (Oxford), Ph.D. (Toronto)
Chris Sinding (Social Work) B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)

Adjunct Professor
Joseph Levy (Health Planning, York University, B.A. (Wilfred Laurier), B.F.H.E. (Waterloo), M.S.W. (Wilfred Laurier), Ph.D. (Waterloo)

Adjunct Assistant Professor
Collin McMullen (Geography and Earth Sciences) B.A. (Brock), 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)
Christina Moffat (Anthropology) B.Sc. (Toronto), B.A., Ph.D. (McMaster)
David Wright (History/Psychiatry) B.A., M.A. (McGill), D. Phil. (Oxford)

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 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. Enrollment 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
Antirequisite: HEALTHST 1E03, 1S03, HTH SCI 3Q03, SOC SCI 1H03
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, enrollment 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 of a Health Studies program
Antirequisite: ANTHRO 2203, CMST 2A03, GEO 2H03, GERONTOL 2C03, SOCIOL 2203

HEALTHST 2C03 HEALTH ECONOMICS AND ITS APPLICATION TO HEALTH POLICY
Economic analyses of health and health care, with a special emphasis on policy issues in the Canadian health care system.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above of a Health Studies program
Antirequisite: ECON 2C03
Not open to students with credit or registration in ECON 2G03, 2K03 or 3L03
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 of a Health Studies program
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 birthing rituals, reproductive ethics, policy and technologies.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above of a Health Studies program
Antirequisite: HEALTHST 3A03
This course may be taken by students enrolled in a Gerontology program. However, enrollment for such students is limited.

HEALTHST 2AA3 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, enrollment 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 or 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
This course may be repeated, if on a different topic, to a total of six units.

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: ECON 3G03
Enrollment 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 1A03, 1E03, 1S03; and registration in Level III or above
Enrollment is limited. Priority will be given to students registered in a Health Studies program.

HEALTHST 3F03 may be repeated, if on a different topic, to a total of six units.
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 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 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: HTH SCI 3Y03, 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 4G06  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 4H03  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 4I03  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.

HEALTHST 4L03  THE POLITICS OF CHANGE IN SOCIAL WELFARE
An examination of how social welfare policy establishes the boundary between public and private roles, and how the boundary changes.
Three hours (seminar); one term
Prerequisite: HEALTHST 3M03 or POL SCI 3M03 and registration in Level IV of an Honours Health Studies program
Cross-list: POL SCI 4L03
Enrolment is limited.
This course is administered by the Department of Political Science.

HEBREW

(SEE RELIGIOUS STUDIES, HEBREW)

HISPANIC STUDIES

(SEE LINGUISTICS AND LANGUAGES, HISPANIC STUDIES)

HISTORY

WEB ADDRESS: http://www.humanities.mcmaster.ca/-history/
Chester New Hall, Room 619
Ext. 24270

Faculty as of January 15, 2006

Chair
Virginia Aksan

Professors
J. Michael Gauvreau/B.A. (Laurentian), M.A., Ph.D. (Toronto)
Bernice M. Kaczynski/B.A. (Pittsburgh), M.Phil., Ph.D. (Yale)
H. V. Nelles/B.A., M.A., Ph.D. (Toronto)/L. R. Wilson Professor in Canadian History
John C. Weaver/B.A. (Queen's), M.A., Ph.D. (Duke)

Adjunct Professor

Associate Professors
Virginia Aksan/B.A. (Allegheny College), M.L.S. (California-Berkeley), M.A., Ph.D. (Toronto)
David P. Barrett/B.A., M.A., M.Phil. (Toronto), Ph.D. (London)
Kenneth Culkshank/B.A. (Carleton), M.A., Ph.D. (York)
Ruth Frager/B.A. (Rochester), M.A., Ph.D. (York)
Evans W. Haley/A.B. (Dartmouth), Ph.D. (Columbia)
Stephen Heathorn/B.A. (Toronto), M.A. (McMaster), Ph.D. (Toronto)
Martin Horn/B.A. (Western Ontario), M.A. (McMaster), Ph.D. (Toronto)
Stephen Streeter/B.S. (Bates), M.A. (SUNY-Storybrook), M.A. (California-Riverside), Ph.D. (Connecticut)
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 1L03 and 1L33, cross-listed as HISTORY 1L03 and 1L33. Students may take only 12 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

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 1A33 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 1B33 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
This course is administered by the Department of Classics.

HISTORY 1L33 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 1L33
This course is administered by the Department of Classics.

HISTORY 2A33 THE MODERN CARIBBEAN
An examination of the history 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 discussions); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2A33

HISTORY 2C33 THE MEDIEVAL WORLD 400-1050
The Early Middle Ages: The barbarian kingdoms to the feudal monarchies.
Three hours (lectures and discussions); one term
Prerequisite: Registration in Level II or above
Alternate: HISTORY 3X33

HISTORY 2D03 EARLY LATIN AMERICA
From the Amerindian cultures to 1623. This course will deal with the pre-Columbian civilizations, the Spanish conquest and its consequences until the war for independence from Spain.
Three hours (lectures and discussions); one term
Prerequisite: Registration in Level II or above
Alternate: HISTORY 3X03

HISTORY 2D05 THE MEDIEVAL WORLD 1050-1400
The High and Late Middle Ages: Themes in European history, society, and culture.
Three hours (lectures and discussions); one term
Prerequisite: Registration in Level II or above
Alternate: HISTORY 3X05

HISTORY 2EE3 SCIENCE AND TECHNOLOGY IN WORLD HISTORY
An introduction to the manner in which science and technology influence society and how society influences science and technology, paying particular attention to the transfer of knowledge and machines over time and between cultures.
Three hours (lectures and discussions); one term
Prerequisite: Registration in Level II or above

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
Alternate: HISTORY 2BB6

HISTORY 2F33 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 2F33
Alternate: HISTORY 2BB6

HISTORY 2G03 MODERN LATIN AMERICA SINCE 1820
Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2G03
Alternate: HISTORY 3Y35, PEACE ST 3J03

HISTORY 2G05 MODERN LATIN AMERICA SINCE 1820
Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2G05
Alternate: HISTORY 3Y35, PEACE ST 3J03

HISTORY 2G05 MODERN LATIN AMERICA SINCE 1820
Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2G05
Alternate: HISTORY 3Y35, PEACE ST 3J03

HISTORY 2G05 MODERN LATIN AMERICA SINCE 1820
Liberalism, nationalism, militarism and the various revolutions will be covered, as well as the U.S. role in Latin America and the Caribbean.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 2G05
Alternate: HISTORY 3Y35, PEACE ST 3J03
This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.

Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG 2FF3

HISTORY 2J13 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 2J13
Antirequisite: HISTORY 3Q03, PEACE ST 3G03

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

This course is administered by the Department of Classics.

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

This course is administered by the Department of Classics.

HISTORY 2L13 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 2L13

This course is administered by the Department of Classics.

HISTORY 2M03 EARLY MODERN BRITAIN, 1500-1800
A thematic study of British culture, society and governance between 1500 and 1800 A.D.

Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2N06

HISTORY 2M3 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 2N06

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 2N06

HISTORY 2Q03 THE SOVIET UNION
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 3H06

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 eras to the Civil War and Reconstruction.

Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 2RR3 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

HISTORY 2S03 WAR IN THE WEST, 1850-1945
A survey of the development of warfare in the Western World from 1850 to 1945. Particular attention is paid to 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 2T03 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 ORIGINS OF GLOBALIZATION, 1200-1700
An introduction to interpretations of globalization, the appearance and expansion of cross-cultural trade systems, colonization and population diasporas.

Three hours (two lectures, one tutorial); one term
Prerequisite: Registration in Level II or above
Antirequisite: HISTORY 2006

HISTORY 3A03 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 3A03

HISTORY 3B03 MODERN JAPAN
A survey of the 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 1L3, 2K03, 2L3, 3C3, 3E03; and registration in Level III or above
Cross-list: CLASSICS 3C03

Alternates with HISTORY 3C03.
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 3CC3  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 1LL3, 2K03, 2LL3, 3C03, 3E03; and registration in Level III or above
Cross-list: CLASSICS 3CC3
Antirequisite: HISTORY 3MM3
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 3DD3  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: RELIGST 3DD3
This course is administered by the Department of Religious Studies.

HISTORY 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: One of HISTORY 1LL3, 2K03, 2LL3, 3C03, 3CC3; and registration in Level III or above
Cross-list: CLASSICS 3EE3
Alternates with HISTORY 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); one term
Prerequisite: Registration in Level II or above

HISTORY 3G03  BUSINESS HISTORY: THE CANADIAN EXPERIENCE IN INTERNATIONAL CONTEXT
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 3G33  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
Antirequisite: HISTORY 2E06

HISTORY 3J03  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 3J03

HISTORY 3L03  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, counter-culture, feminism and the conservative backlash.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above

HISTORY 3J03  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 focus 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 3J03  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 3J03
Antirequisite: GSCHE 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 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 HISTORY 1L3, 1L3, 2L3, 2L03
Cross-list: CLASSICS 3L3
This course is administered by the Department of Classics.

HISTORY 3MM3  TOPICS IN ANCIENT 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 1L3, 2K03, 2L03, 2L3
Cross-list: CLASSICS 3MM3
HISTORY 3MM3 may be repeated, if on a different topic, to a total of six units.
This course is administered by the Department of Classics.

HISTORY 3N03  THE HISTORY OF THE CANADIAN WORKING CLASS
An examination of social, political and economic issues shaping the development of the Canadian working class. This includes investigation of the ideological divisions, ethnic relations and gender roles within the working class and within the labour movement.
Three lectures; one term
Prerequisite: Registration in Level II or above
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 liberal democracy premised on community solidarity to a liberal democracy which exalts 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 plantation and labour regimes, gender, slave health; slave resistance; Afro-Creole cultures; 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 3P33  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  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 3R03  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
Cross-list: PEACE ST 3R03

HISTORY 3S33  ASPECTS OF THE CULTURAL HISTORY OF ENGLAND, 1500-1898
An introduction to courtly, urban and rural culture from pre-Reformation humanism through to the Restoration era, with emphasis on social, political and religious influences.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3T03  EARLY MODERN FRANCE, 1450-1789
France was without question one of the most powerful polities in early modern Europe and serves as a useful focal point for understanding the emergence of absolutism, colonization, imperialism, urbanization and changing gender and social roles.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above

HISTORY 3U03  HISTORY OF THE FUTURE
A study of the history of how human technological capacity in interaction with social, economic and social influences has driven imagination of the future and helped shape the future imagined.
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 3V33  WAR AND SOCIETY IN EARLY MODERN BRITAIN 1485-1815
A thematic study of the nature of British warfare and its relationship to society during the period when Britain developed as a major military and naval power.
Three hours (lectures and discussion groups); one term
Prerequisite: Registration in Level II or above
Cross-list: PEACE ST 3V33

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 3W33  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 3G33
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 tutorial; 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 lure 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
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3Z03
Antirequisite: RELIG ST 2X03
This course is administered by the Department of Religious Studies.

HISTORY 3ZZ3  JUDAISM AND THE JEWISH PEOPLE IN THE TWENTIETH CENTURY
Jews and Judaism in a century of catastrophe and renewal. The progress of Emanicipation; Jews in Canada and the U.S.; the Jewish catastrophe in Europe; the Jewish identities in literature and the arts.
Two lectures, one tutorial; one term
Prerequisite: Registration in Level II or above
Cross-list: RELIG ST 3Z33
Antirequisite: RELIG ST 2X33
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. Enrollment will be limited to approximately 15 students per seminar. The Department is able to offer only a selection of the seminars listed below every year. Information on courses may be obtained from the Department. Seminar places will be allotted each March for the succeeding session; early application to the Department is essential.

HISTORY 4A06  RACISM AND HUMAN RIGHTS IN POST-CONFEDERATION CANADA
This course examines racist 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.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2J06, 2T13 or 2U03; and registration in Level III or IV of an Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4A36  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 or 3S33; and registration in Level III or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4A60  RACISM AND HUMAN RIGHTS IN POST-CONFEDERATION CANADA
This course examines racism 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.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2J06, 2T13 or 2U03; and registration in Level III or IV of an Honours program in History
Enrolment is limited. Departmental permission required.
HISTORY 4896  MODERN CANADA, 1896-1968:
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 cul-
tural 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 2006, 2T03, 2TT3 or 3NN3; and registra-
tion in Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 48B6  MODERN JAPAN
Japan from the Meiji Restoration to the post-war resurgence, with em-
phasis on political development and social change.
Seminar (two hours); two terms
Prerequisite: HISTORY 3B03 and registration in Level Ill 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 Ill or IV of the Japanese
Studies program
Enrolment is limited. Departmental permission required.

HISTORY 4065  MODERN EUROPEAN CULTURE IN CRISIS
A thematic study of selected civilizations of the late nineteenth and twen-
tieth centuries. Themes include the encounter with modernity; the intersecti-
on of culture and politics; the impact of two world wars; and the response of intellectuals, artists and scientists to ideological
socialization.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2C06, 2FF3, 2L13, 2Q03, 2S03, 3H06, 3H13,
3L03, 3Q03, 3Q03, 3P03, and registration in Level Ill or IV of any Honours
program in History
Enrolment is limited. Departmental permission required.

HISTORY 4066  ANCIENT CIVILIZATIONS
A thematic study of selected civilizations in the ancient world.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2106, 2L03, 2L13, 3L13, 3M33; and registra-
tion in Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4067  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 2M33, 2N06, 2P33 or 3R33; and registra-
tion in Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4068  HEALTH AND MEDICINE IN THE MODERN WESTERN 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 Na-
tions' society; urban sanitary reform; the emergence of the medical pro-
fession; and the rise of universal health insurance.
Seminar (two hours); two terms
Prerequisite: HISTORY 3V03 or 3Y03; and registration in Level Ill or IV of
any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4069  MODERN CHINA
Aspects of the political, social and cultural history of nineteenth and
twentieth-century China.
Seminar (two hours); two terms
Prerequisite: HISTORY 2G03 or 3G03; and registration in Level Ill or IV of
any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4069S  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 2E03, 2E03, 3A03, 3AA3; and registration in
Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4070  WOMEN AND SOCIAL MOVEMENTS IN THE NINETEENTH- AND
TWENTIETH-CENTURY UNITED STATES
Women's involvement in social movements such as anti-lynching, unioni-
zation, feminism and civil rights is used to discuss power, social change,
race, femininity, masculinity, and class in U.S. history.
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2F03, 2R03, 2RW3 or 3WW3; and registra-
tion in Level Ill or IV of any 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 4106  THE UNITED STATES SINCE 1865
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2R03, 2R03 or 3F03; and registration in
Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4106  THE UNITED STATES SINCE 1865
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2R03, 2R03 or 3F03; and registration in
Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.

HISTORY 4106  THE UNITED STATES SINCE 1865
Seminar (two hours); two terms
Prerequisite: One of HISTORY 2R03, 2R03 or 3F03; and registration in
Level Ill or IV of any Honours program in History
Enrolment is limited. Departmental permission required.
INDIGENOUS STUDIES

WEB ADDRESS: http://www.mcmaster.ca/indigenous/default.htm

Hamilton Hall, Room 103
Ext. 27426

Director
D.J. Martin-Hill/B.A., M.A., Ph.D. (McMaster)

Committee of Instructors
T. Deer, Mohawk Language Instructor
R. Hill/M.A. (SUNY)
N. General
J. Longboat
T. McCarthy/B.A., M.A. (Western Ontario), Ph.D. (McMaster)
A. Darnay, Ojibwe Language Instructor/B.A. (McMaster), B.Ed. (Nipissing), B.A. (Algoma)
P. Hess/B.A. (McMaster)

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)
P. Daenzer (McMaster University Representative)

INDIGENOUS STUDIES...

Courses

If no prerequisite is listed, the course is open.

INDIG ST 1A03 INTRODUCTION TO INDIGENOUS STUDIES
An introduction to Indigenous peoples’ world views from pre-contact to the Indian Act of 1876. Indigenous history and philosophy will be examined along with the issues of representation and colonialism.
Three hours (lectures and seminars); one term
Antirequisite: INDIG ST 1A06

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 1A06

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, 1AA3; or one of CAYUGA 1203, MOHAWK 1203, OJIBWE 1202; or permission of the instructor
Antirequisite: INDIG ST 2A06

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, 1AA3; or one of CAYUGA 1203, MOHAWK 1203, OJIBWE 1202; or permission of the instructor
Antirequisite: INDIG ST 2A06

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 eras within a post-colonial context. Topics will include self-determination, resource management, land claims, and economic development.
Three hours (lectures and seminars); one term
Prerequisite: INDIG ST 1A03, 1AA3; or permission of the instructor

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 1806, PHILOS 2R03

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.
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: Six units Level II Indigenous Studies 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 Level II Indigenous Studies or permission of the instructor.

INDIG ST 3CC3  CONTEMPORARY INDIGENOUS SOCIETIES: SELECTED TOPICS
2006-2007 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 stereotyping.
Three hours (lectures and seminars); one term
Prerequisite: Six units Level II Indigenous Studies or six units of Level II English or permission of the instructor.

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 Level II Indigenous Studies or six units of Level II English or permission of the instructor.

INDIG ST 3G03  INDIGENOUS CREATIVE ARTS AND DRAMA: SELECTED TOPICS
2006-2007 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 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 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.
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 1203 or 1206
Antirequisite: OJIBWE 2206

**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 1H3** 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 1S3** 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
The systematic investigation of any subject requires a set of widely applicable and transferable skills. Students learn how to formulate questions, gather and interpret evidence, and reach well-considered conclusions. The content theme will be drawn from Social Sciences issues and will vary depending upon the subject expertise of the instructor.
Three hours; one term
Prerequisite: Registration in Social Sciences I or Kinesiology I
Enrolment is limited.
Not open to students with credit in Inquiry 1H3, 1S3.

**Inquiry 1SS3** INQUIRY IN SCIENCE II
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 fees set by the Unit to cover travel costs.
Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

**Inquiry 1SS3** 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. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

**Inquiry 1SS3** 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. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

**Inquiry 1SS3** INQUIRY IN SCIENCE II (PHYSICS AND ASTRONOMY)
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 fees set by the Unit to cover travel costs.
Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

**Italian**

(See Linguistics and Languages, Italian)

**Japanese and Japanese Studies**

(See Linguistics and Languages, 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, 2006

Choir
Neil McCartney
Associate Choir (Undergraduate Program)
Nick Cipriano
KINESIOLOGY

Professors
Cameron J. Blinkie/B.A., B.P.E. (McMaster), M.A., Ph.D. (Western Ontario)
Digby 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)
Sue Inglis/B.P.E., M.A. (Alberta), Ph.D. (Ohio State)
Timothy D. Lee/B.H.K., M.A. (Windsor), Ph.D. (Louisiana State)
Neil McCartney/B.Ed. (Exeter), Ph.D. (McMaster)
Digby G. Sale/B.P.H.E. (Toronto), M.A. (Western Ontario), Ph.D. (McMaster)
Janet L. Staikes/B.A. (Western Ontario), M.Sc., Ph.D. (Waterloo)

Associate Professors
Nancy B. Boucheir/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)
Martin J. Gibala/B.H.K. (Windsor), M.Sc. (McMaster), Ph.D. (Guelph)
Robert J. Henderson/B.P.E. (McMaster), M.A., Ph.D. (Alberta)
Kathleen A. Martin Gins/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. (Acadis), M.Sc., Ph.D. (Waterloo)

Associate Members
Vicki Gaele/Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (McMaster)
Mark V. Kamath/Medicine) B.Eng.(Myssore), M.S., Ph.D. (Indian Inst. of Tech., Madras), Ph.D. (McMaster)
Robert S. McKeil/Rehabilitation Science) B.Sc., M.Sc., M.D. (Western Ontario), Ph.D. (McMaster)
Michael Pietrylowski/Rehabilitation Science) B.Sc., M.Sc. (Waterloo), Ph.D. (Simon Fraser)
Mark A. Tarnopoloski/Medicine) B.P.E., M.D., Ph.D., F.R.C.P. (C), F.A.C.P. (C), M.C.P.A. (C)
Jean Wessel/Rehabilitation Science) B.Sc., M.C.P.A. (C), M.Sc. (McMaster)
Ph.D. (Alberta)
Laurie Wishart/Rehabilitation Science) Dip.P.O.T, B.Sc. (Toronto), M.Sc., Ph.D. (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. Enrolment in some Level III and IV Kinesiology courses is limited.

3. KINESIOLOGY 1Y03 and 1Y13 are available to non-Kinesiology students. Enrolment is limited.

4. The following courses are available for elective credit for students enrolled in Level II or above of a non-Kinesiology program: KINESIOLOGY 2D03, 3F03, 3J03, 3L03, 3M03, 3P03, 3S03, 3T03, 3Y03, 4D03, 4G03, 4M03, 4T03 and 4Z03. Enrolment 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 3S03 may be used to satisfy Health Studies requirements for Kinesiology students pursuing a Minor in Health Studies.

7. KINESIOLOGY 4G03 may be used to satisfy Gerontology requirements for Kinesiology students pursuing a Minor in Gerontology.

8. Some Level III and IV Kinesiology courses may require current CPR/First Aid certification. Students are responsible for checking course outlines and ensuring this requirement is met.

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, HTH SCI 1D06, 1H03, 1H06, 1H30, 2F03, 2F03, 2L03, 2L13, KINESIOLOGY 1X06, 1Y03, 1YY3

Not open to students with credit or registration in BIOLOGY 4G06.

KINESIOLOGY 1L03 PSYCHOMOTOR BEHAVIOUR

The behavioural and psychological principles underlying motor control and motor learning.

Three hours (lectures, lab); 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 2A03, SOCIOLGY 2T03

KINESIOLOGY 1K03 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 1L00

KINESIOLOGY 1Y03 HUMAN ANATOMY AND PHYSIOLOGY I

An introduction to the anatomy and physiology of the skeletal, articular, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, and urinary systems with 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 U is strongly recommended.

Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1D06, 1H03, 1H30, 2F03, 2F03, 2L03, 2L13, 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 1Y13 HUMAN ANATOMY AND PHYSIOLOGY II

A systematic approach to the examination of the endocrine, cardiovascular, respiratory, digestive, and urinary systems with a regional approach to examine the functional anatomy of the upper and lower extremities.

Three hours (lectures), two hours (labs/tutorials); one term

Prerequisite: KINESIOLOGY 1Y03

Antirequisite: BIOLOGY 1J03, 2A03, HTH SCI 1D06, 1H03, 1H30, 2F03, 2F03, 2L03, 2L13, 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 2A03 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 1A06 and registration in Level II of a Kinesiology program

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, lab); 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, lab); one term

Prerequisite: Registration in Level II of a Kinesiology program

Antirequisite: HTH SCI 2J03

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  \textbf{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 3AA3  \textbf{BIOMECHANICS II}  
Study of kinematics and kinetics of human movement, including electromyography, fluid and tissue mechanics with applications.  
Three hours (lectures); one term  
Prerequisite: KINESIOLOGY 1A06, 2A03 and registration in Level III or above of a Kinesiology program  
Antirequisite: KINESIOLOGY 2A06

KINESIOLOGY 3B03  \textbf{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, 2B03  
Corequisite: KINESIOLOGY 3B00  
Students who do not successfully complete the required KINESIOLOGY 3B00 placement will forfeit credit in KINESIOLOGY 3B03.

KINESIOLOGY 3B00  \textbf{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  \textbf{STATISTICS AND RESEARCH DESIGN}  
Research design and descriptive and inferential statistics in Kinesiology.  
Three hours (lectures, lab); one term  
Prerequisite: Registration in Level III or above of a Kinesiology program

KINESIOLOGY 3D03  \textbf{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, debates and applied case study assignment; one term  
Prerequisite: KINESIOLOGY 1A06, 2C06

KINESIOLOGY 3DD3  \textbf{FOUNDATIONS OF OUTDOOR EXPERIENTIAL EDUCATION}  
An analysis of curricular programs in O.E.E. including, environmental, earth, and eco-physical education; experiential 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  \textbf{NEURAL CONTROL OF HUMAN MOVEMENT}  
Neuromuscular control underlying human movements. 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 PSYCHO 2F03 and registration in Level III or above of an Honours Psychology program; permission of the instructor.

KINESIOLOGY 3F03  \textbf{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 project); 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  \textbf{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 3K03  \textbf{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 3K06  \textbf{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  \textbf{ORGANIZATIONAL BEHAVIOUR AND APPLICATIONS TO KINESIOLOGY}  
An examination of concepts and issues of organizational 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 2B03  
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  \textbf{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 3M03  \textbf{COMMUNITY LEADERSHIP IN SPORT AND PHYSICAL ACTIVITY}  
This placement course provides the essential links between classroom knowledge and professional practice. Working with special needs populations, children, adolescents, adults and the elderly, students will experience the challenges faced by community agencies that deliver sport and physical activity programs.  
Placement experience equivalent to one day per week (60 hrs.); seminars; one term  
Prerequisite: Credit or registration in KINESIOLOGY 3M03 and registration in Level III or above  
Antirequisite: KINESIOLOGY 3MP0, SOC SCI 3MP3  
Not open to students with credit or registration in KINESIOLOGY 4EE3 if the placement is in the area of coaching or leadership.  
Enrolment is limited.

KINESIOLOGY 3P03  \textbf{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, SOCIOL 1A06; and registration in Level III or above  
Antirequisite: SOCIOL 2T03  
Not open to students with credit or registration in SOCIOL 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  \textbf{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 workshops.  
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 3T03  DANCE PERFORMANCE**
An in-depth practical experience in performing, choreographing and teaching aimed at experienced dancers. The course will have a focus on creative 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.

**KINESIOLOGY 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 KINESIOLOGY 1A06 or 1X06, or both KINESIOLOGY 1Y03 and 1Y03; and registration in Level III or above
Antirequisite: KINESIOLOGY 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.

**KINESIOLOGY 4A06  ADVANCED BIOMECHANICS**
An in-depth study of the mechanics of human movement including 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: KINESIOLOGY 2A03, 3A03
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 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: KINESIOLOGY 1A06, 2C06
Enrolment is limited.

**KINESIOLOGY 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: KINESIOLOGY 2C06
Enrolment is limited.

**KINESIOLOGY 4CC3  NEUROMUSCULAR EXERCISE PHYSIOLOGY**
Neuromuscular physiological of strength, power, and speed performance, including adaptations to training and training methods.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 2C06
Enrolment is limited.

**KINESIOLOGY 4D03  OUTDOOR EDUCATION**
An examination of skills, pedagogy and perspectives of outdoor (expeditionary) 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.

**KINESIOLOGY 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 and teaching and coaching.
Placement experience equivalent to one day per week (60 hrs.); seminars; one term
Prerequisite: One of KINESIOLOGY 3B03, 3F03, 3J03, 3K03, 3M03, 4B03, 4D03, 4I03, 4J03, 4S33; and registration in Level IV of a Kinesiology program; and permission of the supervising instructor
Students must complete only one of KINESIOLOGY 4EE3 and 4X06.

**KINESIOLOGY 4FF3  SELECTED TOPICS IN KINESIOLOGY II**
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.

**KINESIOLOGY 4GG3  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 an examination of five-day traditional winter travel experience during the February mid-term recess.
Three hours (lectures, tutorials, field experiences); one term
Prerequisite: KINESIOLOGY 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 $80.00)
Enrolment is limited.

**KINESIOLOGY 4HH3  EXERCISE PSYCHOLOGY**
This course examines the interaction of psychological factors and participation in physical activity with a focus on research, promotion and maintenance of exercise participation and health outcomes.
Three hours (lectures); one term
Prerequisite: KINESIOLOGY 2G03 and registration in Level III or above of a Kinesiology program
Enrolment is limited.

**KINESIOLOGY 4II3  FUNCTIONAL ANATOMY**
A hands-on applied study of functional anatomy for independent learners. The focus is on palpating the structures of the osseous, articular, muscular, and support systems and testing their functions.
Four hours (labs, located in IWC 224); one term
Prerequisite: KINESIOLOGY 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 KINESIOLOGY 4FF3 if the topic was Functional Anatomy.

**KINESIOLOGY 4IK3  ADVENTURES IN PERCEPTION AND ACTION**
The examination of perception and action of everyday skills is discussed using a problem-based approach. The emphasis is on the discovery of principles through the generation of research and hypothesis testing.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 1A06, 2C06 and registration in Level III or above of a Kinesiology program
Enrolment is limited.

**KINESIOLOGY 4JK5  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, amputation, spinal cord injury, neuromuscular disease, stroke, etc.
Three hours (lectures, labs); one term
Prerequisite: KINESIOLOGY 1A06, 2C06 and registration in Level III or above of a Kinesiology program
Enrolment is limited. Priority will be given to Level IV Kinesiology students.

**KINESIOLOGY 4JJ3  SPORT PSYCHOLOGY**
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.
Enrolment is limited.
An analysis of factors that facilitate sport performance at the elite level. Topics include periodization, talent identification, environmental factors, optimal arousal and scotting.

Three hours (lectures); one term
Pre-requisite: KINESIO 3M03 and registration in Level III or above of a Kinesiology program

KINESIO 4Q03 PAEDIATRIC EXERCISE PHYSIOLOGY
Physiologic aspects of physical activity in children and adolescents in health and disease.
Two lectures, one lab; one term
Pre-requisite: KINESIO 2C06, 3D03

KINESIO 4R03 INDEPENDENT RESEARCH
Investigation of a selected theoretical or applied problem mutually accepted by instructor and student.
Pre-requisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5 and permission of the instructor
Antirequisite: KINESIO 4L06

KINESIO 4R06 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.
Pre-requisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 8.5; and permission of the instructor; and co-registration or completion of KINESIO 3C03
Antirequisite: KINESIO 4L03

KINESIO 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
Pre-requisite: KINESIO 3B03, 3B04

KINESIO 4S23 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
Pre-requisite: KINESIO 1A06, 2C06, 2D03

KINESIO 4T03 GENDER, SPORT AND LEISURE
The influence of sport and leisure on the social construction of masculinity and femininity.
Three hours (seminars); one term
Pre-requisite: One of KINESIO 1H03, 2B03, SOCIO1 2Q06; and registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

KINESIO 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
Pre-requisite: KINESIO 1A06, 1E03, 2A03

KINESIO 4X06 THEORY AND PRACTICE IN EXERCISE REHABILITATION
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
Pre-requisite: Registration in Level IV of a Kinesiology program with a minimum C.A. of 7.0; and credit or registration in two of KINESIO 3B03, 4B03, 4I03, 4S03, 4S04
Students may complete only one of KINESIO 4E03 and 4X06.

KINESIO 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
Pre-requisite: One of KINESIO 3F03, 3I03 or COMMERCE 2BA3; and registration in Level III or above
This course may be taken as elective credit by undergraduates in Level III or above of a non-Kinesiology program. However, enrolment for such students is limited.

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 2A03 Unions
LABR ST 2C03 Theoretical Foundations of the Labour Movement
LABR ST 2E03 Work, Workers and Unions: Challenges and Possibilities
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 3I03 Independent Study
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 Balnes (Labour Studies/Social Work)
David Goutor (Labour Studies)
Wayne Lewchuk (Economics/Labour Studies)
Greg McElligott (Labour Studies/Political Science)
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 1C03 VOICES OF WORK, RESISTANCE AND CHANGE
An examination of how work is shaped by gender, race, class and culture in a global world; how workplace cultures of community and resistance are built; and their effect on our experience of work.

Lectures and discussion; one term
Antirequisite: LABR ST 2D03

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.

Lectures and group work; one term
Prerequisite: Registration in a Labour Studies program or permission of the instructor
Antirequisite: LABR ST 2A06

LABR ST 2B03 SOCIAL WELFARE: GENERAL INTRODUCTION
Purpose, values underlying development of social welfare programs; Canada's social security system in historical perspective.

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 2B03 SOCIAL WELFARE: ANTI-OFFRESSIVE POLICIES AND PRACTICES IN SOCIAL WORK
Exploration and analysis of systematic patterns of oppression; 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
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 2C03 THEORETICAL FOUNDATIONS OF THE LABOUR MOVEMENT
An examination of political, sociological and economic explanations of labour behaviour in industrial society. The focus will be on attempts to explain why labour has tended to organize as well as the 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 WORK, WORKERS AND UNIONS: CHALLENGES AND POSSIBILITIES
An examination of how technology, government regulation and social and political activism influence how work is organized in the 21st century.

Lectures and discussion; one term
Prerequisite: Registration in a Labour Studies program or permission of the instructor
Antirequisite: LABR ST 1D03

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
Prerequisite: LABR ST 1G03
Enrolment 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 closing; work sharing.

Prerequisite: ECON 1A06 or both ECON 1B03 and 1BB3 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 1A06 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 4B03
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 relationship 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
LABR ST 3F03 may be repeated, if on a different topic, a total of six units. 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 3AA3

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 Power Point 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 3J03 INDEPENDENT STUDY
Independent study of a research problem to be arranged between student and instructor. It is incumbent on the student to secure arrangements with the supervising instructor and present a written proposal to the Director for approval prior to registration.

One term
Prerequisite: Registration in Level III or IV of an Honours Labour Studies program and permission of the Director
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 program
Antirequisite: ENGSOCGY 3X03
Offered in alternate years.
Enrolment is limited.

LABR ST 4A06  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 4G03
This course is administered by the School of Business.

LABR ST 4E03  COMPARATIVE LABOUR SYSTEMS
A discussion of labour policies, politics, unionization and industrial relations in selected countries in Europe, Latin America and possibly including Japan. Topics will include government labour market policy, labour law, union objectives and strategies and the impact that unions have on the respective national political-economies.
Lectures and seminar discussion; one term
Prerequisite: Registration in Level III or IV of a Labour Studies program or permission of the instructor
Antirequisite: COMMERCE 4B03, LABR ST 4D03

LATIN
(SEE CLASSICS, LATIN)

LINGUISTICS
(SEE LINGUISTICS AND LANGUAGES, LINGUISTICS)

LINGUISTICS AND LANGUAGES
WEB ADDRESS: http://www.humanities.mcmaster.ca/-modlang/
Togo Salmon Hall, Room 613
Ext. 24388

Faculty as of January 15, 2006

Acting Chair
Robert McNutt/B.Sc. (New Brunswick), Ph.D. (M.I.T.)

Professors
Nina Kolinskii/M.A. (Moscow State), Ph.D. (Alberta)
Magda Strohska/M.A., Ph.D. (Warsaw), Ph.D. (Edinburgh)

Associate Professors
Iris Bruce/M.A., Ph.D. (Toronto)
María del C. Cerzano/B.A. (Puerto Rico), M.A. (McGill), Ph.D. (Toronto)
Florigio Minelli/B.A., M.A. (Western Ontario), Ph.D. (Brown)
Jean Wilson/B.A. (McMaster), B.Ed., M.A., Ph.D. (Toronto)

Assistant Professors
Catherine Anderson/B.A., Ph.D. (Northwestern)
Vittoria Cecchetto/B.A., M.A., Ph.D. (Toronto)
Paolo Chiurumblou/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. (UWE, Bristol)
Diana Spoklane/M.A. (New Brunswick), Ph.D. (Alberta)
Antonio Velasquez/B.A. (Waterloo), M.A., Ph.D. (Toronto)
Marzena Walkowiak/M.A., Ph.D. (Toronto)

Lecturer
Franco Gallipoli/M.A. (Toronto)

Department Notes:
1. The Department of Linguistics and Languages administers all courses in 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, except GERMAN 3N03, 4G03, 4J03 and ITALIAN 2B03.
3. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

GERMAN...

Courses and programs in German are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:
1. Students should note that the Department has classified its German language courses under the following categories:
   - Introductory Level Language Course
     GERMAN 1206
   - Intermediate Level Language Courses
     GERMAN 1803, 1823, 2203, 2223
   - Advanced Level Language Courses
     GERMAN 3203, 3223, 4C03, 4203
2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.
3. Courses cross-listed with other programs (GERMAN 3NN3, 4G03, 4J03) will use English as the language of classroom instruction. Students taking these courses for credit in German will be required to do all their reading, writing and film viewing in German.
4. Students may be required to take a placement test in the Department of Linguistics and Languages to assess their proficiency in the language.

COURSES  If no prerequisite is listed, the course is open.

GERMAN 1803  INTERMEDIATE GERMAN I
A course designed to expand German linguistic skills through practice in reading, writing, listening and speaking, promoting intercultural learning and international awareness. Course uses WebCT and multimedia technology.
Four hours; one term
Prerequisite: Grade 12 U or M equivalent
Antirequisite: GERMAN 2203, 2223
Not open to students with credit or registration in GERMAN 1803.
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 1823  INTERMEDIATE GERMAN II
Through integrated and interactive practice in reading, writing, listening and speaking, this course is intended to serve as a foundation for the advanced study of German language and culture. The sequence to this course are GERMAN 3203 and 3223.
Four hours; one term
Prerequisite: GERMAN 1803
Antirequisite: GERMAN 2223

GERMAN 1206  BEGINNER'S INTENSIVE GERMAN
Formerly: German 1203 and 1223
This course enables students to communicate effectively and accurately in German. Using multimedia resources, students acquire the basics of German grammar and develop language skills in order to master everyday situations. The course is enhanced by the use of WebCT and multimedia technology. The sequel to this course is GERMAN 2203.
GERMAN 2AA3  INTRODUCTION TO GERMAN STUDIES
This course provides the foundation for work in German literature and in the broader field of German Studies. Theoretical approaches combined with the analysis of specific cultural texts, forms and practices will allow students to experience the pleasure of the text and help them to develop analytical and research tools.
Three hours; one term
Prerequisite: GERMAN 1 BB3 or 2223, (or concurrent registration in GERMAN 2203 or 2223)

GERMAN 2CC3  GERMANY THROUGH THE AGES: CULTURE AND SOCIETY
An interdisciplinary look at historical events, cultural phenomena, and personalities which have shaped German culture and society until World War II. Topics include: Medieval and Romantic Heritage, the Golden Twenties, Nationalism and National Socialism, the Holocaust.
Three hours; one term
Prerequisite: GERMAN 1 BB3 or 2223 (or concurrent registration in GERMAN 2203 or 2223)

GERMAN 2203  INTERMEDIATE GERMAN
This 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 2223.
Three hours; one term
Prerequisite: GERMAN 1206 or 12Z3
Antirequisite: GERMAN 1 BB3
Not open to students with credit or registration in GERMAN 2223. The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 2223  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 designed to further expand German linguistic skills through integration 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 are GERMAN 3203 and 3223.
Three hours; one term
Prerequisite: GERMAN 2203
Antirequisite: GERMAN 1 BB3
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3B03  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 2CC3
Offered in alternate years.

GERMAN 3C03  GERMAN CULTURE AFTER 1945
This course will explore the culture of 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 2CC3

GERMAN 3N03  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
Cross-list: COMP LIT 3NN3, WOMEN ST 3NN3
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 3Z23 and 4Z03.
Three hours; one term
Prerequisite: GERMAN 1BB3 or 22Z3
Antirequisite: GERMAN 3E03
The Department reserves the right to place students in the course most appropriate to their abilities.

GERMAN 3Z23  ADVANCED GERMAN II
This course further develops 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 is GERMAN 4Z03.
Three hours; one term
Prerequisite: GERMAN 3Z03
Antirequisite: GERMAN 3G03
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.

GERMAN 4C03  TRANSLATION: TECHNIQUES AND PRACTICE
The course offers practice in the translation of literary and non-literary texts, literature, and other cultural texts, forms and practices will allow students to experience the pleasure of the text and help them to develop analytical and research tools.
Three lectures; one term
Prerequisite: One of GERMAN 3E03, 3G03, 3Z03, 3Z23 or 4Z03

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 4H3.

GERMAN 4G03  BERLIN: 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 we will examine important cultural developments in the city in high and popular culture. (See Note 3 above.)
Three hours; one term
Prerequisite: Registration in Level III or IV
Cross-list: COMP LIT 4G03
Offered on an irregular rotation basis.

GERMAN 4H03  THE HOLOCAUST IN GERMAN FILM AND FICTION
This course will examine the moral, philosophical and cultural legacy of the Holocaust portrayed in 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 4H3  GERMAN LANGUAGE THROUGH THE AGES
The course follows the development of the German language from its Indo-European origins to the present situation in several 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 1
Alternates with GERMAN 4F3.

GERMAN 4I03  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 1 and permission of the Department.
### GERMAN 4J03
**THE SPLIT-SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA**
This course examines German films 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: Six units of German above Level I
Cross-list: COMP LIT 4J03, THTR&FLM 4J03
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 - reemerge 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 3G03 or 3Z73

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### HISPANIC STUDIES...
Courses and programs in Hispanic Studies are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counseling, please contact the departmental 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 Courses: HISPANIC 1Z06
   - Intermediate Level Language Courses: HISPANIC 1A03, 1AA3, 2D03, 2DD3, 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 Linguistics and Languages to assess their proficiency in the language.
4. Students are advised to pay particular attention to prerequisites for upper-level literature courses.

**Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Term(s)</th>
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</thead>
<tbody>
<tr>
<td>HISPANIC 1A03</td>
<td><strong>INTERMEDIATE SPANISH I</strong></td>
<td>First part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 1AA3.</td>
<td>Grade 12 U or M equivalent; HISPANIC 2D03, 2DD3, 2Z03, 2ZZ3</td>
<td>Four hours; one term</td>
</tr>
<tr>
<td>HISPANIC 1AA3</td>
<td><strong>INTERMEDIATE SPANISH II</strong></td>
<td>Second part of an intensive review of grammatical structures in Spanish. Emphasis will be on composition, expansion of vocabulary and oral practice. Written works in the original will be studied. The sequel to this course is HISPANIC 3X03.</td>
<td>HISPANIC 1A03; or HISPANIC 2D03, 2DD3, 2ZZ3</td>
<td>Four hours; one term</td>
</tr>
<tr>
<td>HISPANIC 1Z06</td>
<td><strong>BEGINNER'S INTENSIVE SPANISH</strong></td>
<td>This course gives students the ability to express themselves reasonably well in Spanish and acquire the basics of Spanish grammar and considerable reading skill. Small tutorial groups will ensure maximum participation by each student. This course is enhanced by a Computer Assisted Language Learning (CALL) module. The sequel to this course is HISPANIC 2Z03.</td>
<td>Grade 12 U or M equivalent; HISPANIC 1Z03, 2D03, 2DD3</td>
<td>Four hours; two terms</td>
</tr>
<tr>
<td>HISPANIC 2D03</td>
<td><strong>INTENSIVE SPANISH FOR NATIVE SPEAKERS I</strong></td>
<td>First part of a course designed to meet the needs of native Spanish-speaking students who have little or no formal training in Spanish. Emphasis on grammar and composition. The sequel to this course is HISPANIC 2DD3.</td>
<td>One term</td>
<td>Three hours; one term</td>
</tr>
<tr>
<td>HISPANIC 2DD3</td>
<td><strong>INTENSIVE SPANISH FOR NATIVE SPEAKERS II</strong></td>
<td>Second part of a course designed to meet the needs of native Spanish-speaking students who have little or no formal training in Spanish. Emphasis on grammar and composition.</td>
<td>One term</td>
<td>Three hours; one term</td>
</tr>
<tr>
<td>HISPANIC 2X03</td>
<td><strong>CONTEMPORARY SPAIN</strong></td>
<td>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 Movida madrileña, Barcelona's new architecture and Gehry's Guggenheim in Bilbao.</td>
<td>One term</td>
<td>Three lectures; one term</td>
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<tr>
<td>HISPANIC 2XX3</td>
<td><strong>SPAIN IN THE WESTERN TRADITION</strong></td>
<td>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.</td>
<td>One term</td>
<td>Three lectures; one term</td>
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<tr>
<td>HISPANIC 2Z03</td>
<td><strong>INTERMEDIATE SPANISH</strong></td>
<td>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.</td>
<td>One term</td>
<td>Four hours; one term</td>
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<tr>
<td>HISPANIC 3X03</td>
<td><strong>CONTEMPORARY SPAIN</strong></td>
<td>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.</td>
<td>One term</td>
<td>Three lectures; one term</td>
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<tr>
<td>HISPANIC 3Y03</td>
<td><strong>INTRODUCTION TO SPANISH AMERICAN LITERATURE</strong></td>
<td>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.</td>
<td>One term</td>
<td>Three lectures; one term</td>
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<tr>
<td>HISPANIC 4J03</td>
<td><strong>THE SPLIT-SCREEN - RECONSTRUCTING NATIONAL IDENTITIES IN WEST AND EAST GERMAN CINEMA</strong></td>
<td>This course examines German films 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</td>
<td>Six units of German above Level I</td>
<td>Two terms</td>
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</table>
HISPANIC 2Z3 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 work in the original will be studied. The sequel to this course is HISPANIC 3X03.
Four hours; one term.
Prerequisite: HISPANIC 2Z3.

NOT open to native speakers of Spanish.
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: One of HISPANIC 1AA3, 2D03 or 2Z3.
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: One of HISPANIC 1AA3, 2D03 or 2Z3.
Antirequisite: HISPANIC 4G03.

HISPANIC 4D03 HUMOUR IN LATIN AMERICAN LITERATURE
This course will study different theories of humour and its techniques and functions in representative literary texts from Latin America.
Three hours; one term.
Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies above Level I.

HISPANIC 4I3 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.
Prerequisite: 12 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
This 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 the 19th century to the present, its development, themes and formal aspects.
Three hours; one term.
Prerequisite: HISPANIC 2L03 and nine units of Hispanic Studies above Level I.

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, Cortázar, 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 above Level I.

HISPANIC 4Q03 SPANISH AND LATIN AMERICAN CULTURE THROUGH CINEMA
This course is designed to provide students with the background necessary to analyze and interpret Spanish and Latin American culture through cinema. Films will be studied within their social and political context.
Three hours; one term.
Prerequisite: HISPANIC 2C03 or 2L03; and nine 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 socio-cultural milieu.
Three hours; one term.
Prerequisite: HISPANIC 2C03 or 2L03; and nine units of Hispanic Studies above Level I.
Offered on an irregular rotation basis.

HISPANIC 4V03 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 2X03 or 2XX3; and nine units of Hispanic Studies above Level I.
Offered on an irregular rotation basis.

ITALIAN...

Courses and programs in Italian are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counselling, please contact the departmental office, Togo Salmon Hall, Room 613.

Notes:
1. Students should note that the Department has classified its Italian language courses under the following categories:
   - Introductory Level Language Courses
   - Intermediate Level Language Courses
   - Advanced Level Language Courses

2. Not all courses are offered on an annual basis. Students should consult the timetable for available courses.

3. ITALIAN 2803 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 Linguistics and Languages to assess their proficiency in the language.

Courses If no prerequisite is listed, the course is open.

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 1A03.
Four hours; one term.
Prerequisite: Grade 12 U or M equivalent or other equivalent or permission of the Department.
Antirequisite: ITALIAN 2Z03.

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 1A03.
Four hours; one term.
Prerequisite: Grade 12 U or M equivalent or other equivalent or permission of the Department.
Antirequisite: ITALIAN 2Z03.

Not open to students with credit or registration in ITALIAN 1A03.

The Department reserves the right to place students in the course most appropriate to their abilities.
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
Antirequisite: ITALIAN 2ZZ3
The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 1Z06 BEGINNER’S INTENSIVE ITALIAN
Formerly: ITALIAN 1CC3 and 1C03
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 2203.
Four hours; two terms
Antirequisite: Grade 12 U or M equivalent, 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.

ITALIAN 1Z26 BEGINNER’S INTENSIVE ITALIAN FOR DIALECT SPEAKERS
An intensive beginner’s course designed for students with no formal training in Standard Italian, but who understand an Italian dialect or Standard Italian. The course covers the basics of Italian grammar and gives students the opportunity to practice the spoken language.
Four hours; two terms
Antirequisite: ITALIAN 1Z06 or Grade 12 U or M equivalent
Students who have credit in ITALIAN 1C03, but not in ITALIAN 1CC3, will be permitted to take ITALIAN 1ZZ6; 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.

ITALIAN 2B03 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 World War II period. (See Note 3 above.)
Four hours; one term
Prerequisite: Registration in Level II or above
Cross-list: THTHR&FLM 2103

ITALIAN 2F03 INTRODUCTION TO THE STUDY OF LITERATURE: IL NEOREALISMO
An introduction to the study of literature in Italian, focusing on the neorealism 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 2Z03)

ITALIAN 2I03 ITALY THROUGH THE AGES II: 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 2Z03)

ITALIAN 2Z03 INTRODUCTION TO INTERMEDIATE ITALIAN
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 2ZZ3.
Four hours; one term
Prerequisite: One of ITALIAN 1CC3, 1DD3 or 1206
Antirequisite: ITALIAN 1AA3. 2ZZ3
The Department reserves the right to place students in the course most appropriate to their abilities.

ITALIAN 2ZZ3 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 2BB3
Antirequisite: ITALIAN 1AA3
The Department reserves the right to place students in the course most appropriate to their abilities.

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: One of ITALIAN 1AA3, 2ZZ3

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

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
Antirequisite: ITALIAN 4I03

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.
Three lectures; one term
Prerequisite: ITALIAN 2F03 or 2I03
Antirequisite: ITALIAN 4R03

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 contemporary literary and journalistic sources.
Three hours; one term
Prerequisite: ITALIAN 4A03

ITALIAN 4I03 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.
Three lectures; one term
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 stili nuovo and selected works by Dante, Petrarch and Boccaccio.
Three lectures; one term
Prerequisite: ITALIAN 2F03 or 2I03
Antirequisite: ITALIAN 3RR3
Offered in alternate years.

ITALIAN 4X23 DANTES’ 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 or 2I03
Antirequisite: ITALIAN 3RR3
Offered in alternate years.
JAPANESE STUDIES

Courses
If no prerequisite is listed, the course is open.

JAPANESE 1206 BEGINNER'S INTENSIVE JAPANESE
Formerly: JAPANESE 1203 and 1223
An intensive study of 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 2203.
Four hours; two terms
Prerequisite: JAPANESE 1203, 1223
Students who have credit in JAPANESE 1203, but not in JAPANESE 1223, will be permitted to take JAPANESE 1206; however, they must relinquish credit in JAPANESE 1203 to do so.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrollment is limited.

JAPANESE 2203 INTERMEDIATE INTENSIVE JAPANESE I
This course develops students' communicative skills in Japanese through conversational exercises, creative writing and other practices. Emphasis will be placed upon refining the knowledge of grammar and expanding vocabulary. The sequel to this course is JAPANESE 2223.
Four hours; one term
Prerequisite: Level 106 or 1206.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrollment is limited.

JAPANESE 2223 INTERMEDIATE INTENSIVE JAPANESE II
This course further develops and consolidates the students' communicative skills in Japanese through conversational exercises, creative writing and other exercises. The sequel to this course is JAPANESE 3A03.
Four hours; one term
Prerequisite: JAPANESE 2203
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrollment is limited.

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 Kanji. The sequel to this course is JAPANESE 3A03.
Four hours; one term
Prerequisite: JAPANESE 2223.
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrollment is limited.

JAPANESE 3A03 ADVANCED INTENSIVE JAPANESE II
Emphasis is given to the development of situational conversational skills, advanced reading skills and essay writing skills. The sequel to this course is JAPANESE 4203.
Three hours; one term
Prerequisite: JAPANESE 3A03
The Department reserves the right to place students in the course most appropriate to their abilities.
Enrollment is limited.
JAPAN ST 3E03 JAPANESE RELIGION
A study of Japanese religion and how it functions in Japanese society. Topics will include Shinto, shamanism, Ancestor Worship, Japanese Buddhism and the New Religions of Japan. Two lectures, one tutorial; one term.
Prerequisite: Registration in Level II or above. One of RELIG ST 1B06, 2M06 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 2F03
This course is administered by the Department of Religious Studies.

JAPAN ST 3S03 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 3U03 BUDDHISM AND THE NEW RELIGIONS OF JAPAN
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.

JAPAN ST 4S03 JAPANESE BUSINESS
An introduction to Japan's business system. The approach is integrative, as the course examines Japan's economic history, culture, politics, industrial policy, management practices, advertising and doing business with Japan. Prerequisite: Registration in a Commerce, Engineering and Management or Japanese Studies program
Cross-list: COMMERCE 4F03
This course is administered by the School of Business.

LINGUISTICS

Linguistics courses and programs are administered within the Department of Linguistics and Languages 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

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 1AA3 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
Antirequisite: ANTHROP 2A03
This course is administered by the Department of Linguistics and Languages.

LINGUIST 2A3 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. Three lectures; one term
Prerequisite: LINGUIST 1A03, 1AA3
Antirequisite: ANTHROP 2A03

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: Registration in Level II or above
Cross-list: CMST 2E03
This course is administered by the Department of Linguistics and Languages.

LINGUIST 2L03 PHONETICS
A study of the sounds of language and human articulatory capabilities. Three lectures; one term
Prerequisite: LINGUIST 1A03
Cross-list: ANTHROP 2L03

LINGUIST 2L06 INTRODUCTION TO LINGUISTIC TYPOL OGY
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
Cross-list: ANTHROP 2L06
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

LINGUIST 3A03 PHONOLOGY
A study of the patterns of distinctive sounds in the world's languages. Three lectures; one term
Prerequisite: LINGUIST 2L03
Cross-list: ANTHROP 3A03
Antirequisite: ANTHROP 2M03, LINGUIST 2M03
This course is administered by the Department of Linguistics and Languages.

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 1A03 and 1AA3 (or 1A06); or PSYCH 2H03
Cross-list: PSYCH 3B03
Alternates with LINGUIST 3C03.
This course is administered by the Department of Linguistics and Languages.

LINGUIST 3C03 CHILD LANGUAGE ACQUISITION
Language behavior and development in children, from birth to school age. The course examines how data from children's language acquisition can inform linguistic theory. Three hours; one term
Prerequisite: LINGUIST 1A03 and 1AA3 or PSYCH 2H03
Cross-list: PSYCH 3C03
Alternates with LINGUIST 3B03.

LINGUIST 3D03 SYNTAX
The study of sentence structure in many languages. The emphasis is on using empirical data to test theoretical proposals. Three hours; one term
Prerequisite: LINGUIST 1A03, 1AA3
Cross-list: ANTHROP 3D03
This course is administered by the Department of Linguistics and Languages.

LINGUIST 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.

LINGUIST 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.

LINGUIST 4S03 JAPANESE BUSINESS
An introduction to Japan's business system. The approach is integrative, as the course examines Japan's economic history, culture, politics, industrial policy, management practices, advertising and doing business with Japan. Prerequisite: Registration in a Commerce, Engineering and Management or Japanese Studies program
Cross-list: COMMERCE 4F03
This course is administered by the School of Business.
LINGUIST 3113 SEMANTICS
The study of patterns of meaning in language; a critical survey of theories and issues.
Three hours; one term
Prerequisite: ANTHROP 3103 or LINGUIST 3103
Cross-list: ANTHROP 3113
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

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: LINGUIST 1A03, 1AA3
Cross-list: ANTHROP 3M03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

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 FRENCH 2H03
Cross-list: CMST 3P03
Antirequisite: ANTHROP 3P03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

LINGUIST 3X03 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, language choice, language change, pidgin and creole languages.
Three lectures; one term
Prerequisite: LINGUIST 1A03, 1AA3
Cross-list: CMST 3X03
Antirequisite: ANTHROP 3X03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

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 hours; one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I
Cross-list: CMST 4B03
Antirequisite: ANTHROP 4B03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

LINGUIST 4D03 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
Cross-list: CMST 4D03
Offered in alternate years.
This course is administered by the Department of Linguistics and Languages.

LINGUIST 4E03 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
Offered on an irregular rotation basis.

LINGUIST 4I03 IMMIGRANT CONTACT LANGUAGES AND THE CREATION OF A NEW IDENTITY
This course will look at the genesis, characteristics and usage patterns of "hyphenated" identities (i.e. Spanglish - Latin; Italian - Italian-Canadian).
Seminar (two hours); one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I
Offered on an irregular rotation basis.
LINGUIST 4SL3 SLP PRACTICUM
Observation in a professional speech pathology environment or involvement in a relevant research project, and completion of a paper related to experience. Experience must be approved by the Department prior to the commencement of the course.
One term
Prerequisite: Registration in Level IV of the Honours Linguistic Cognitive Science program and permission of the Department

LINGUIST 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 3X03
Cross-list: CMST 4T03
Not open to students with credit in LINGUIST 4803, TOPICS IN THE APPLICATION OF LINGUISTICS, if the topic was Forensic Linguistics.
Offered on an irregular rotation basis.

LINGUIST 4TE3 TESL PRACTICUM
Observation and instruction in a TESL classroom and completion of a paper based on experience. Experience must be approved by the Department prior to the commencement of the course.
One term
Prerequisite: Registration in Level IV of the Honours Linguistic Cognitive Science program and permission of the Department

LINGUIST 4XX3 TOPICS IN LINGUISTIC THEORY
Issues in different aspects of Linguistic Theory and Advanced Philology. Consult the Department for the topic to be offered.
Seminar (two hours); one term
Prerequisite: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I
Cross-list: ANTHROP 4XX3
LINGUIST 4XX3 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 Linguistics and Languages.

LINGUIST 4203 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: LINGUIST 1A03, 1AA3 and six units of Linguistics above Level I
Cross-list: PSYCH 3BB3 or 3UU3
LINGUIST 4203 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 Linguistics and Languages.

LINGUIST 4223 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 Communication Studies
Cross-list: CMST 4L03
Enrolment is limited to 25 students.
This course is administered by Communication Studies.

Courses...

Courses in Polish are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counseling, please contact the departmental office, Togo Salmon 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 and 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.

Courses...

Courses in Russian are administered within the Department of Linguistics and Languages of the Faculty of Humanities. For information and counseling, please contact the departmental office, Togo Salmon Hall, Room 613.

Note:
Students should note that the Department has classified its Russian language courses under the following categories:
   - Introductory Level Language Courses
     - RUSSIAN 2A03, 2AA3
   - Intermediate Level Language Courses
     - RUSSIAN 3A03, 3AA3
   - Advanced Level Language Courses
     - RUSSIAN 4B03, 4BB3
This course focuses on the 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 2AA3.

Four hours; one term
Antirequisite: Grade 12 U or M equivalent, RUSSIAN 1ZZ3
Not open to students with credit or registration in RUSSIAN 2AA3 or credit in RUSSIAN 1ZZ3. The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 2AA3  INTENSIVE BEGINNER’S RUSSIAN III
Formerly: RUSSIAN 1ZZ3
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 3AA3.

Four hours; one term
Prerequisite: RUSSIAN 1ZZ3 or 2A03
Antirequisite: Grade 12 U or M equivalent, RUSSIAN 1ZZ3
The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 3AA3  INTERMEDIATE RUSSIAN III
Formerly: RUSSIAN 2Z03
This course continues 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 4B03 (formerly RUSSIAN 3G03).  
Four hours; one term
Prerequisite: RUSSIAN 2Z03 or 3AA3
Antirequisite: RUSSIAN 2G06, 2Z03
Not open to students with credit or registration in RUSSIAN 3AA3 or credit in RUSSIAN 2Z03. The Department reserves the right to place students in the course most appropriate to their abilities.

RUSSIAN 4B03  ADVANCED LANGUAGE PRACTICE I
Formerly: RUSSIAN 3J03
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 4BB3 (formerly RUSSIAN 3H03).

Three hours; one term
Prerequisite: One of RUSSIAN 2G06, 2Z03, 3AA3
Antirequisite: RUSSIAN 3C06, 3G03
The Department reserves the right to place students in the course most appropriate to their abilities.

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
Antirequisite: RUSSIAN 3C06, 3H03
The Department reserves the right to place students in the course most appropriate to their abilities.
MATERIALS SCIENCE AND ENGINEERING

Courses

If no prerequisite is listed, the course is open.

**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 physical properties including mechanical, electrical, magnetic and thermal behaviour.
Three lectures, one tutorial; second term
Prerequisite: CHEM 1A03 or 1E03

**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 2B06, PHYSICS 2H04

**MATS 2B03**
SOLUTION THERMODYNAMICS
Thermodynamic activity in solid and liquid systems: Gibbs energy of solutions; binary phase diagrams; equilibrium constant; reaction equilibria in gases; Ellingham diagrams.
Three lectures, one tutorial; second term
Prerequisite: CHEM 1A03 or 1E03; and MATLS 2B03
Antirequisite: MATLS 2B06

**MATS 2B04**
MEASUREMENTS AND COMMUNICATION
Basic experimental, simulation and data collection relating to materials structure and properties. Written and presentation skills development through lab report writing, assignments and plant visits.
Two three hour laboratories or tutorials per week; both terms
Prerequisite: One of COMP SCI 1MA3, 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 2B03

**MATS 2X03**
CRYSTALLINE STRUCTURE OF MATERIALS
Crystal geometry, point groups, space groups, x-ray diffraction methods for the determination of crystalline structures and chemical compositions, electron and neutron diffraction methods, microanalysis, crystallographic defects, physical properties of crystals, crystal growth; phase analyses, 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

**MATS 3A03**
COMPUTATIONAL THERMODYNAMICS
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: One of MATLS 3C03, 3C04 or registration in a program administered by the Department of Materials Science and Engineering

**MATS 3B03**
MATERIALS PRODUCTION
Surface science and technology related to the preparation of fine particles of materials, metals and ceramics for industrial production. Application of electrochemistry for diverse materials processing, such as electrometalurgy, thin film production and anodizing.
Three lectures; second term
Prerequisite: MATLS 2B06; or MATLS 2B03 and 2D03

**MATS 3C04**
THERMODYNAMICS OF MULTICOMPONENT SYSTEMS
Reaction equilibria in solution; stability diagrams; ternary phase diagrams; aqueous and high temperature electrochemistry; use of computerized thermodynamic databases.
Three lectures; one lab (three hours) every other week; one tutorial; first term
Prerequisite: MATLS 2B03
Antirequisite: MATLS 3C03, 3D03

**MATS 3E04**
MASS TRANSFER
Phenomenological and mechanistic approaches to diffusion; boundary conditions; diffusion in fluids and solids; pore defects in solids.
Three lectures; two tutorials; second term.
Prerequisite: One of ENGINEER 2E03, MATLS 1A03 or 1M03; and either MATH 2M06 or both MATH 2A03 and 2C03

**MATS 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 (one hour); second term
Prerequisite: MATLS 2D03
Antirequisite: MATLS 4B04

**MATS 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 2C03, MATLS 1A03, 1M03, 2003; or permission of the department
Antirequisite: ENGINEER 3P03, MATLS 3P03

**MATS 3N03**
COMPUTATIONAL MODELLING IN MATERIALS ENGINEERING
Introduction to numerical modeling of heat and mass transfer processes, microstructure development in alloys, interface properties and simple atomic and molecular modeling.
Three lectures; second term
Prerequisite: MATLS 1M03 or 3T04; or registration in a program administered by the Department of Materials Science and Engineering
Antirequisite: MATLS 4E04

**MATS 3Q03**
MATERIALS FOR ELECTRONIC APPLICATIONS
Fundamental properties of materials used in electronic applications, operation of devices and fabrication methods of electronic circuits and packaging. Includes description of dielectric, magnetic and optoelectronic properties.
Three lectures; second term
Prerequisite: One of ENGINEER 2E03, 2003 or MATLS 1M03

**MATS 3T04**
PHASE TRANSFORMATIONS
Review of thermodynamics, binary phase diagrams and solid state diffusion. Role of interfaces; solidification, diffusional and martensitic transformations; welding; oxidation. Materiallographic examination will be featured in laboratory work.
Three lectures or tutorial, one lab (three hours); first term
Prerequisite: One of ENGINEER 2L03, MATLS 1M03, 2X02 or 2X03

**MATS 4A02**
SEMINARS AND INDUSTRIAL PRACTICE
Seminars and discussions by technical personnel from industry. Corresponding plant visits arranged by the course instructor. Workshops on Statistical Process Control and 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

**MATS 4C03**
MODERN IRON AND STEELMAKING
Theory and practice of iron making. New processes for reduced energy consumption and pollution. Thermodynamics and kinetics of steelmaking.
Three lectures; second term
Prerequisite: CHEM ENG 2A04, MATLS 3E04
Corequisite: MATLS 4B04
Offered on an irregular rotation basis. Offered in 2006-2007.

**MATS 4D03**
MATERIALS AND THE ENVIRONMENT
The environments experienced by engineering materials in service, and environmental 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)
Offered on an irregular rotation basis. Offered in 2006-2007.
MATLS 4F03 SYNTHESES 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.

Three lectures; second term
Prerequisite: Registration in Level IV of a program in Honours Chemistry, Engineering Physics, Materials Engineering or Honours Materials Science
Antirequisite: MATLS 4F04

MATLS 4G03 CHARACTERIZATION OF NANOMATERIALS

Interaction of electrons and photons with matter. Imaging methods with electron microscopy, scanning probe techniques, x-ray photoelectron spectroscopy and X-ray absorption analysis with high spatial resolution.

Three lectures; 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
Antirequisite: MATLS 4G02
Offered on an irregular rotation basis.

MATLS 4H03 THIN FILM SCIENCE AND ENGINEERING

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 Materials Engineering
Offered on an irregular rotation basis.

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 group project.

Two lectures, one tutorial (one hour); second term
Prerequisite: MATLS 3E03; and MATLS 3F03 or 4G04
Offered on an irregular rotation basis.

MATLS 4J04 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

MATLS 4P03 PROPERTIES OF POLYMERIC MATERIALS

Structure of amorphous and crystalline polymer/c materials; mechanical, electrical and optical properties, and their modification through processing.

Three lectures; first term
Prerequisite: CHEM 2W22; and either MATH 2M06 or both MATH 2A03 and 2C03
Offered on an irregular rotation basis.
Offered in 2007-2008.
Open to Level III and IV students registered in a program in the Faculty of Science or Engineering with permission of the department.

MATLS 4R03 CERAMIC SCIENCE

The unique properties of structural and functional ceramics are explored, including ferroelectric, piezoelectric and magnetic ceramics, clays, ceramics, and refractories. The importance of processing for achieving properties is emphasized.

Three lectures; second term
Prerequisite: Registration in a program in Materials Engineering
Offered on an irregular rotation basis.
Offered in 2007-2008.

MATLS 4T03 PROPERTIES AND PROCESSING OF COMPOSITES

Intrinsic properties of matrix materials and fibres; mechanics and thermodynamics of interfaces; mechanical properties and fabrication of engineering composites.

Three lectures; second term
Prerequisite: ENGINEER 3P03 or MATLS 3M03
Offered on an irregular rotation basis.
Offered in 2007-2008.

MATLS 4W04 INDUSTRIAL PROJECTS

Projects, in cooperation with industry, involving materials design in manufacturing, complemented by workshops in group problem solving and design methodology.

Two labs (three hours); both terms
Prerequisite: Registration in Level IV or V of any program in Materials Engineering

MATHMATICS AND STATISTICS

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

Hamilton Hall, Room 218
Ext. 24581

Faculty as of January 15, 2006

Chair
Bradd Hart

Associate Chairs
Hans Boden/Graduate Studies
Deirdre Haskell/Undergraduate Studies

Professors

Stanley Alama/B.Sc. (Columbia), M.Sc., Ph.D. (Courant, N.Y.U.)
N. Balakrishnan/B.Sc., M.Sc. (Madras), Ph.D. (I.I.T., Kanpur)
Lia Brondzard/B.A. (Montreal), M.Sc., Ph.D. (Courant, N.Y.U.)
Walter Craig/A.B. (California-Berkeley), M.S., Ph.D. (Courant, N.Y.U.)
Senior Canada Research Chair
Shui Feng/B.Sc., M.Sc. (Beijing Normal), Ph.D. (Carleton)
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. (Toronto), 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)
Maung Min-Oo/Ph.D. (Rangoon), Dr. rer. nat. (Berlin), Habil. (Bochum)
Gregory H. Moore/B.A. (California-Berkeley), M.A., Ph.D. (Toronto)
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. Valeriote/B.Math. (Waterloo), Ph.D. (California-Berkeley)
Roman Vivcros-Aguillera/B.A. (Veracruz, Mexico), M.A. (National Polytechnic Inst., Mexico), Ph.D. (Waterloo) Graduate Advisor, Statistics
McKenzie Y.-K. Wang/A.B. (Princeton), Ph.D. (Stanford)
Gail 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
**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).

**MATHEMATICS AND STATISTICS**

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**Notes:**

- **MATH 1A03**
  - For students in science: geared towards applications, attention to underlying concepts. Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration.
  - Three lectures, one tutorial; one term
  - Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U or MATH 1K03.
  - Antirequisite: ARTS&SCI 1DO6, MATH 1N03, 1X03

- **MATH 1A93**
  - Three lectures, one tutorial; one term
  - Prerequisite: MATH 1A03 or 1X03
  - Antirequisite: ARTS&SCI 1DO6, MATH 1N03, 1X03

- **MATH 1B03**
  - Three lectures, one tutorial; one term
  - Prerequisite: One of Grade 12 Geometry and Discrete U, MATH 1D03, STATS 1L03
  - Antirequisite: MATH 1H03, 1H05, 1H06

- **MATH 1C03**
  - Inquiry into the ideas and methods of advanced mathematics. Material will include topics selected from algebra, calculus, discrete math, geometry and number theory.
  - Three hours; one term
  - Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U and Grade 12 Geometry and Discrete U; or registration in MATH 1DG3 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 1D03**
  - Three lectures, one tutorial; one term
  - Prerequisite: Grade 12 Advanced Functions and Introductory Calculus U
  - Not open to students who have completed Grade 12 Geometry and Discrete Math U.

- **MATH 1H03**
  - Linear systems of equations, matrices, determinants, vectors and vector spaces, complex numbers, eigenvalues and eigenvectors.
  - Three lectures, one tutorial; first term
  - Prerequisite: Registration in a program in Engineering
  - Antirequisite: MATH 1B03, 1H05

- **MATH 1L03**
  - An introduction to differential calculus and its applications.
  - Three lectures, one tutorial; one term
  - Prerequisite: OSS Grade 11 Mathematics or OSS Grade 12 Mathematics (Advanced)
  - Normally not open to students who have completed Grade 12 Advanced Functions and Introductory Calculus U. Students transferring to the Faculty of Science do not retain credit for this course.

- **MATH 1M03**
  - Differential and integral calculus.
  - Three lectures, one tutorial; one term
  - Prerequisite: MATH 1K03 or Grade 12 Advanced Functions and Introductory Calculus U
  - Not open to students with credit or registration in MATH 1A03, 1N03, 1X03, ARTS&SCI 1ID6.
  - 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**
  - Differential calculus, the definite integral, techniques of integration, applications.
  - Three lectures, one tutorial; one term
  - Prerequisite: Registration in a program in Engineering
  - Antirequisite: MATH 1A03, 1X03

- **MATH 1X03**
  - For students with interest in mathematics/statistics: emphasis on geometric intuition, but also theoretical foundations. Functions: limits, continuity, derivatives, optimization, curve sketching. Antiderivative, definite integral, techniques of integration.
  - Three lectures, one tutorial; one term
  - Prerequisite: Registration in Math and Stats I
  - Antirequisite: ARTS&SCI 1DO6, MATH 1A03, 1N03
MATH 1X33  CALCULUS FOR MATH AND STATS II
For students in mathematics/statistics. Additional techniques of integration, applications of definite integrals, differential equations, polar coordinates, parametrized curves, infinite series, power series. Partial derivatives. Three lectures, one tutorial; one term
Prerequisite: MATH 1X03 and registration in Math and Stats I
Antirequisite: ARTS&SCI 1D06, MATH 1A3, 1NN3

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 1A3, 1NN3, 1X33, ARTS&SCI 1D06; and credit or registration in one of MATH 1B03, 1D03, 1H03, 1H05 or 1H3H
Antirequisite: MATH 2M05, 2Q04, 2X03

MATH 2C03  DIFFERENTIAL EQUATIONS
Ordinary differential equations, Laplace transforms, series solutions, partial differential equations, separation of variables, Fourier series. Three lectures; one term
Prerequisite: One of MATH 1A3, 1NN3, 1X33, ARTS&SCI 1D06; and one of MATH 1B03, 1D03, 1H03, 1H05, 1H3H
Antirequisite: MATH 2O03, 2M06, 2P04

MATH 2E03  INTRODUCTION TO MODELLING
General features of modelling. 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 1A3, 1NN3, 1X33, ARTS&SCI 1D06; and one of MATH 1B03, 1D03, 1H03, 1H05, 1H3H
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 compound interest, annuities certain; amortization, sinking funds, bonds, security evaluation, determination of yields. Three lectures; one term
Prerequisite: One of MATH 1A03, 1M03, 1N03, 1X03, 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, 1X03, ARTS&SCI 1D06; and one of MATH 1B03, 1D03, 1H03, 1H05, 1H3H
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 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, 1H3H
Antirequisite: MATH 2A03, 2C03, 2P04, 2X03

MATH 2P04  DIFFERENTIAL EQUATIONS FOR ENGINEERING
Three lectures and two tutorials; one term
Prerequisite: MATH 1NN3 and one of MATH 1H03, 1H05, 1H3H
Antirequisite: MATH 2C03, 2M06

MATH 2Q04  ADVANCED CALCULUS FOR ENGINEERING
Vector spaces, curves, vector 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, 1H3H
Antirequisite: MATH 2A03, 2M06

MATH 2R03  LINEAR ALGEBRA II
Abstract vector spaces, linear transformations. Inner product spaces, spectral theorems, orthogonal bases, other topics.
Three lectures; one term
Prerequisite: One of MATH 1A3, 1NN3, 1X03, ARTS&SCI 1D06; and one of MATH 1B03, 1H03, 1H05, 1H3H

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 2R03

MATH 2T03  NUMERICAL ANALYSIS I
Introduction to MATLAB; matrix and vector norms; sensitivity, conditioning, convergence and complexity, direct and iterative methods for linear systems; eigenvalues and eigenvectors; least squares.
Three lectures; one term
Prerequisite: MATH 2R03

MATH 2U03  TEACHING MATHEMATICS
This course is designed to give a minimum 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 1AA3; or in both MATH 1X03 and 1XX3, 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 1.

MATH 3A03  REAL ANALYSIS I
Sequences of real numbers; supremum, continuity, Riemann integral, differentiation. Sequences and series of functions; uniform continuity and uniform convergence.
Three lectures; one term
Prerequisite: MATH 2AB3, 2C03, 2R03

MATH 3B03  GEOMETRY
Selected topics from: affine and projective geometry, Euclidean and hyperbolic geometry, differential geometry of curves and surfaces.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 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 2X03

MATH 3C93  CRYPTOGRAPHY
Introduction to cryptosystems used in modern secure systems: elementary number theory, primality testing and factorization, discrete logarithm, RSA cryptosystems, elliptic curve cryptosystems.
Three lectures; one term
Prerequisite: MATH 2R03

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 registered in Honours Mathematics and Physics.
MATH 3D3* DISCRETE DYNAMICAL SYSTEMS AND CHAOS
Iteration of functions: orbits, graphical analysis, fixed and periodic points, stability, bifurcations, chaos, fractals.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03

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 2R03
Prerequisite (Beginning in 2007-2008): MATH 2S03

MATH 3E33 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
Prerequisite (Beginning in 2007-2008): MATH 2C03 or 2P04; and MATH 2X03; and credit or registration in MATH 2R03

MATH 3F33 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
Prerequisite (Beginning in 2007-2008): MATH 2C03, 2R03, 2X03

MATH 3G03 PROBLEM SOLVING
A course designed to illustrate the principles of mathematical problem solving. Maximum enrolment is 20 students.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

MATH 3G3P* GEOMETRIC IDEAS IN PHYSICS
Minkowski space, Lorentz metric, Maxwell's equations, general relativity, geodesics, curvature, black hole geometries and other selected topics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2R03 or credit or registration in MATH 3C03

MATH 3H03 NUMBER THEORY
Selected topics from: congruence and residues, continued fractions, approximation of irrational numbers, 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 Mathematics or Statistics Level II or above

MATH 3H33 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
Antirequisite: MATH 3D03

MATH 3N03 MATHEMATICAL BIOLOGY
Three lectures; one term
Prerequisite: MATH 2E03, 3F03

MATH 3Q03 NUMERICAL INTERPOLATION AND APPROXIMATION THEORY
Polynomial and spline interpolations; approximation in Hilbert space; Hermite interpolation and orthogonal polynomials; wavelets; numerical differentiation and integration; solution of nonlinear equations; minimization of nonlinear functions.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2T03

MATH 3Q3* INTRODUCTION TO QUANTUM COMPUTING
Postulates of quantum mechanics for finite-dimensional systems; information on quantum bits, logical operations and quantum gates; quantum parallelism and complexity theory; examples of quantum algorithms.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2R03

MATH 3T03 INQUIRY IN TOPOLOGY
Size and shape in topology and analysis, compactness, connectedness, limit sets, theory of dimension, fractals and self-similarity.
Three lectures; one term
Prerequisite: MATH 2AB3
Prerequisite (Beginning in 2007-2008): MATH 2XX3

MATH 3TP3* TRUTH AND PROVABILITY: GODEL'S INCOMPLETENESS THEOREMS
The goal is to inquire into Gödel's proof of incompleteness; in any axiom system there will be statements which are true but not provable.
Three lectures; one term
Prerequisite: MATH 2R03

MATH 3U03* COMBINATORICS
Inversion formulae, systems of distinct representatives, block designs and other configurations; and other topics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2R03
Antirequisite: MATH 4C03

MATH 3V03* GRAPH THEORY
Graphs, trees, bipartite graphs, connectivity, graph colouring, matrix representations, applications.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2R03
Antirequisite: MATH 4J03

MATH 3X03 COMPLEX ANALYSIS I
Cauchy's theorem, Cauchy's integral formula, residues, zeroes of analytic functions; Laurent series, the maximum principle.
Three lectures; one term
Prerequisite: MATH 2AB3, 2C03, 2R03

MATH 3Y03 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 4A03 REAL ANALYSIS II
Metric spaces, compactness. Spaces of continuous functions, functions of several variables, inverse and implicit function theorems. Lebesgue integration.
Three lectures; one term
Prerequisite: Credit in at least 12 units of Mathematics or Statistics Level II or above

MATH 4AT3* TOPICS IN ANALYSIS
Precise topics may vary; consult the department for current information. Possible topics include: functional analysis, measure theory, harmonic analysis, calculus of variations.
Three lectures; one term
Prerequisite: MATH 3A03
Antirequisite: MATH 3AA3

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 2S03 and either MATH 2AB3 or 2XX3
MATH 4B3* - TOPICS IN GEOMETRY
Precise topics will vary; consult the department for current information. Possible topics include: differential geometry, Riemannian metrics, connections, curvature, geodesics, topological and analytic properties of Riemannian manifolds. Three lectures; one term
Prerequisite: MATH 4B03
MATH 4B3 may be repeated, if on a different topic.

MATH 4E03 - GALOIS THEORY
Field extensions, splitting fields, normality and separability, Galois extensions, finite fields, solvability by radicals, cyclic extensions, cyclotomic extensions, algebraic closure, classical constructions, computations of Galois groups. Three lectures; one term
Prerequisite: MATH 3EE3

MATH 4E3* - TOPICS IN ALGEBRA
Precise topics will vary; consult the department for current information. Possible topics include: algebraic geometry, algebraic number theory. Three lectures; one term
Prerequisite: MATH 4E03
MATH 4E3 may be repeated, if on a different topic.

MATH 4G03 - 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 4K03* - MATHEMATICS OF FINANCE
Options and forwards, efficient market hypothesis, no arbitrage condition, binomial asset pricing model, portfolio strategies, stochastic processes, conditional expectation, martingales, optimal portfolio selection, exotic options, stochastic interest rate models. Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and STATS 2D03

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 4L3* - TOPICS IN LOGIC
Precise topics will vary; consult the department for current information. Possible topics include: axiomatic set theory, computability theory, model theory or proof theory. Three lectures; one term
Prerequisite: MATH 4L03
MATH 4L3 may be repeated, if on a different topic.

MATH 4Q03 - NUMERICAL METHODS FOR DIFFERENTIAL EQUATIONS
Approximation error; methods for ordinary differential equations, stiffness; iterative methods for boundary value problems; weighted residuals; spectral methods; methods for partial differential equations; accuracy, consistency, convergence, stability analysis. Three lectures; second term
Prerequisite: Credit or registration in MATH 3C03 or 3F33; or permission of the instructor

MATH 4T3* - TOPICS IN TOPOLOGY
Precise topics will vary; consult the department for current information. Possible topics include: fundamental group and covering spaces, cell complexes and homology theory, theory of knots, links, and braids. Three lectures; one term
Prerequisite: MATH 4B03
Antirequisite: MATH 4T03
MATH 4T3 may be repeated, if on a different topic.

MATH 4V03* - APPLIED ANALYSIS
Theory of distributions, Fourier Transform, fundamental solutions and Green's functions for partial differential operators, uncertainty principle, Poisson summation formula, applications. Three lectures; one term
Prerequisite: MATH 3D03 or 3F33
Prerequisite (Beginning in 2007-2008): MATH 3B03

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 4W03 may be repeated, if on a different topic.

MATH 4X03 - COMPLEX ANALYSIS II
Conformal maps, analytic continuation, harmonic functions, the Riemann mapping theorem, Riemann surfaces. Three lectures; one term
Prerequisite: 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.

STATS 1A03 - STATISTICAL REASONING
The basic ideas of graphical displays, sampling methodology and probability are developed through diverse examples from a wide range of disciplines. Three lectures, one tutorial; one term
Prerequisite: OSS Grade 11 Mathematics or OSIS Grade 12 Mathematics
Not open to students registered in the Faculties of Science or Business or in a Kinesiology program.
Antirequisite: ECON 2B03
Not open to students with credit or registration in COMMERCE 2Q43, PSYCH 2R3, SOC SCI 2J03, STATS 1C03, 2D03, 2M3, 2M3.

STATS 1C03 - INTRODUCTORY COMPUTER-AIDED STATISTICS
Applied statistics including simple probability calculations based on binomial, Poisson and normal distributions, with emphasis on Inferential methods and linear regression using computer statistics packages. Two lectures, one lab (two hours); one term
Prerequisite: MATH 1M03, or credit or registration in MATH 1A03 or 1X03
Antirequisite: COMMERCE 2Q43, ECON 2Z03, HTH SCI 1F03, 2A03, PSYCH 2G03, 2R03
Not open to students with credit in any Level II or above Statistics course. See Department Note above.

STATS 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 STATS 1CC3, 2D03, 2M3, 2M3.
Not open to students registered in Science or Engineering programs.
Students transferring to the Faculty of Science do not retain credit for this course.

STATS 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: Any of MATH 1A03, 1M03 or 1X03; and credit or registration in MATH 1B03 or 1D03
Antirequisite: PSYCH 2R3
Not open to students with credit or registration in STATS 2A03, 2M3.

STATS 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 one of MATH 1A03, 1M03 or 1X03
Antirequisite: ECON 2B03
Not open to students with credit or registration in COMMERCE 2Q43, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2D03, 2M3.

STATS 2M3S - STATISTICAL METHODS
Estimation; sampling distributions; hypothesis testing; power; robustness; analysis of variance for one and two factor designs; linear regression; graphical methods; statistical computing software package R.
Three lectures; one term
Prerequisite: STATS 2D03
Antirequisite: ECON 2B03, PSYCH 2R3, 2RB3, 2RR3, STATS 2R06
Not open to students with credit or registration in COMMERCE 2Q43, ECON 2B03, SOC SCI 2J03, STATS 2A03, 2M3.
STATS 3A03  REgression and Design of Experiments
Introduction to SAS, linear models, regression and inference, diagnostics, analysis of variance, randomized block designs,拉丁 squares, and factorial experiments using SAS.
Three lectures; one term.
Prerequisite: Credit or registration in STATS 3D03.
Antirequisite: STATS 4B03.

STATS 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, 2X03.
Antirequisite: STATS 3D06.

STATS 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.

STATS 3G03*  Actuarial Mathematics I
Survival distributions, life tables, life insurance, life annuities, net premiums and reserves.
Three lectures; one term.
Prerequisite: STATS 2D03 and one of MATH 2A03, 2L03, 2Q04, 2X03.
Antirequisite: STATS 3D06.

STATS 3H03*  Actuarial Mathematics II
Multiple life functions, multiple decrement models, valuation theory for pension plans.
Three lectures; one term.
Prerequisite: STATS 3G03

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 Level II or above of any program in Engineering.
Antirequisite: STATS 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 3J03, 3Y03.

STATS 3P03  Survey Sampling
Survey design; simple random sampling; stratiﬁed sampling; proportional 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, 2M33.

STATS 3T03  Stochastic Processes
Random walk, Markov chains, discrete and continuous parameter Markov processes, branching processes, birth and death processes, queuing processes.
Three lectures; one term.
Prerequisite: MATH 2A03 or 2X03; and 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 4B03.

STATS 4C03  Generalized Linear Models
Normal linear model, exponential family, iteratively-reweighted least squares, logistic regression, Poisson regression and log-linear models, other families of GLMs, analysis of deviance and model checking, residual analysis.
Three lectures; one term.
Prerequisite: STATS 3A03 or 4B03; 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, week convergence, characteristic functions and central limit theorems, martingales.
Three lectures; one term.
Prerequisite: STATS 3A03, STATS 2D03.

STATS 4E03  Brownian Motion and Diﬀusion
Brownian motion, stochastic integrals, one-dimensional Itô’s formula, diffusion processes, option pricing and other financial applications. Simulation of the Black-Scholes formula and related models.
Three lectures; one term.
Prerequisite: STATS 2D03.

STATS 4F03  Categorical Data Analysis
Two-way and three-way contingency tables, logistic regression, loglinear models for contingency tables, collapsibility, ordinal associations, multcategory logit models.
Three lectures; one term.
Prerequisite: STATS 3A03 or 4B03; 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; one term.
Prerequisite: STATS 3D03 (or 3D06); and MATH 2503 or 2T03.

STATS 4Q03*  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.
STATS 4W03 may be repeated, if on a different topic.

MECHANICAL ENGINEERING

WEB ADDRESS: http://www.mech.mcmaster.ca
John Hodgins Engineering Building, Room 316
Ext. 24294

Faculty as of January 15, 2006

Chair
Samir Zidaa

Professors
Mamdouh Shoukri/B.Sc. (Cairo), M.Eng., Ph.D. (McMaster), P.Eng.
Samir Zidaa/B.Sc. (Cairo), M.Eng. (McMaster), Ph.D. (Lehigh)

Adjunct Professors
M. Heimi Attia/B.Sc., M.Sc. (Alexandria), Ph.D. (McGill)
MECH ENG 2P04  STATICS AND MECHANICS OF MATERIALS
Principles of statics as applied to deformable solid bodies. Stress and strain, elastic behaviour of simple members under axial force, bending and torsion. Principle 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
Antirequisite: ENGINEER 2P04

MECH ENG 2004  ENGINEERING MECHANICS: KINETICS AND DYNAMICS
Kinematics and dynamics of particles and rigid bodies. Analysis of planar mechanisms. Displacement, velocity and acceleration analysis methods. Motion with respect to a rotating frame reference. Work, energy and momentum principles.
Three lectures, plus one unit comprising tutorials or lectures devoted to applications at the discretion of the instructor; first term
Prerequisite: Registration in Level II of any Mechanical Engineering or Mechatronics Engineering program
Antirequisite: CIV ENG 2Q04, ENGINEER 2Q04

MECH ENG 2W04  THERMODYNAMICS
Introduction to the principles of thermodynamics, and applications in engineering. Basic concepts: energy systems, properties of pure substances, entropy. Laws of thermodynamics, power and refrigeration cycles.
Three lectures, one tutorial; second term
Prerequisite: Registration in Level II of any Mechanical Engineering program
Antirequisite: ENGINEER 2H03, 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 and frames using energy methods, impact loads. Buckling of compression members. Introduction to yield criteria.
Three lectures; second term
Prerequisite: ENGINEER 2P04 or MECH ENG 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 OF ENERGY SYSTEMS
Re-examination of laws of thermodynamics, analysis using second law of thermodynamics, multicomponent systems, psychrometry, HVAC systems, combustion systems, steam power systems and micro-nano systems.
Three lectures; first term
Prerequisite: MECH ENG 2W04

MECH ENG 3E05  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.
Four lectures, one lab (two hours); second term
Prerequisite: ENGINEER 2P04 or MECH ENG 2P04; and MECH ENG 2Q04, 3A03
Antirequisite: MECH ENG 3E04

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 3M02  COMPOSITE LABORATORY
Laboratory exercises in fluid mechanics, thermodynamics and solid mechanics. One lab (three hours); both terms
Prerequisite: Registration in any Mechanical Engineering program

MECH ENG 3N04  FLUID MECHANICS
Fluid properties and statics, conservation laws, applications of the continuity, momentum and energy equations, dimensional analysis and similarity, boundary layer flow, internal and external flows.
Three lectures, one tutorial (two hours); first term
Prerequisite: MATH 2A06; or MATH 2P04 and 2Q04; or MATH 2A03 and 2C03
MECH ENG 3R03  HEAT TRANSFER

Three lectures; second term.
Prerequisite: MATH 2M06, MECH ENG 2W04.

MECH ENG 4B03  TOPICS IN PRODUCT DEVELOPMENT
Case studies using modern product development methods, value engineering, product specification, rapid product development, lean design and continuous improvement. Product liability and robust design.

Three lectures; first term.
Prerequisite: Registration in Level IV or above of a Mechanical Engineering or Mechatronics Engineering program or permission of the department.

MECH ENG 4D03  MANUFACTURING PROCESSES (METAL REMOVAL)

Three lectures; second term.
Prerequisite: MECH ENG 3C03.

MECH ENG 4E03  MICROELECTROMECHANICAL SYSTEMS (MEMS)
Introduction, microfabrication and micromachining fundamentals, scaling effects, mechanics and transduction at microscale, actuation and sensing methods - Electrostatic, piezoelectric, thermal, electromagnetic, resonant, tunneling and microfluidic techniques. Capacitive sensors, resonators, lab on chip devices, microfluidic devices, micromirrors, assembly techniques for MEMS, microsystem packaging.

Three lectures; second term.
Prerequisite: Registration in Level IV or above of a Mechanical Engineering program or permission of the department.

Enrolment is limited.

MECH ENG 4H03  MECHATRONICS
Integration of mechanical engineering with electronics and computer control. Sensors, actuators (including pneumatic and hydraulic), modeling 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 3CA3, 3TP4 or MECH ENG 4R03.

MECH ENG 4I03  NOISE ANALYSIS AND CONTROL
Acoustic quantities; noise measurements and analysis; noise standards; sound generation, propagation, absorption, transmission; acoustic materials; noise control techniques; case studies.

Three lectures; second term.
Prerequisite: MECH ENG 4Q03.

MECH ENG 4J03  INTRODUCTION TO COMPUTATIONAL FLUID MECHANICS AND HEAT TRANSFER

Three lectures; second term.
Prerequisite: MECH ENG 3F04.

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: MECH ENG 2C03.

Enrolment is limited.

MECH ENG 4M03  PROJECT
A major mechanical or manufacturing engineering design or experimental project to be completed under the 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 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 degree-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  INCOMPRESSIBLE FLOW
Introduction to internal and external laminar and turbulent incompressible flows. Topics include turbulent boundary layers, aerodynamics and convective heat transfer.

Three lectures; first term.
Prerequisite: MECH ENG 3G03.

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  COMPRESSIBLE FLOW AND TURBOMACHINERY
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 2W04, 3004.

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 systems. Design optimization and system performance evaluation.

Three lectures; first term.
Prerequisite: MECH ENG 2W04, 3004, 3R03.

MECH ENG 4Z03  CAD/CAM/CAE
Solid modeling theory, part creation, assemblies and rigid bodies, mechanism simulation, B-Splines, data exchange, CNC machining and inspection. Major project using computer laboratory facilities.

Three lectures, one lab (one hour); second term.
Prerequisite: Registration in Level IV or above of any Mechanical Engineering program.

MECHATRONICS ENGINEERING

WEB ADDRESS: http://www.cas.mcmaster.ca
Information Technology Building, Room 202
Ext. 24614

Notes:
1. Courses in Mechatronics Engineering are administered within the Department of Computing and Software in the Faculty of Engineering.
2. All Mechatronics Engineering courses are open to students registered in a Mechatronics Engineering program, subject to prerequisite requirements. Prior permission of the Department is necessary for other students.
3. Students registered in Mechatronics Engineering are not allowed to substitute any of the required courses containing Engineering Science or Engineering Design content with any courses offered by a non-CEAB accredited Engineering program.
Courses

MECHTRON 3TA4  EMBEDDED SYSTEMS DESIGN I
Interfacing to digital and analog systems, sensors and actuators. Signals and conditioning: data acquisition, active and passive filtering, optical and analog isolation, PWM, demultiplexing. Architecture of micro-controllers and DSP. Embedded system design and documentation.
Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; first term
Prerequisite: ENG PHYS 2E04
Corequisite: SFWR ENG 3K04

MECHTRON 3TB4  EMBEDDED SYSTEMS DESIGN II
Design and implementation of embedded systems interacting with analog systems. Software design and implementation for embedded systems and DSP systems. Simulation and testing of embedded systems.
Three lectures, one tutorial (two hours) every other week, one lab (three hours) every other week; second term
Prerequisite: MECHTRON 3TA4

MECHTRON 4TB5  MECHATRONICS CAPSTONE DESIGN PROJECT
Student teams prepare the requirements, design, documentation and implementation of a Mechatronics System taking into account the economic, health, safety, cultural, legal and marketing factors into account. Students must demonstrate a working system and convincing test results.
Three hours (lectures, discussion, group project, seminar); two terms
Prerequisite: MECHTRON 3TB4 and registration in Level IV of Mechatronics Engineering

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, 2006
Chair
Fiona E. McNeill

Professors
David R. Chetlott/B.Sc., M.Sc., Ph.D. (Birmingham)
Carmel E. McSheehy/B.Sc., Ph.D. (University College Dublin) *
Michael S. Petersen/B.Sc. (Queen's), M.Sc. (McMaster), Ph.D. (Toronto)
Colin B. Seymour/D.C.R. (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)
John F. Valliant/B.Sc., Ph.D. (McMaster)
Douglas R. Wyman/B.Math (Waterloo), Ph.D. (McMaster)

Assistant Professors
Soo Hyun Byun/B.Sc., M.Sc., Ph.D. (Seoul National University)
Joseph E. Hayward/B.Eng., M.Eng., Ph.D. (McMaster)
Gerald R. Moran/B.Sc. (McMaster), Ph.D. (Guelph)/Undergraduate Advisor
Gianni Parise/B. Kinct., M.Sc., Ph.D. (McMaster)

Associate Members
Richard G. Bulger (Pathology) B.Sc., M.Sc. (Toronto), Ph.D. (A.N.U. Canberra), M.B.A. (McMaster)
Troy Farncombe/Radiology) B.Sc. (Calgary), M.Sc., Ph.D. (British Columbia)
Andrew J. Rainbow (Biological) 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 Barraclough/Dipl, M.R.T. (R), RTR

Coordinator, Radiation Therapy Specialization
Appointment Pending

Coordinator, Radiography Specialization
Caroline Falconi

Coordinator, Ultrasonography Specialization
Lori Kozio1

Faculty
Mary Ayer/RTR, RDMS/Clinical Coordinator, Ultrasonography
Desmond Barres/M.R.T. (R), RTR
Darrin Courneyea/B.Sc. (Guelph), Dipl (Med Im), RSMS, RVT
Caroline Falconi/Dipl, B.App.Sc. (Med Im), M.App.Sc. (Med Im) (Charles Sturt), M.R.T. (R) RTR
Malka Glasner/B.Sc. (York), Dipl (Med Im), B.App.Sc. (Med Im) (Charles Sturt), M.R.T. (R), RTR
Janice Gyory/Dipl, RTR, RDMS
Carol Ann Howe1/B.App.Sc. (Med Im) (Charles Sturt), M.R.T. (R), RTR
Lori Kozio1/B.App.Sc. (Med Im) (Charles Sturt), Dipl, RTR, RDMS, FSDMS, CRGMS
Margaret MacDonald/Dipl, RTNM, RDMS, ROCS
Leslie Murray/B.App.Sc. (Med Im), M.App.Sc. (Med Im) (Charles Sturt), M.R.T. (R), RTR
D. Edward Scott/Dipl, M.App.Sc. (Med US) (Charles Sturt), RTR, RDMS, RDSC, RVT
Mary Tuttle/Dipl, M.R.T. (R), RTR, RDMS

MEDICAL AND HEALTH PHYSICS ...

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 Physics
Antirequisite: PHYSICS 3R03

MEd PHYS 4A03  MEDICAL PHYSICS COMMUNICATIONS
This is an enquiry 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 3101, 4AA1, 4AB2, 4101, PHYSICS 3101, 4A03, 4A01, 4AA1, 4A01

MEd PHYS 4AA1  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
Antirequisite: MEd PHYS 3101, 4A03, PHYSICS 3101, 4A03

MEd PHYS 4AB2  MEDICAL PHYSICS COMMUNICATIONS B
Preparation and presentation of report on second work term.
One seminar (one hour); second term
Prerequisite: MEd PHYS 4AA1
Antirequisite: MEd PHYS 4A03, 4101, PHYSICS 4A03, 4101
MED PHYS 4B03  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 1B3A, 1BB3 or permission of the instructor
Antirequisite: BIOL 3L03, MED PHYS 3T03, PHYSICS 3T03

MED PHYS 4R06  RADIATION AND RADIOISOTOPE METHODOLOGY
Techniques and theory of the measurement of radiation. Includes radioactivity 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 underlaying 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 2G04; and MATH 2C03 or 2P04; and one of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03, 4B03, PHYSICS 3T03
Antirequisite: PHYSICS 4T03

MED PHYS 4XX3  HUMAN BIOLOGY FOR PHYSICAL SCIENTISTS
An overview of the structure and the 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 Honours 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

BIOL 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: BIOLOGY 2B03 or 2C03, and credit or registration in one of MED PHYS 3T03, 4B03, 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 fees set by the Unit to cover travel costs.
Prerequisite: Registration in Level IV of any Honours program in the Faculty of Science
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

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 III Medical Radiation Sciences 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), three hours (tutorial) second term; two terms
Prerequisite: Registration in Medical Radiation Sciences I

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 I
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 radiation therapy and to ultrasonic, radiographic and magnetic resonance imaging.
Three lectures; one term
Prerequisite: PHYSICS 1P03 or a grade of at least 60% in Grade 12 Physics U; and registration in Medical Radiation Sciences I

MEDRADSC 2A03  PATIENT CARE
Theoretical foundation and skills development to enable the student to meet the physical and emotional needs of patients in the clinic 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 the 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), one hour (lab), one hour (tutorial); one term
Prerequisite: Registration in Level II of the Radiography or Radiation Therapy Specialization
MEDRADSC 2F03  RADIOPHYSICS 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), one hour (lab), one hour (tutorial); one term
Prerequisite: Registration in Level II of the Radiation Therapy or the 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 performance 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 the Radiography or Ultrasonography 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 the Radiography or Ultrasonography Specialization

MEDRADSC 3D03  SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - ADVANCED STUDIES IN COMPUTED TOMOGRAPHY
A study of clinical use of CT in diagnosis, including clinical indications, pathophysiology, imaging appearances, imaging protocols and post-processing tools.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3D03  SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - MAMMOGRAPHY
Dedicated mammographic imaging technology (both film-screen and digital systems) replaces mammographic imaging technique, and appearances are compared, with correlation to other imaging modalities.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3E03  SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - INTRODUCTION TO MAGNETIC RESONANCE IMAGING
Of magnetic resonance imaging, including instrumentation, image production, selection and control of magnetic fields, pulse sequences, safety and clinical application.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiation Therapy or the Radiography Specialization

MEDRADSC 3E03  INQUIRY IN MEDICAL RADIATION SCIENCES
Independent study of the scientific literature, including preparation of seminars and reports or research proposals 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 3I03  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 2D03 and registration in Level III of the Radiography or the Radiation Therapy Specialization

MEDRADSC 3X03  RESEARCH METHODS IN MEDICAL RADIATION SCIENCES
Prepares students for applied clinical research in Medical Radiation Sciences. Topics include systematic description of observations, testing hypotheses, distinctives of quantitative and qualitative research and critical review of published literature.
Three hours (lectures), one hour (tutorial), one hour (lab); one term
Prerequisite: STATS 1C03 and registration in Level III of Medical Radiation Sciences

MEDICAL RADIATION SCIENCES (RADIATION THERAPY SPECIALIZATION)...

Courses

MEDRADSC 2S03  CLINICAL ONCOLOGY I
This course examines pediatric and some adult oncology sites. Epidemiology, etiology, signs and symptoms of disease, pathways, 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 2T03  CLINICAL ONCOLOGY II
This course further emphasizes the principles of additional oncology disease sites e.g., epidemiology, etiology, signs and symptoms of disease, pathways, routes of spread, staging systems and management approach.
Four hours (lectures); one term
Prerequisite: MEDRADSC 2S03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 2U03  RADIATION THERAPY SKILLS I
Students develop critical thinking, problem-solving skills in the simulation and radiation treatment of patients. Emphasis is on anatomy, pathology, physics and treatment planning to execute a treatment technique.
Two hours (lectures), one lab; one term
Prerequisite: MEDRADSC 2S03 and 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 2T03, 2U03 and registration in Level II of the Radiation Therapy Specialization

MEDRADSC 3S03  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: MEDRADSC 2U03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3T03  APPLIED PATIENT CARE IN RADIATION THERAPY
This course presents the theory and skills to provide the radiation therapy patient with appropriate patient care. Patient assessment, professionalism and the management of radiation therapy toxicities will be emphasized.
Four hours (lectures); one term
Prerequisite: MEDRADSC 2T03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3U03  RADIATION PROTECTION AND RADIATION BIOLOGY IN RADIATION THERAPY
This course provides an in-depth understanding of radiation protection and radiobiological principles related to high energy radiation used in Radiation Therapy.
Four hours (lectures); one term
Prerequisite: MEDRADSC 2T03, 3S03, 3F03 and registration in Level III of the Radiation Therapy Specialization
MEDRADSC 3V03 TREATMENT PLANNING II
Emphasis on performance of dosimetry problem solving skills for photon and electron beams. Students gain skills to plan Radiation Therapy treatments independently for a variety of sites under variable conditions.
Two lectures, one lab; one term
Prerequisite: MEDRADSC 3K03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 3W03 RADIATION THERAPY SKILLS II
Students further develop critical-thinking, psychomotor and problem-solving skills that are required in the simulation and treatment of radiation therapy patients. The student will practice on simulators and treatment units.
Two lectures, one lab; one term
Prerequisite: MEDRADSC 3V03 and registration in Level III of the Radiation Therapy Specialization

MEDRADSC 4E16 CLINICAL PRACTICUM II
Sixteen week placement in a Radiation Therapy Department. Students further develop clinical and professional skills, working toward competence in radiation therapy.
One term
Prerequisite: MEDRADSC 3W03 and registration in Level IV of the Radiation Therapy Specialization

MEDRADSC 4F17 CLINICAL PRACTICUM III
Seventeen week placement in a Radiation Therapy Department. Students further develop clinical and professional skills, working toward competence in radiation therapy.
One term
Prerequisite: MEDRADSC 4E16 and registration in Level IV of the Radiation Therapy Specialization

MEDICAL RADIATION SCIENCES
(RADIOGRAPHY SPECIALIZATION)...

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 peers.
One hour (lectures), two labs, two hours each; 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 peers.
One hour (lecture), four 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 3D03 SUBSPECIALTIES IN MEDICAL RADIATION SCIENCES - BONE MINERAL DENSITOMETRY
Pathophysiology of osteoporosis, diagnosis and treatment are discussed. The principles and practice of bone densitometry measurements, with emphasis on dual energy x-ray absorptiometry, are covered, with hands-on experience in a simulated clinical environment.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Radiography Specialization

MEDRADSC 3E03 RADIOGRAPHIC PHYSICS AND INSTRUMENTATION I
The main operations of radiographic and fluoroscopic 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

MEDRADSC 3H03 QUALITY CONTROL IN RADIOGRAPHY
Students perform quality control testing procedures on both analogue and digital radiographic equipment, comparing equipment performance to legislated standards and best practices concepts.
One hour (lecture), three hours (lab), one hour (tutorial); one term
Prerequisite: MEDRADSC 3G03 and registration in Level III of the Radiography Specialization

MEDRADSC 3J03 PATHOLOGY AND PROCEDURES II
Radiological procedures and image appearances of associated pathologies of the cardiovascular, endocrine, nervous and reproductive systems.
Three hours (lectures); one term
Prerequisite: MEDRADSC 2I03 and registration in Level III of the Radiography Specialization

MEDRADSC 3K03 COMPUTED TOMOGRAPHY
Processes of data acquisition, image reconstruction and post-processing are discussed. Scan protocol optimization in terms of image quality, demonstrated structures and patient dose are examined.
Three hours (lectures), one lab; one term
Prerequisite: MEDRADSC 3I03 and registration in Level III of the Radiation Therapy or Radiography Specialization

MEDRADSC 3L03 RADIOGRAPHIC SKILLS III
Radiography of cranio-facial structures and development of case management and adaptation skills in modifying standard radiographic procedures to the special needs patient.
One hour (lecture), four 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 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

MEDICAL RADIATION SCIENCES
(ULTRASONOGRAPHY SPECIALIZATION)...

Courses

MEDRADSC 2K03 SONOGRAPHIC PHYSICS AND INSTRUMENTATION I
This course will examine the following topics: physical principles associated with propagation of ultrasound in tissues, attenuation of sound in tissues, ultrasound instrumentation, image quality and biopsy techniques associated with propagation of ultrasound in tissues.
Three hours (lectures), one hour (lab), one hour (tutorial); one term
Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2L03 ABDOMINAL ULTRASONOGRAPHY I
A comprehensive study of the anatomy, normal and abnormal conditions of major abdominal organs; general pathologic conditions; application to the vascular and reticulo-endothelial systems with sonographic correlation.
Three hours (lectures), one hour (lab); one hour (tutorial); one term
Prerequisite: Registration in Level II of the Ultrasonography Specialization

MEDRADSC 2M03 OBSTETRICAL AND GYNECOLOGIC ULTRASONOGRAPHY I
A comprehensive study of the anatomy, physiology of the normal female pelvis including pregnancy. Sonographic technique, normal appearances, patient care and ethical issues will be examined.
Three hours (lectures), one hour (tutorial); one term
Prerequisite: Registration in Level II of the Ultrasonography 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 2003  ABDOMINAL ULTRASONOGRAPHY II
A comprehensive overview with sonographic correlation of the rela-
tional anatomy, normal and anomalous conditions of the remaining major
abdomino-pelvic organs with detailed pathologic conditions.
Three hours (lectures), one hour (tutorial); one term
Prerequisite: MEDRADSC 2L03 and registration in Level II of the Ultra-
sonography Specialization

MEDRADSC 2P03  OBSTETRICAL AND GYNECOLOGICAL
ULTRASONOGRAPHY II
A comprehensive study of gynaecological pathologies and abnormal
sonographic appearances of the female pelvis. Pathologies of the ob-
sterical patient will be examined.
Three hours (lectures), one hour (tutorial); one term
Prerequisite: MEDRADSC 2M03 and registration in Level II of the Ultra-
sonography Specialization

MEDRADSC 2Q03  SONOGRAPHIC SKILLS II
Emphasis is on performance of sonography of the pancreas, urinary system,
complete abdomen and female pelvis to include routine and alternate tech-
niques, Image recognition, patient care, communication and ergonomics.
One hour (lecture), four hours (lab); one term
Prerequisite: MEDRADSC 2N03 and registration in Level II of the Ultra-
sonography 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 2A03, 2K03, 2003, 2P03, 2Q03 and registra-
tion in Level II of the Ultrasonography Specialization

MEDRADSC 3D03  SUBSPECIALTIES IN MEDICAL RADIATION
SCIENCES - ULTRASONOGRAPHY OF THE BREAST
A comprehensive study of the diagnostic application of ultrasound in the
neural, brain and spinal cord. Sonographic appearance, technique and
and correlation with other diagnostic modalities are covered.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3D03  SUBSPECIALTIES IN MEDICAL RADIATION
SCIENCES - NEUROSONOGRAPHY
A comprehensive study of the diagnostic application of ultrasound in the
head and neck. Sonographic appearance, technique and correlation with other
diagnostic modalities are covered.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3D03  SUBSPECIALTIES IN MEDICAL RADIATION
SCIENCES - FETAL ECOCARDIOGRAPHY
A comprehensive study of the normal and pathologic structure of the
fetal heart. Sonographic appearance and technique are covered.
Three hours (lectures); one term
Prerequisite: Registration in Level III of the Ultrasonography Specialization

MEDRADSC 3M03  ABDOMINAL ULTRASONOGRAPHY III
A comprehensive overview with sonographic correlation of the rela-
tional anatomy, normal, anomalous and pathologic conditions of remain-
ing abdominal and superficial structures.
Three hours (lectures); one hour (tutorial); one term
Prerequisite: MEDRADSC 2O03 and registration in Level III of the Ultra-
sonography Specialization

MEDRADSC 3N03  VASCULAR ULTRASONOGRAPHY
Vascular anatomy, physiology, flow hemodynamics, sonographic tech-
nique of normal and pathologic flow states, relevant alternative methods
of assessing the vasculature of the heart, neck, abdomen and extremities.
Three hours (lectures); one term
Prerequisite: MEDRADSC 2K03 and registration in Level III of the Ultra-
sonography Specialization

MEDRADSC 3O03  SONOGRAPHIC SKILLS III
Emphasis is on performance of sonography of superficial structures, doppler
of abdominal and peripheral vasculature to include routine and alternate tech-
niques. Image recognition, patient care, communication and ergonomics.
One hour (lecture), four hours (lab); one term
Prerequisite: MEDRADSC 2N03, 2R17 and registration in Level III of the
Ultrasonography Specialization

MEDRADSC 3P03  OBSTETRICAL AND GYNECOLOGICAL
ULTRASONOGRAPHY III
A comprehensive study of obstetric anomalies and abnormal sonographic
appearances of amniotic fluid, fetal growth, fetal syndromes. Doppler
studies of the gravid patient and fetal anomalies of each system.
Three hours (lectures), one hour (tutorial); one term
Prerequisite: MEDRADSC 2P03 and registration in Level III of the Ultra-
sonography Specialization

MEDRADSC 3Q03  SONOGRAPHIC PHYSICS AND
INSTRUMENTATION II
Recent and emerging technological advances in ultrasound instrumenta-
tion. Emphasis will be placed on the acoustic diagnostic value provided by
the technology and new applications for the instrumentation.
Three hours (lectures), one hour (lab), one hour (tutorial); one term
Prerequisite: MEDRADSC 2K03 and registration in Level III of the Ultra-
sonography Specialization

MEDRADSC 3R03  MUSCULOSKELETAL ULTRASONOGRAPHY
Sonographic correlation of upper/lower extremity joint anatomy; normal
and pathologic musculoskeletal structures using standard scanning tech-
niques and protocols.
Two hours (lectures), one hour (lab); one term
Prerequisite: MEDRADSC 2R17, and registration in Level III of the Ultra-
sonography 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, 3003 and registration in Level IV of the
Ultrasonography Specialization

MEDRADSC 4D17  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 Ul-
trasonography Specialization

MIDWIFERY
WEB ADDRESS: http://www.mcmaster.ca/midwifery
Michael G. DeGroote Centre for Learning and Discovery, Room 3103
Ext. 26654

Faculty as of January 15, 2006
Assistant Dean
Karyn Kaufman
Professor
Karyn Kaufman/B.S.S. (Michigan), M.S. (New York), Dr.P.H. (North
Carolina), R.M.
Associate Professors
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)
Helent McDowell/M.H.Sc. (McMaster), R.M.
Patrice 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.

MIDWIF 1A05  THE MIDWIFERY PROFESSION
Seminar presentations, discussion and arranged experiences to intro-
duce students to the history, philosophy of care, and role of the midwife
in Canada and elsewhere.
Seminar (three hours); first term
Prerequisite: Registration in the Midwifery Education Program
Antirequisite: MIDWIF 1A05
MOLECULAR BIOLOGY 267

MIDWIF 2A03 MIDWIFERY CARE I-CLINICAL SKILLS
This course involves structured learning experiences to prepare for an individualized placement in a midwifery practice. Fundamental clinical skills and theoretical information will be included.
Four weeks; second term
Prerequisite: MIDWIF 1A06

MIDWIF 2E12 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

MIDWIF 2F03 PHARMACOTHERAPY
This course is an overview of basic concepts in pharmacy, pharmacology and therapeutics relevant to the practice of midwifery in Ontario. Content areas include pharmacokinetics, toxicology, adverse drug reactions during pregnancy and lactation and pharmacology in the neonate. Two lectures (three hours), one tutorial (one hour); one term
Prerequisite: HTH SCI 1D06

MIDWIF 2G03 CLINICAL SKILLS FOR MIDWIFERY PRACTICE
Lecture, demonstration and laboratory practice of fundamental skills for midwifery practice.
First term
Prerequisite: MIDWIF 1D03
Antirequisite: MIDWIF 2A03
May be taken concurrently with MIDWIF 1D03 with permission of the Program Director.

MIDWIF 2H15 MIDWIFERY CARE I: NORMAL CHILDBEARING
First clinical placement under the supervision of a registered midwife: students focus on beginning level skills for the care of women experiencing normal childbearing. Weekly problem-based tutorials include normal antepartum, intrapartum, postpartum and newborn care situations.
Second term
Prerequisite: HTH SCI 2M03, MIDWIF 1D03, 2G03 (or 1A06), 2F03. A minimum CA of 6.0 in first term is required.
Antirequisite: MIDWIF 2E12

MIDWIF 3A09 COMMUNITY PLACEMENTS
Three one month placements will be organized over the term. One placement will be organized with a hospital labour and delivery department and one with an obstetrician. The third placement will be chosen by the student and may take place within or outside the province or country.
Second term
Prerequisite: MIDWIF 2B15

MIDWIF 3D03 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 1C05

MIDWIF 3F03 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.
Second term
Prerequisite: Registration in Level III of the Midwifery Education Program

MIDWIF 3G15 MIDWIFERY CARE II
Second clinical placement under the supervision of a registered midwife: students develop additional skills in planning and providing care to women and their newborn infants. Weekly problem-based tutorials focus on a range of normal and more common abnormal situations.
First term
Prerequisite: MIDWIF 2A03, 2E12
Antirequisite: MIDWIF 2B15

MIDWIF 3H15 MIDWIFERY CARE III
Third placement in a midwifery practice: students extend skills to more complex childbearing situations. Problem-based tutorials focus on expanding the knowledge base of maternal-newborn complications, for consultation and referral, and relationships with other health care providers.
Third term
Prerequisite: MIDWIF 2B15, 3G15
Antirequisite: MIDWIF 2C15

MIDWIF 4A15 MIDWIFERY CARE IV
Fourth placement in a midwifery practice. In defined situations, supervision is indirect. Students care for assigned caseload, including situations with complications. Problem-based tutorials focus on midwifery roles and responsibilities in highly complex and urgent situations.
First term
Prerequisite: MIDWIF 2C15, 3H15
Antirequisite: MIDWIF 3B15

MIDWIF 4B15 MIDWIFERY CLERKSHIP
Final placement in a midwifery practice. Supervision is increasingly indirect. Students formulate and provide care to an entire caseload of women. Tutorials and workshops include case review, preparation for registration and establishing a practice in Ontario.
Second term
Prerequisite: MIDWIF 3B15, 4A15
Antirequisite: MIDWIF 3C12, 3E03

MODERN LANGUAGES AND LINGUISTICS

(SEE LINGUISTICS AND LANGUAGES)

MOHAWK

(SEE INDIGENOUS STUDIES, MOHAWK)

MOLECULAR BIOLOGY

The Molecular Biology courses are administered within the Faculty of Science through a Committee of Instruction, and draw on the Departments of Biochemistry and Biomedical Sciences, Biology and Pathology and Molecular Medicine. Information may be obtained from the Program Administrators in Life Sciences Building, Room 118 or Health Sciences Centre, Room 4H43 who can refer students to the appropriate faculty councilor.

Courses

If no prerequisite is listed, the course is open.

MOL BIOL 2B03 CELL BIOLOGY
Basic treatment of cell structure and function, including transport and chemical signals; adaptation of structure and function in specialized cells.
Two lectures, one lab (three hours), one tutorial; one term
Prerequisite: BIOLOGY 1A03, 1AA3, CHEM 1AA3 and registration in Honours Molecular Biology
Antirequisite: BIOLOGY 2B03
This course is administered by the Department of Biology.

MOL BIOL 2L06 INQUIRY IN BIOCHEMICAL TECHNIQUES
An inquiry approach to learning about current techniques in biochemistry research. Students will work in small groups in labs and workshops, with a focus on how to search the primary literature, prepare and deliver written and oral presentations.
One lecture (one hour), one lab or workshop (four hours); two terms
Prerequisite: Registration in BioCHEM 2B03 and Honours Molecular Biology
Cross-list: BIOCHEM 2L06
Antirequisite: BIOCHEM 3L03
This course is administered by the Department of Biology.

MOL BIOL 3A03 CURRENT TOPICS IN MOLECULAR BIOLOGY
A review of current literature in molecular biology. A combination of lectures and student presentations on selected topics.
One lecture; one tutorial (two hours); one term
Prerequisite: Registration in Honours Molecular Biology

MOL BIOL 3I03 INDEPENDENT RESEARCH PROJECT
Students will conduct an independent research study in a faculty member's laboratory.
8-10 hours per week (scheduling to be arranged by supervisor); one term
Prerequisite: Registration in Honours Molecular Biology

 courses in the Faculty of Science section of the Calendar.
MUSIC

WEB ADDRESS: http://www.humanities.mcmaster.ca/-sotw/
Togo Salmon Hall, Room 414
Ext. 27671

Courses and programs in Music are administered within the School of the Arts in the Faculty of Humanities.

Courses  
If no prerequisite is listed, the course is open.

MUSIC 1A03  INTRODUCTION TO THE HISTORY OF MUSIC I  
A one-lecture survey of Western music. Topics include 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 1A04  INTRODUCTION TO THE HISTORY OF MUSIC II  
A one-lecture survey of Western music. Topics include 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 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 tutorials; two terms  
Prerequisite: Registration in a Music program; or a grade of at least B- in MUSIC 1C03, or qualifying tests

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 technical and repertoire of any orchestral instrument, e.g., flute, oboe, clarinet, bassoon, violin, viola, cello, bass, piano, harpsichord, organ, harp, guitar, or voice. Twelve-one-hour meetings per term; two terms  
Prerequisite: Registration in a Music program; or a successful audition at a minimum level of Honours Grade 6 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 1GY3  HISTORY OF WESTERN MUSIC: BAROQUE AND CLASSICAL  
A survey of Baroque and Classical music. Includes consideration of performance practices, influence of the other arts and socio-political developments. Three lectures; one term  
Prerequisite: MUSIC 1Y03

MUSIC 2A03  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: MUSIC 1Y03

MUSIC 2B03  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. Twelve-one-hour meetings per term; two terms  
Prerequisite: MUSIC 1E06; and registration in Level II of any program in Music 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, THTR&FLM 2T03
Antirequisite: SADM 2A03

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 1C03

MUSIC 2I03  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: Registration in Level II or above
Cross-list: CMST 2R03

MUSIC 2J03  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 2R03
Antirequisite: MUSIC 2A03

MUSIC 2Y03  HISTORY OF WESTERN MUSIC: ROMANTIC TO THE PRESENT
Three lectures; one term
Prerequisite: MUSIC 1Y03
Antirequisite: MUSIC 2B03, 2B03

MUSIC 2Y03  HISTORY OF WESTERN MUSIC: ROMANTIC TO THE PRESENT
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

MUSIC 2Z03  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: MEDIADIA 2G03
Enrolment is limited.
This course is administered by the Department of Communication Studies and Multimedia.

MUSIC 3A03  ELEMENTARY MUSIC EDUCATION
A survey of elementary music education methods such as those of Kodály, Orff and Suzuki.
Three lectures; one term
Prerequisite: MUSIC 1A03 and 1A03; or 18 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.
Seminar (two hours); one term
Prerequisite: MUSIC 2C03 and registration in Honours Music
Antirequisite: MUSIC 2C03
Offered in alternate years.
Enrolment is limited.

MUSIC 3C03  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.
Seminar (two hours); one term
Prerequisite: MUSIC 2C03 or 2C03; 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 3E03
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 2H03, 2H03 and registration in Honours Music
Offered in alternate years.
Enrolment is limited.

MUSIC 3I03  ORCHESTRA AND ARRANGING
A study of the orchestral/band instrumentation; scoring of music for various ensembles.
Two lectures; two terms
Prerequisite: MUSIC 2C03, 2H03 and registration in Honours Music

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

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

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
MUSIC 3N03 VOCAL METHODS
Basic techniques of singing; organization, conducting, and rehearsing a
choral literature for primary and junior levels.
Two lectures; one term
Prerequisite: Registration in Honours Music
Alternates with MUSIC 4N03.
Enrolment is limited.

MUSIC 3003 CONDUCTING
Fundamental conducting techniques applied to works selected from the
standard repertoire.
Three lectures; one term
Prerequisite: MUSIC 2C03, 2H03 and registration in Honours Music
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
Antirequisite: MUSIC 4P03
Enrolment is limited.

MUSIC 3S33 SPECIAL STUDIES IN CHAMBER MUSIC OR ACCOMPANYING
Advanced supervised studies in chamber music performance or vocal
or instrumental accompanying.
Times to be arranged between the students and instructor; one term
Prerequisite: A grade of at least A- in MUSIC 3E06; 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 3S33. 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 III or above
Offered in alternate years.

MUSIC 3U03 JAZZ
An historical survey of jazz, focusing on selected performers and
arrangers.
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 context. Possible topics include: the concerto, the symphonic
poem, orchestral music, 1880-present.
Two lectures; one tutorial; one term
Prerequisite: Registration in Level III or IV of an Honours Music program
Alternates with MUSIC 3Y03.

MUSIC 3YY3 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
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
tandem to develop skills for multimedia audio production. Topics include:
advanced MIDI, musical instrument digital interface (MIDI), and
sampling.
Two lectures, one tutorial; one term
Prerequisite: MMEDIA 2G03 or MUSIC 2Z03
Cross-list: MMEDIA 3C03
Enrolment is limited.
This course is administered by the Department of Communication
Studies and Multimedia.

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: 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
Enrolment is limited.

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 3E06 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 2E06 and registration in the Diploma in Music Performance.
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 analy-
sis, song cycles of Schubert, advanced set theory.
Seminar (two hours); one term
Prerequisite: MUSIC 2C03, 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: MUSIC 2C03, 2H03 and registration in Honours Music
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
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 3M03.
Two lectures; two terms
Prerequisite: Registration in Honours Music
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.
Alternates with MUSIC 3N03.
Enrolment is limited.

MUSIC 40C3 ADVANCED CONDUCTING: ORAL
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.
Alternates with MUSIC 40C3.
Enrolment is limited.

MUSIC 4013 ADVANCED CONDUCTING: CHORAL
A continuation of MUSIC 3013. Refinement and development of conducting techniques. Exploration of in-depth score preparation, rehearsal techniques, odd and shifting meters, subdivision.
Two lectures; one term.
Prerequisite: MUSIC 3003 and registration in Honours Music.
Alternates with MUSIC 4013.
Enrolment is limited.

MUSIC 403 ADVANCED CONDUCTING: INSTRUMENTAL
A continuation of MUSIC 303. 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 3003 and registration in Honours Music.
Alternates with MUSIC 40C3.
Enrolment is limited.

MUSIC 4P03 PERCUSSION METHODS
A continuation of MUSIC 3P03.
Two lectures; one term.
Prerequisite: MUSIC 3P03 and registration in Honours Music.
Enrolment 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.
Offered in alternate years.
Enrolment is limited.

MUSIC 4R03 ISSUES AND METHODS IN CURRENT MUSICOCOLOGY
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 III or IV of an Honours Music program.
Offered in alternate years.
Enrolment 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 4SS3 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 3SS3; 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 a Diploma in Music Performance.

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.
Enrolment is limited.

MUSIC 4Z03 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.
Enrolment is limited.

MUSIC 4Z13 ADVANCED 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.

MUSIC 5C03 ADVANCED CONDUCTING: CHORAL
A continuation of MUSIC 4013. Refinement and development of conducting techniques. Exploration of in-depth score preparation, rehearsal techniques, odd and shifting meters, subdivision.
Two lectures; one term.
Prerequisite: MUSIC 4013 and registration in Honours Music.
Alternates with MUSIC 5C03.
Enrolment is limited.

MUSIC 5D03 ADVANCED CONDUCTING: INSTRUMENTAL
A continuation of MUSIC 403. 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 4013 and registration in Honours Music.
Alternates with MUSIC 5D03.
Enrolment is limited.

MUSIC 5P03 PERCUSSION METHODS
A continuation of MUSIC 4P03.
Two lectures; one term.
Prerequisite: MUSIC 4P03 and registration in Honours Music.
Enrolment is limited.

MUSIC 5Q03 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.
Offered in alternate years.
Enrolment is limited.

MUSIC 5R03 ISSUES AND METHODS IN CURRENT MUSICOCOLOGY
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 III or IV of an Honours Music program.
Offered in alternate years.
Enrolment is limited.

MUSIC 5S03 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 5SS3 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 4SS3; 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 a Diploma in Music Performance.

MUSIC 5U03 JAZZ IMPROVISATION
Study and performance of jazz improvisations in various styles.
Two hours; one term.
Prerequisite: MUSIC 4U03 and permission of the instructor.
Offered in alternate years.
Jenny Ploeg/B.Sc.N., M.Sc.N. (Western Ontario), Ph.D. (Toronto), R.N.
Jennifer Skelly/M.H.Sc., M.Sc. (McMaster), Ph.D. (Toronto), R.N.
Wendy Sword/B.Sc.N. (McMaster), Ph.D. (Guelph), R.N.
Helen Thomas/B.N.Sc. (Queen's), M.Sc. (Waterloo), R.N.
Catherine Tompkins/B.Sc.N. (Western Ontario), M.Ed. (Toronto), Ph.D. (California), R.N.
Fluta Valais/B.A., B.Sc.N. (Windsor), M.H.Sc. (McMaster), Ph.D. (Toronto), R.N.

Assistant Professors:
Noori Akhtar-Danesh, B.Sc., M.Sc. (Iran), Ph.D. (Newcastle-upon-Tyne).
Pamela Baxter/B.Sc.N. (McMaster), Ph.D. (McMaster), R.N.
Gertrude Benson/B.N.Sc. (McMaster), M.Sc. (Toronto), R.N.
Lynda Bentley Poole/B.Sc.N. (McMaster), M.Sc. (Toronto), R.N.
*Denise Bryant-Lukosius/B.Sc.N. (McMaster), M.Sc. (D'Youville), Ph.D. (McMaster), R.N.
Michelle Butt/B.Sc., B.N. (Memorial), M.Sc. (Queen's), R.N.
Patricia Cadwallader/B.Sc.N. (McMaster), M.Sc. (Guelph), Ph.D. (McMaster), R.N.
Ruth Chen/B.A. (California-Berkeley), M.Sc. (Yale), R.N.
Kirsten Culver/B.Sc. (Queen's), Ph.D. (McMaster), R.N.
Micheline Drummond-Young/B.Sc.N., M.H.Sc. (McMaster), R.N.
Anne Ehlich/B.N.Sc. (Queen's), M.H.Sc. (Toronto), R.N.
Ruth Hannon/B.N.Sc. (Queen's), M.H.A. (Wales), M.S.E.N.P. (D'Youville)
Susan Jack/B.Sc.N. (Alberta), Ph.D. (McMaster), R.N.
Sharon Kaasalainen/B.Sc.N. (McMaster), M.Sc. (Toronto), Ph.D. (McMaster), R.N.
Michael Leduc/B.Sc.N. (Victoria), M.P.H. (Boston), R.N.
Yvonne Lawton/B.N.Sc. (New Brunswick), M.Ed. (Brock), R.N.
Jeanne LeGras/B.N.Sc. (Manitoba), M.H.Sc. (McMaster), R.N.
Ola Lunny-Child/B.Sc.N. (McMaster), M.Sc. (Toronto), R.N.
Maureen Markle-Reid/B.Sc.N. (McMaster), M.Sc. (Toronto), Ph.D. (McMaster), R.N.
Lynn Martin/B.Sc.N. (McMaster), M.Sc. (Western Ontario), Ph.D. (McMaster), R.N.
Colleen McKey/B.Sc.N. (Niagara), B.Sc. (D'Youville), Ph.D. (Capella), R.N.
Karen Moncrieff/B.Sc.N. (McMaster), M.S. (D'Youville), R.N.
Charlotte Nessgaard/B.Sc.N. (McGill), M.Sc. (Western Ontario), R.N.
Cottie O'Sos/B.A. (McMaster), M.Ed. (Brock), Ph.D. (Toronto)
Chris Patterson/B.Sc. (Waterloo), B.Sc.N. (McMaster), M.Sc. (Western Ontario), R.N.
Gladys Peachey/B.N. (Memorial), M.H.Sc. (Toronto), Ph.D. (McMaster)
Joanna Perazzo/B.Sc.N., M.Sc.N. (Western Ontario), R.N.
Jennine Safi/B.Sc.N., M.Sc., Ph.D. (McMaster), R.N.
Ruth Schofield/B.Sc.N., M.Sc. (McMaster), R.N.
Dyanne Semoga/B.Sc.N. (McGill), M.N. (Washington), R.N.
Kathy Sleeth/B.Sc.N., M.Sc. (McMaster), R.N.
Eric Staples/B.A.A. (N.J.) (Ryan), M.Sc. (D'Youville), Ph.D. (Case Western Reserve), R.N.
Catherine Thomas/B.Sc.N., M.Sc. (New York), R.N.
Olive Wahous/h/M.Sc. (Util), R.N.

Lecturers:
Iris Mulica/B.Sc.N., M.Sc.N. (McMaster), R.N.
Mariliny Ott/B.Sc.N. (McMaster), M.Sc. (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 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. Registered students who have been convicted of an offense under the criminal code for which they have not been pardoned may be denied the opportunity to enter clinical placement.

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 enroll in the B.Sc.N. Program are expected to travel to any learning setting in Hamilton and the surrounding area (McMaster and Mohawk) and to Kitchener-Waterloo and surrounding areas (Conestoga).
5. Students in any stream who register for a clinical lab course in Level III or above must also submit a placement request to the Placement Coordinator. 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 deadline will normally be required to defer their placement until the next term in which the course is offered. The final assignment of learning settings for any course is constrained by the availability of the requested setting and faculty resources. Students may therefore be required to complete the practicum component of a course in a learning setting that is not of their choosing.
6. 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.
7. The Paediatric and Adult Oncology courses are open to nurses working in or who have an interest in paediatric or adult oncology respectively. A candidate must be currently registered as a nurse in a province or territory in Canada.
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.

NURSING Courses...

NURSING 1A00 WHMIS, HEALTH AND SAFETY
Basic safety course including the safety guidelines, acceptable safety conduct and positive safety attitudes and practices in laboratories and clinical practice settings and Workplace Hazardous Materials Information System (WHMIS). Evaluation: One multiple choice questions examination graded pass or fail; students who fail will be required to attend the course again during the same academic term. One session (two hours)
Prerequisite: Registration in the B.Sc.N. Program or the Ontario Primary Health Care Nurse Practitioner Certificate program
Antirequisite: SCIENCE 1A00, ENGINEER 1A00

NURSING 1F04 INTRODUCTION TO NURSING AND HEALTH I
An introduction to definitions of nursing and health. Emphasis is on the relevance of context and on caring. Nursing process, beginning level problems and clinical practice. Place of Mental Health in the Whole Person, an introduction. Evaluation: One multiple choice examination graded pass or fail; students who fail will be required to attend the course again during the same academic term. One session (two hours)
Prerequisite: Registration in the B.Sc.N. Program or the Ontario Primary Health Care Nurse Practitioner Certificate program
Antirequisite: SCIENCE 1A00, ENGINEER 1A00

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: Registration in Level I of the B.Sc.N. (A) or (D) Stream

NURSING 2A04 TRANSITION TO BACCALAUREATE NURSING I
Role differences between R.P.N. and B.Sc.N. are explored. Problem-based, small group learning is introduced. Biological, physical, psychological, social science and nursing theories/concepts are integrated and applied to health care problems and clinical practice. Two and one half hours (lecture/problem-based tutorials); four hours (clinical lab); one term
Prerequisite: NURSING 1F04

NURSING 2A04 TRANSITION TO BACCALAUREATE NURSING II
NURSING 2A04 TRANSITION TO BACCALAUREATE NURSING II
A continuation of NURSING 2A04. Theories/concepts from a variety of disciplines are integrated and applied to complex health care problems. Clinical practice and research concepts related to health and illness across the continuum of individual and family growth and development are examined. Two and one half hours (lecture/problem-based tutorials), four hours (clinical lab); one term
Prerequisite: NURSING 2A04

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 settings. This course is evaluated on a Pass/Fail basis. Nine hours (clinical lab); one term
Prerequisite: NURSING 1A00, 1F04, 1G04
Normally to be taken concurrently with NURSING 2M03

NURSING 2M03 NURSING CONCEPTS IN HEALTH AND ILLNESS I
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 1F04, 1G04
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 2Q03 POPULATION HEALTH
An introduction to the major factors that determine the health of populations. Approaches to the assessment of the health status of communities will be considered. This course provides experience in conducting a community assessment.
Three hours (clinical lab) and two hours (tutorial and self-study); one term
Prerequisite: NURSING 1Q04 or registration in Level II, B.Sc.N. (E) Stream
Antirequisite: NURSING 2Q02

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.
Three hours (problem-based tutorials; clinical lab); one term
Prerequisite: Registration in Oncology Program or permission of the instructor
Antirequisite: NURSING 3A02, 3G03, 3L05, 3L3, 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 II: of the B.Sc.N. (B) Stream and permission of the instructor
Antirequisite: NURSING 3N03, 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-leveled 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 3L03 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.
Three hours (problem-based tutorials; clinical lab; self-study); one term
Prerequisite: Registration in Level III or IV of the B.Sc.N. (E) Stream or permission of the instructor
Antirequisite: NURSING 3A03, 3G03, 3L04, 3L05, 3L3, 3V05

NURSING 3M05 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 3G03, 3L04, 3L05, 3V05
Not open to students with credit in NURSING 3H03

NURSING 3N03 INTRODUCTION TO NURSING CONCEPTS AND THEORIES IN HEALTH AND ILLNESS
Biological, 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 and permission of the instructor
Antirequisite: NURSING 3C03, 3E03, 3F03, 3S03

NURSING 3P03 CONCEPTS AND THEORIES IN PAEDIATRIC ONCOLOGY NURSING
Bio-psycho-social 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 and permission of the instructor
Antirequisite: NURSING 3N03, 3S03
NURSING 3Q03 CONCEPTS AND THEORIES IN PAEDIATRIC ONCOLOGY NURSING II
A continuation of NURSING 3P03. 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 3A03 NURSING CONCEPTS IN HEALTH AND ILLNESS III
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 any stream of the B.Sc.N. program.
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 3C03. 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 3D03, 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 3X04 GUIDED NURSING PRACTICE III
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. Students are given formulating nursing interventions. This course is evaluated on a Pass/Fail basis.
Twelve hours (clinical lab); one term
Prerequisite: NURSING 2A03
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 4B05 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 4E06

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 4D6 ADVANCED LEADERSHIP AND MANAGEMENT IN HEALTH CARE ORGANIZATIONS
This advanced course builds upon NURSING 4B06 content. It integrates theories and research in leadership and management to enhance the health care provider's knowledge of key issues in today's workplace. Offered in tutorial or distance format.
Four hours (tutorial or equivalent); six hours (independent study in an organization); one term
Prerequisite: NURSING 4B06
Antirequisite: HTH SCI 4D6

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. Students participate in selecting appropriate situations and related theories for study, and identifying interventions and evaluation strategies.
Three hours (lecture/problem-based tutorials); one term
Prerequisite: Registration in Level IV of the B.Sc.N. (A) or (D) Stream.
Antirequisite: NURSING 4E04
Normally to be taken concurrently with NURSING 4J07 or NURSING 4J06.

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 4F04
Normally to be taken concurrently with NURSING 4K07 or NURSING 4J06.

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 4H03 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: COLLAB 4H03, HTH SCI 4H03

NURSING 4I03 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 care 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 4J07 LEADING EFFECTIVE TEAMS IN PRIMARY HEALTH CARE
This course introduces primary health care providers to the concepts and dynamics of teams within primary health care organizations. Theories and concepts related to leadership, communication and health care 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 4J03.

NURSING 4K07 LEADING EFFECTIVE TEAMS IN HEALTH AND ILLNESS SYSTEMS
This course introduces health and illness care providers to the concepts and dynamics of teams within health and illness care organizations. Theories and concepts related to leadership, communication and health care 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 4K07.

NURSING 4L07 LEADING EFFECTIVE TEAMS IN COMPLEMENTARY AND ALTERNATIVE HEALTH CARE
This course introduces complementary and alternative health care providers to the concepts and dynamics of teams within complementary and alternative health care organizations. Theories and concepts related to leadership, communication and health care 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 4L07.
NURSING 4J07 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 or 4Y04
Normally to be taken concurrently with NURSING 4P04.

NURSING 4K07 GUIDED NURSING PRACTICE VI
A continuation of NURSING 4J07. This course is evaluated on a Pass/Fail basis.
Twenty-four hours (clinical lab, including tutorials); one term
Prerequisite: NURSING 4L07. Normally to be taken concurrently with NURSING 4Q04.

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: NURSING 1A00 and registration in the Psychiatric Mental Health Nursing Program.

NURSING 4M05 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: NURSING 1A00 and registration in the Adult 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 any stream of the B.Sc.N. Program
Antirequisite: NURSING 4E03
Normally to be taken concurrently with NURSING 4J07, 4S06 or 4T06.

NURSING 4Q04 ADVANCED NURSING CONCEPTS II
A continuation of NURSING 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: NURSING 4P04
Antirequisite: NURSING 4P03
Normally to be taken concurrently with NURSING 4K07, 4S06 or 4T06.

NURSING 4R06 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: NURSING 1A00. 3V03 and registration in Level IV of the B.Sc.N. (B) Stream.
Normally to be taken concurrently with either NURSING 4P04 or 4Q04.

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: NURSING 1A00 and registration in Level IV of the B.Sc.N. (B) Stream.
Not open to students with credit in NURSING 4L06, 4M06 or 4N06.
Normally to be taken concurrently with either NURSING 4P04 or 4Q04.

NURSING 4Z03 NURSING CONFLICT MANAGEMENT IN HEALTH CARE ORGANIZATIONS
An introduction to the types and processes of conflict in health care organizations. Exploration and application of theories and principles of conflict and negotiation to situations in the health care environment.
Offered in both tutorial and distance format.
Three hours (tutorial); one term
Prerequisite: A minimum of one year clinical work experience in a health care profession or permission of the instructor
Antirequisite: HTH SCI 4D03

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: NURSPRAC 4A04 and credit or registration in NURSPRAC 4P03; and registration in Level IV of the B.Sc.N. Nurse Practitioner (C) Stream or the Primary Health Care Nurse Practitioner Certificate Program
Antirequisite: NURSPRAC 4A05,4A10

NURSPRAC 4Q03 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 physiology, pathogenesis and clinical manifestation of diseases in adults and children found in primary care.
Three hours (tutorial); two terms
Prerequisite: Registration in Level III or IV of the B.Sc.N. N.P. (C) Stream or the Primary Health Care Nurse Practitioner Certificate Program

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 B.Sc.N. N.P. (C) Stream or the Primary Health Care Nurse Practitioner Certificate Program

NURSPRAC 4T05 THERAPEUTICS IN PRIMARY HEALTH CARE I
Courses focus on pharmacotherapy, advanced counseling 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: NURSPRAC 4A04; and credit or registration in NURSPRAC 4A10, 4P03; and registration in Level IV of the B.Sc.N. Nurse Practitioner (C) Stream or the Primary Health Care Nurse Practitioner Certificate Program
Antirequisite: NURSPRAC 4T05, 4T10, 4T15
NURSPRAC 4T05  THERAPEUTICS IN PRIMARY HEALTH CARE II
A continuation of NURSPRAC 4T04. This course applies the principles 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
Antirequisite: NURSPRAC 4T05, 4T10, 4T15

NURSING CONSORTIUM (D) STREAM ...

Notes:
1. Former NURSECON courses are now listed as COLLAB courses. Students with credit in NURSECON courses may not take the corresponding course under the COLLAB designation.
2. The following courses are open only to those students at the Mohawk College or Conestoga College sites who are registered in the McMaster/Conestoga Collaborative B.Sc.N program with the exception of NURSECON 2F03 (Medical Informatics) and NURSECON 2K03 (Introduction to Health Informatics) which are also open to students registered in the B.Sc.N.(A) Stream.

Courses

COLLAB 1A03  INTRODUCTION TO PSYCHOLOGY
An introduction to the 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: NURSECON 1C03
Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1B03  DEVELOPMENTAL PSYCHOLOGY
The study of human psychological development from the prenatal period to old age.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 1B03
Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1C03  PSYCHOLOGY: BASIC PROCESSES OF BEHAVIOUR
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: NURSECON 1C03
Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1D03  PSYCHOLOGY: DYNAMICS OF HUMAN BEHAVIOUR
Stress and stress management, thickening 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 (Mohawk College site)
Antirequisite: NURSECON 1D03
Not open to students with credit or registration in PSYCH 1A03.

COLLAB 1E03  ESSENTIALS OF CANADIAN HISTORY
A study of recurrent themes in public affairs within the historical context of Canada from Confederation to the present.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 1E03

COLLAB 1F03  POLITICAL STRUCTURES AND ISSUES
Introduction to the study of politics within the Canadian context.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 1F03

COLLAB 1G03  MULTICULTURALISM
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 (Mohawk College site)
Antirequisite: NURSECON 1G03

COLLAB 1H03  INTRODUCTION TO CRITICAL THINKING IN THE SOCIAL SCIENCES
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 (Mohawk College site)
Antirequisite: NURSECON 1H03

COLLAB 1I03  SOCIOLOGY I
An analysis of Canadian social institutions and social processes.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)
Antirequisite: NURSECON 1I03

COLLAB 1J03  PRINCIPLES OF ETHICAL REASONING
The development of ethical thinking by focussing on inequality in society.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (A) Stream (Mohawk College site)
Antirequisite: NURSECON 1J03

COLLAB 1K03  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 1L03  BUELL  DESIRE IN LITERATURE
The historical and cross-cultural coverage of this course will lead to an 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 1M03  BUELL  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1N03  PRINCIPLES OF ETHICAL REASONING
The development of ethical thinking by focussing on inequality in society.
Three hours; one term
Prerequisite: Registration in B.Sc.N. (A) Stream (Mohawk College site)
Antirequisite: NURSECON 1N03

COLLAB 1O03  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)
Antirequisite: NURSECON 1O03

COLLAB 1P03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1Q03  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 1R03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1S03  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 1T03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1U03  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 1V03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1W03  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 1X03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 1Y03  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 1Z03  THE USES OF LAUGHTER: COMEDY AND SATIRE
A study of 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 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 2L03 INTRODUCTION TO STATISTICS
An introductory course in statistics which includes organizing and graphing univariate and bivariate data; measures of central tendency and variation; regression and correlation; collecting data, experiments and surveys; probability distributions; sampling distribution confidence interval and hypothesis testing; use of MINITAB.
Three hours (lecture); one term.
Prerequisite: Registration in B.Sc.N. (D) Stream (Mohawk College site)

COLLAB 3A03 SOCIOLOGY: SOCIETY, TECHNOLOGY AND SOCIAL ISSUES
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 INEQUITY
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

COLLAB 4H03 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 tutorial); one term.
Prerequisite: HTH SCI 3D03; and registration in Level III or IV of the B.Sc.N. (D) Stream; and permission of the instructor.
Antirequisite: HTH SCI 4H03 or NURSING 4H03

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

Note:
ORIGINS courses usually are available to students who are registered in the Origins Research Specialization.

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 space-time, elements, structure in the cosmos and life and the search for other planets.
Three lectures, one tutorial; first term.
Prerequisite: Registration in Level II or above and credit or registration in ORIGINS 2S03. Students wishing to take this course as an elective should register in SCIENCE 2B03.

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

ORIGINS 2G03 ORIGINS AND EVOLUTION OF LIFE
Topics about structure in our universe will be explored: planet; star, galaxy, and large-scale structure formation.
Three hours; one term.
Prerequisite: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3E03 ORIGINS OF SPECIES AND BIODIVERSITY
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: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3F03 ORIGINS OF HUMANITY
Topics in genetics, anthropology, and archaeology will be explored to discuss when, where, and how humans arose.
Three hours; one term.
Prerequisite: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3G03 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: Permission of instructor
Enrolment is limited.

ORIGINS 3H03 ORIGINS 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: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3I03 ORIGINS 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: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3J03 ORIGINS OF SPECIES AND BIODIVERSITY
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: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
Enrolment is limited.

ORIGINS 3K03 ORIGINS 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: ORIGINS 2S03 or permission of the instructor
Offered in alternate years.
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
Mark Vorobej

Committee of Instruction
Chair
Mark Vorobej (Philosophy)
Virginia Akean (History)
Martin Horn (History)
Joanna Santa Barbara (Health Sciences)
Susan Sears-Giroux (English and Cultural Studies)
Stephen Streetlert (History)
Wil Waluchow (Philosophy)
Jean Wilson (Comparative Literature, Linguistics, and Languages)

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 areas 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
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 2A03

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
Antirequisite: HISTORY 3Y03, PEACE ST 3J03
This course is administered by the Department of History.

PEACE ST 2R03 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: PHILOS 2G03
This course is administered by the Department of Philosophy.

PEACE ST 2R13 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: HISTORY 2R13
Antirequisite: HISTORY 3Q03, PEACE ST 3G03
This course is administered by the Department of History.

PEACE ST 2S03 War in the West, 1850-1945
A survey of the development of warfare in the Western world from 1850 to 1945. Particular attention is paid to the two World Wars in the 20th 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 or Women’s Studies
Cross-list: COMP LIT 3R06, CSCT 3A03, ENGLISH 3A03, WOMENST 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
Cross-list: HISTORY 3A03

PEACE ST 3F03 The Modern Mideast
A survey of the political and social history of the Middle East from 1800 to the present, with 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 3F03
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 3I03 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 3I03

PEACE ST 3K03 History of the Vietnam War
The history of the First and Second Indochina Wars (1945-1975) 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 3K03
Antirequisite: GSCHE 4H03
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 action.
Three hours; one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3L03
This course is administered by the Department of History.
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 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
Cross-list: COMP LIT 3M3
This course is administered by Comparative Literature.

PEACE ST 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 studied 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 or Peace Studies.
Cross-list: CMST 2N3
Not open to students with credit in CMST 3A03, TOPICS IN COMMUNICATION, if the topic was Ethical Issues in Communication.
This course is administered by the Department of Communication Studies and Multimedia.

PEACE ST 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 labor regimes, gender, slave health, slave resistance, Afro-Creole cultures, emancipation.
Three hours (lectures and discussion); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3M03
This course is administered by the Department of History.

PEACE ST 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
Cross-list: HISTORY 3RR3
This course is administered by the Department of History.

PEACE ST 3VV3 \ WAR AND SOCIETY IN EARLY MODERN BRITAIN, 1485-1815
A thematic study of the nature of British warfare and its relationship to society during the period when Britain developed as a major military and naval power.
Three hours (lectures and discussions groups); one term
Prerequisite: Registration in Level II or above
Cross-list: HISTORY 3VV3
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: CSCT 3W03, ENGLISH 3W03, INDIG ST 3W03
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: CSCT 3X03, ENGLISH 3X03, INDIG ST 3X03
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 Program in Peace Studies.
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+ 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.

PHARMACOLOGY

WEB ADDRESS: http://www.science.mcmaster.ca/biopharm

These courses are available only to those students registered in Honours Biology and Pharmacology.

Note:
PHARM 3A06, 3B06, 4A03, 4AA3, 4C03, 4D03 and 4E03 will be based on self-directed problem based learning.

Courses

PHARM 3A06 INTRODUCTION TO PHARMACOLOGY
Principles of pharmacodynamics, principles of pharmacokinetics. Drugs acting on the CNS, female reproductive system, autonomic nervous system and respiratory system. Antimicrobials.
One tutorial (three hours); two terms
Prerequisite: Registration in the Honours Biology and Pharmacology program

PHARM 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
Receptor classification, receptor theory, stimulus response coupling, second messengers.
One tutorial (three hours); one term
Prerequisite: PHARMAC 3A06

PHARMAC 4A03 ADVANCED TOPICS IN PHARMACOLOGY
New developments in pharmacology, with an emphasis on mechanisms of drug action.
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 (three 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 (three 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 (three hours); one term
Prerequisite: PHARMAC 3A06

PHILOS 1A03 PHILOSOPHICAL TEXTS
An introduction to philosophy through the close reading of selected classical texts. Authors to be considered may include Plato, Descartes, Hobbes, Hume, Marx, Mill, Nietzsche, Russell, and De Beauvoir.
Two lectures, one tutorial; one term

PHILOS 1B03 PHILOSOPHY, LAW AND SOCIETY
An introduction to 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
Alternates with PHILOS 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 morality, the possibility of freedom, human nature, the self, and religious belief.
Two lectures, one tutorial; one term
Alternates with PHILOS 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
Not open to students with credit or registration in PHILOS 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

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
Enrollment is limited to 475 students.

PHILOSOPHY

WEB ADDRESS: http://wwwhumanitiessmcmasterca/~philos

University Hall, Room 209
Ext. 24275

Faculty as of January 15, 2006

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)
Wiliard Waluchow/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
Jill LeBlanc/B.A. (McMaster), M.A., Ph.D. (Toronto)
Sopo Panagiotou/B.Sc., M.A. (Guelph), Ph.D. (St. Andrews)
Brigitte Sassen/B.A. (Toronto), M.A., Ph.D. (Pennsylvania State)
Mark Vorder/B.A. (Carleton), M.A., Ph.D. (Toronto)

Assistant Professors
Diane Enns/B.A., M.A. (Toronto), Ph.D. (SUNY-Binghamton)
Brian Garrott/B.A., M.A. (Auckland), Ph.D. (McGill)
Violetta Ignesk/B.A., (Western Ontario), Ph.D. (Toronto)

Associate Members
Caroline Bayard/French) L. as L., M. as 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 PHILOS 3W03, 4W03 or 4Z06 are strongly encouraged to obtain permission from the Undergraduate Counselor by the end of May of the preceding year. Access to these courses cannot be guaranteed beyond that date.

Courses If no prerequisite is listed, the course is open.

PHILOS 1A03 PHILOSOPHICAL TEXTS
An introduction to philosophy through the close reading of selected classical texts. Authors to be considered may include Plato, Descartes, Hobbes, Hume, Marx, Mill, Nietzsche, Russell, and De Beauvoir.
Two lectures, one tutorial; one term

PHILOS 1B03 PHILOSOPHY, LAW AND SOCIETY
An introduction to 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
Alternates with PHILOS 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 morality, the possibility of freedom, human nature, the self, and religious belief.
Two lectures, one tutorial; one term
Alternates with PHILOS 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
Not open to students with credit or registration in PHILOS 3D03.

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A critical investigation of philosophical arguments concerning such topics as God, politics, morality, human nature, knowledge, and art.
Two lectures, one tutorial; one term

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A study of Western philosophical thought from its earliest beginnings to late Roman times, with emphasis on Plato and Aristotle.
Three lectures; two terms
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Cross-list: CLASSICS 2P06

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Sentential and quantification logics are introduced and applied to arguments in English.
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Prerequisite: Registration in Level II or above

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Three lectures; two terms
Prerequisite: Registration in Level II or above

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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
Enrollment 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 2103

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 towards 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 2203

PHILOS 3A06  FROM KANT TO HEGEL
The philosophies of Kant and Hegel viewed in relation to each other and to other philosophies of the period, such as those of Rousseau or Schelling.
Three lectures; two terms
Prerequisite: PHILOS 2C06

PHILOS 3B03  PHILOSOPHIES OF EXISTENCE
An examination of the 19th-century forerunners of contemporary existential 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, and the therapeutic relationship.
Three lectures; one term
Prerequisite: A grade of at least B in PHILOS 2D03 or RELIG ST 2C03, and at least three additional units of Philosophy; or registration in Level III or above of an Honours program in Philosophy
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 the 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 or (1A03 and 1A03); and registration in Level III or above
Cross-list: WOMEN ST 3I03
Offered in alternate years.

PHILOS 3J03  MODERN JEWISH THOUGHT
Three hours (lectures and discussion); one term
Cross-list: RELIG ST 3J03
This course is administered by the Department of Religious Studies.

PHILOS 3L03  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 3M03  ARGUMENTATION THEORY
A study of some theoretical issues concerning the identification, analysis and evaluation of arguments.
Three hours (lectures and discussion); one term
Prerequisite: One of ARTS ASCI 1B06, CMST 2W03, HUMAN 2C03 or PHILOS 2B03; and registration in Level II or above
Cross-list: CMST 3E03

PHILOS 3N03  POLITICAL PHILOSOPHY
A study of major political concepts and issues, such as social contract, 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 3P03  THEORY OF KNOWLEDGE
A study of skepticism and certainty, knowledge and belief, perception, memory, and truth.
Three lectures; one term
Prerequisite: PHILOS 2C06

PHILOS 3Q03  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
Cross-list: PEACE ST 3M03
Offered in alternate years.

PHILOS 3R03  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 3W03  READING COURSE
A tutorial course in which individual students meet regularly with an instructor on a list of readings outside normally available 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 III or IV of any program in Philosophy, with a Cumulative Average of at least 8.5 and permission of the Department...
PHILOS 4A03 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 3G03 and registration in Level III or above
Cross-list: PEACE ST 4C03
Offered in alternate years.

PHILOS 4B03 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 4C03
Offered in alternate years.

PHILOS 4G03 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.
Seminars (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
Offered in alternate years.

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 4H03 METAPHYSICS
An investigation of metaphysical concepts, such as substance, individuation, identity, essence, quality, process, mind, time and causality. Some contemporary criticisms of metaphysics will be discussed.
Seminar (two hours); one term
Prerequisite: PHILOS 2A06, 2G06 and registration in Level III or above
Offered in alternate years.

PHILOS 4I03 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 4K03 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
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 4G03, 4J03
Offered in alternate years.

PHILOS 4W03 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 outside normally available 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 4W03

PHILOS 4Z06 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 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 4W03

PHYSICS AND ASTRONOMY
WEB ADDRESS: http://www.physics.mcmaster.ca/
A.N. Bowns Science Building, Room 241
Ext. 24559

Faculty as of January 15, 2006

Chair
D.E. Venus

Associate Chair
K. Dalmoki-Veress

Professors
A. John Berlinsky/B.Sc. (Fordham), M.Sc., Ph.D. (Pennsylvania)
Cliff Burgess/B.Sc. (Waterloo), Ph.D. (Texas)
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. Harris/B.Sc. (Alberta), M.Sc., Ph.D. (Toronto)
Harold K. Haugen/B.Sc. (Acadia), M.Eng. (McMaster), Ph.D. (Aarhus)
Paul G. Higgs/B.Sc., Ph.D., Ph.D. (Cambridge), Senior Canada Research Chair
Catherine Kallin/B.Sc. (British Columbia), A.M., Ph.D. (Harvard)
Graeme M. Luke/B.Sc. (Queen's), Ph.D. (British Columbia)
Ralph E. Pudritz/B.Sc. (British Columbia), M.Sc. (Toronto), Ph.D. (British Columbia)
An-Chang Shi/B.Sc. (Fudan), M.Sc., Ph.D. (Illinois)
Eric Sorensen/B.Sc., M.Sc. (Athos), Ph.D. (California-Santa Cruz)
Peter G. Sutera/B.Sc. (McGill), M.S., Ph.D. (Illinois)
David E. Venus/B.Sc. (Queen's), Ph.D. (Toronto)
Douglass L. Welch/B.Sc., Ph.D. (Toronto)
Christine D. Wilson/B.Sc. (Toronto), Ph.D. (California Institute of Technology)

Associate Professors
Takashi Imad/B.Sc., M.Sc., Ph.D. (Tokyo)
Kari Dalmoki-Veress/B.Sc., M.Sc., Ph.D. (Guelph)

Assistant Professors
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 Nejat/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. Prest/Engineering Physics) B.Sc. (McMaster), M.Sc., Ph.D. (Toronto)

Lecturer
Ken Sills/B.Sc. (Western Ontario), M.Sc. (St. Mary's)

Instructional Assistant
Alex Vorobyev/M.S., Ph.D. (Kharkiv)

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 and Grade 12 Physics U; or PHYSICS 1P03

Antirequisite: SCIENCE 1D03

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; 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

#### 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: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, PHYSICS 2A03 or 2B06; and either one of CHEM 2R03, ENG PHYS 2H04 or PHYSICS 2H04, or both CHEM 2PA3 and 2PB3


#### 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. Taught in an inquiry style.

Three lectures; one term

Prerequisite: PHYSICS 2D03 or 2E03; and one of ENG PHYS 2A03, 2A04, 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.

## PHYSICS...

### Courses

**If no prerequisite is listed, the course is open.**

#### 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); one term

Prerequisite: Either PHYSICS 1P03 or at least 60% in Grade 12 Physics U; and credit or registration in SCIENCE 1A00 and either MATH 1A03 or 1A3

#### 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); one term

Prerequisite: PHYSICS 1B03

Antirequisite: PHYSICS 1B3

#### PHYSICS 1B33

**INTRODUCTION TO MODERN PHYSICS B**


Three lectures, one lab (three hours); one term

Prerequisite: PHYSICS 1B03

Antirequisite: PHYSICS 1B3

#### PHYSICS 1D03

**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

#### 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

#### PHYSICS 1P03

**INTRODUCTORY PHYSICS**

Foundations of physics for students without Grade 12 Physics U. Topics include vectors, graphical analysis, kinematics and Newton's Laws.

Three lectures; one term

Prerequisite: Any Grade 12 U or M Mathematics credit

Not open to students with 60% or higher in Grade 12 Physics U.

#### 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; one term

Prerequisite: PHYSICS 1B03

Corequisite: MATH 2A03, 2C03

#### PHYSICS 2C03

**MODERN PHYSICS**

Special Relativity. Introductory quantum physics.

Three lectures; one term

Prerequisite: PHYSICS 1B03 or 1B3

Antirequisite: PHYSICS 3M03

#### 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

#### 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

#### PHYSICS 2G03

**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 2H04

**THERMODYNAMICS**

An introduction to thermodynamics and its statistical basis at the microscopic level, with applications.

Three lectures, one tutorial every other week, one lab (three hours); second term

Prerequisite: MATH 2A03, PHYSICS 1B03; and credit or registration in MATH 2C03 and PHYSICS 1B3 (or 1B3)

Antirequisite: CHEM 2PA3, 2R03, ENGINEER 2H03, MATLS 2B03

Cross-list: 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; and registration in any Honours program in Science or any program in the Faculty of Engineering

Alternates with PHYSICS 3C03.

#### PHYSICS 3B03

**ELECTRONICS I**

P-N junctions, diodes, bipolar junction transistors, field effect transistors, dc and ac modeling, differential amplifiers and operational amplifiers, feedback and oscillators, digital circuits and multivibrators, signal processing.

Two lectures, one lab (two hours); first term

Prerequisite: One of ENG PHYS 2A03, 2A04, 2E04 or PHYSICS 2B06.

Antirequisite: PHYSICS 3B06
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICS 3B03</td>
<td>ELECTRONICS II</td>
<td>Design and synthesis project in electronics, based on the material presented in PHYSICS 3B03. One tutorial (one hour), two labs (three hours); second term Prerequisite: PHYSICS 3B03</td>
</tr>
<tr>
<td>PHYSICS 3C03</td>
<td>ANALYTICAL MECHANICS</td>
<td>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: Credit or registration in MATH 3C03 and registration in any Honours program in Science or any program in the Faculty of Engineering; or registration in Honours Mathematics and Physics; or permission of the instructor Alternates with PHYSICS 3A03. Not offered in 2006-2007.</td>
</tr>
<tr>
<td>PHYSICS 3H03</td>
<td>INTERMEDIATE LABORATORY</td>
<td>Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanisms. One lecture, one term; one lab (three hours), two terms Prerequisite: PHYSICS 2B06; and credit or registration in PHYSICS 2C03 or 3M03 Antirequisite: PHYSICS 3H04, 3HC1</td>
</tr>
<tr>
<td>PHYSICS 3HC1</td>
<td>INTERMEDIATE LABORATORY (I)</td>
<td>Experiments in atomic physics, neutron physics, optics, spectroscopy, mechanics. One lecture, one lab (three hours), first term Prerequisite: PHYSICS 2D06; and credit or registration in PHYSICS 2C03 or 3M03; and registration in Level III of Honours Physics Co-op or Honours Medical and Health Physics Co-op Antirequisite: PHYSICS 3H03, 3H04</td>
</tr>
<tr>
<td>PHYSICS 3HD2</td>
<td>INTERMEDIATE LABORATORY (II)</td>
<td>The continuation of PHYSICS 3HC1. One lab (three hours); second term Prerequisite: PHYSICS 3HC1</td>
</tr>
<tr>
<td>PHYSICS 3K03</td>
<td>THERMODYNAMICS AND STATISTICAL MECHANICS</td>
<td>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</td>
</tr>
<tr>
<td>PHYSICS 3M03</td>
<td>QUANTUM MECHANICS I</td>
<td>Schrödinger equation for 3D systems with applications to atomic and modern physics. Three lectures; one term: Prerequisite: MATH 3C03; and PHYSICS 2C03 or 3M03</td>
</tr>
<tr>
<td>PHYSICS 3N03</td>
<td>PHYSICAL OPTICS</td>
<td>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 2C03; and MATH 2C03 or 2P04; and either PHYSICS 2B06 or both ENG PHYS 2A04 (or 2A03) and 2E04</td>
</tr>
<tr>
<td>PHYSICS 3P03</td>
<td>SOFT CONDENSED MATTER PHYSICS</td>
<td>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</td>
</tr>
<tr>
<td>PHYSICS 4A03</td>
<td>INQUIRY IN PHYSICS</td>
<td>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 4A1</td>
</tr>
<tr>
<td>PHYSICS 4A1</td>
<td>INQUIRY IN PHYSICS (I)</td>
<td>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</td>
</tr>
<tr>
<td>PHYSICS 4AB2</td>
<td>INQUIRY IN PHYSICS (II)</td>
<td>The continuation of PHYSICS 4A1. Two lectures or seminars; second term Prerequisite: PHYSICS 4A1</td>
</tr>
<tr>
<td>PHYSICS 4B03</td>
<td>ELECTROMAGNETIC THEORY</td>
<td>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 2A04 (or 2A03) and 2E04; or registration in Honours Mathematics and Physics Antirequisite: PHYSICS 4B04</td>
</tr>
<tr>
<td>PHYSICS 4D06</td>
<td>DIGITAL LOGIC AND COMPUTER SYSTEMS</td>
<td>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 2A04 (or 2A03) and 2E04 Antirequisite: PHYSICS 4D03, 4DB3</td>
</tr>
<tr>
<td>PHYSICS 4DA3</td>
<td>DIGITAL LOGIC AND COMPUTER SYSTEMS</td>
<td>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); first term Prerequisite: PHYSICS 2B06; or ENG PHYS 2A04 (or 2A03) and 2E04 Antirequisite: COMP ENG 3D04, PHYSICS 4D06</td>
</tr>
<tr>
<td>PHYSICS 4E03</td>
<td>NUCLEAR PHYSICS</td>
<td>Nuclear masses and stability; radioactivity and nuclear reactions; elementary nuclear models. Three lectures; one term Prerequisite: PHYSICS 3M03</td>
</tr>
<tr>
<td>PHYSICS 4F03</td>
<td>QUANTUM MECHANICS II</td>
<td>A sequel to Physics 3M03, 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</td>
</tr>
<tr>
<td>PHYSICS 4G03</td>
<td>COMPUTATIONAL PHYSICS</td>
<td>A course using computers to solve selected problems in physics. The emphasis is in applying computational methods to physics, rather than the numerical methods or computer programming. One lab (three hours); one term Prerequisite: PHYSICS 2G03, 3M03</td>
</tr>
<tr>
<td>PHYSICS 4J03</td>
<td>ADVANCED LABORATORY</td>
<td>Projects in atomic, nuclear and solid state physics. Four projects are required, one of which may 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 is a specified option; or permission of the Chair of the Department Antirequisite: PHYSICS 4D04</td>
</tr>
<tr>
<td>PHYSICS 4K03</td>
<td>SOLID STATE PHYSICS</td>
<td>Crystal structure and binding; lattice vibrations; electron energy bands; metals and semiconductors; magnetism. Three lectures; one term Prerequisite: PHYSICS 3M03 or registration in Level IV of an Honours Medical and Health Physics program</td>
</tr>
<tr>
<td>PHYSICS 4P06</td>
<td>SENIOR RESEARCH PROJECT</td>
<td>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. Antirequisite: PHYSICS 4Q03, 4Q04</td>
</tr>
</tbody>
</table>

Enrolment is limited. See the Reading Limited Enrolment Courses in the Faculty of Science section of the Calendar.
PHYSICS 4Q03 RESEARCH PROJECT
An experimental or theoretical project to be carried out under the supervision of a faculty member. A report will be required.
First or second term
Prerequisite: One of CHEM 2R03, MATH 2B03 or PHYSICS 2H04. PHYSICS 3503 is recommended.
Antirequisite: PHYSICS 4P06, 4Q04
Enrollment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PHYSICS 4S03 INTRODUCTION TO MOLECULAR BIOPHYSICS
A presentation of recent contributions made to the fields of molecular and cell biology by the use of physical approaches. In particular, the following topics are discussed: physical properties of biomolecules, protein folding, molecular motors, cell motion and cell adhesion. Emphasis on the critical evaluation of current research literature.
Three lectures; first term
Prerequisite: One of CHEM 2R03, MATHS 2B03 or PHYSICS 2H04. PHYSICS 3503 is recommended.
Cross-list: BIOCHEM 4S03

BIOCHEM 4Y03 GENOMES AND EVOLUTION
Three lectures; second term
Prerequisite: BIOCHEM 2B03 or 3G03
Antirequisite: BIOLOGY 4D03

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: ENVIR 3C03, PHYSICS 1B03

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: One of MATH 2A03, 2Q04 or 2X03; and MATH 2C03 or 2P04; and one of -
Not open to students with credit or registration in MATH 3FF3 or credit in MATH 3J04.

MATH 3CY3 CRYPTOGRAPHY
Introduction to cryptosystems used in modern security systems: elementary number theory, primality testing and factorization, discrete logarithm, RSA cryptosystems, elliptic curve cryptosystems.
Three lectures; one term
Prerequisite: MATH 2P03

MATH 3D03 MATHEMATICAL PHYSICS II
Functions of a complex variable, probability and statistics, boundary value problems, Bessel functions.
Three lectures; one term
Prerequisite: MATH 3G03
Antirequisite: MATH 3K03
Not open to students with credit or registration in MATH 3X03 or credit in MATH 3J04.

MATH 3GP3 GEOMETRIC IDEAS IN PHYSICS
Minkowski space, Lorentz metric. Maxwell’s equations, general relativity, geodesics, curvature, black hole geometries and other selected topics.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2P03 or credit or registration in MATH 3G03

MATH 3GQ3 INTRODUCTION TO QUANTUM COMPUTING
Postulates of quantum mechanics for finite dimensional systems; information on quantum bits, logical operations and quantum gates; quantum parallelism and complexity theory; examples of quantum algorithms.
Three lectures; one term
Prerequisite: MATH 2A03 or 2X03; and MATH 2P03

MED PHYS 4B03 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, 1B04 or permission of the instructor
Antirequisite: BIOL 3L03, MED PHYS 3T03, PHYSICS 3T03

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 2Q04; and MATH 2C03 or 2P04; and one of BIOLOGY 3L03, ENG PHYS 3D03, MED PHYS 3T03, 4B03, PHYSICS 3T03
Antirequisite: PHYSICS 4T03

POLISH
(SEE LINGUISTICS AND LANGUAGES, POLISH)

POLITICAL SCIENCE

WEB ADDRESS: http://www.sosc.bsc.carleton.ca/polisci/

Kenneth Taylor Hall, Room 527
Ext. 24741

Faculty as of January 15, 2006

Chair
 Tony Porter

Distinguished University Professor
 William D. Coleman/B.A. (Carleton), A.M., Ph.D. (Chicago)/Canada Research Chair in Global Governance and Public Policy

Professors
 Barbara A. Carroll/B.A. (Manitoba), M.A. (Carleton), Ph.D. (American)
 Henry J. Jacob/B.S. (Fairfield), M.A. (Georgstown)
 Tony Porter/B.A. (McGill), M.A. (Carleton)
 Mark Sproule-Jones/B.Sc. (London), M.A. (Indiana), V.K. Copp Chair in Urban Studies
 Michael B. Stein/B.A. (McGill), M.A., Ph.D. (Princeton)
 Richard W. Subbas/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 Brid/B.A. (Wilfrid Laurier), Ph.D. (Minnesota)
 Nibaldo H. Galleguillo/B.A. (Chile), M.A., Ph.D. (Toronto)
 Svetlana Szolc 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 Belser/B.A., M.A., Ph.D. (York)
 Catherine Frost/Communication Studies and Multimedia B.A. (Lakehead), M.A., Ph.D. (Toronto)
 Alisa Gilardi/Health Studies B.Sc., M.Sc., Ph.D. (Toronto)
 Peter Graefe/B.A. (McGill), M.A. (York), Ph.D. (Montreal)
 Martin Hering, B.A., M.A. (Philips-Universität Marburg), Ph.D., J.H. Hopkins
 Ahmed Shafiqul Huque/B.A., M.A. (Dhaka), M.A. (Manitoba), Ph.D. (British Columbia)
 Greg McEveitt/Labour Studies B.A., B.A. (Carleton), Ph.D. (York)
 Peter Nyens/B.A., M.A. (Victoria), Ph.D. (York)
 Lana Wylie/B.A. (McMaster), M.A. (Calgary), Ph.D. (Massachusetts)

Associate Members
 Julia Ableston/C.E.P.A./B.A., B.Sc (McMaster), M.Sc. (Harvard), Ph.D. (Bath)
 Robert C. A. Andersen (Sociology) B.A., M.A., W.E. (Western), Ph.D. (McMaster)
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 2A06 (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 4Z06, enrolment in all Level IV courses is limited. Admission to Level IV limited enrolment courses is by prerogation preferential ballot. Permission from the Department of Political Science is required before students can register in any Level IV Political Science course. POL SCI 4Z06 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 15 March, 2007. 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-January, or will be available on the Department's web site.

Courses: If no prerequisite is listed, the course is open.

POL SCI 1G06  POLITICS AND GOVERNMENT
An introduction to the study of politics, emphasizing critical discussion of issues such as: 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 term

POL SCI 2B03  U.S. POLITICS
An examination of the development and functioning of the American political system including institutions, processes, and public participation. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 2B06

POL SCI 2B83  U.S. FOREIGN POLICY
An examination of the development as well as theories and practice of American foreign policy. Three hours (lectures and tutorials); one term

POL SCI 2C03  FORCE 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 performance of the Canadian political system. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3D03, 3D6

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 2L03  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 2M03  GLOBAL POLITICAL ECONOMY
A study of institutions and processes of the international economic system. Three hours (lectures and tutorials); one term

POL SCI 2X03  INTRODUCTION TO CANADIAN PUBLIC POLICY
An introduction to the study of public policy in Canada with particular attention to formal political institutions and patterns of social inequality and political decision-making processes and outcomes. Three hours (lectures and tutorials); one term
Antirequisite: POL SCI 3X03

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 3A33  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 3CC3 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: POL SCI 2006 and registration in Level III or above. (See Note 7 above.)

POL SCI 3DD3 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 polices, and trade agreements. Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3EE3 THE POLITICS OF INTERNATIONAL ECONOMIC ORGANIZATIONS
An analysis of the structure, function and politics of the principal international 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.)

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
Enrolment is limited. Priority will be given to students registered in a Political Science program. (See Notes 6 and 7 above.)

POL SCI 3GG3 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: 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 3HH3 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 3II3 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 eco-cultural policy areas. Three hours; one term
Prerequisite: Registration in Level III or above. (See Note 7 above.)

POL SCI 3III 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 3III may be repeated, if on a different topic, to a total of six units.

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: SOCIOL 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 3LL3 DEVELOPMENT AND PUBLIC POLICY
An examination of critical issues in public policy as they impact on the process of development. Three hours (lectures); one term
Prerequisite: Registration in Level III or above
Not open to students with credit in POL SCI 3YY3 if the topic was Development or Public Policy.

POL SCI 3MM3 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: One of CMST 2Z03 or POL SCI 2Z03; and registration in Level III or above
Cross-list: CMST 3MM3

POL SCI 3NN6 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 2F06
(See Notes 4 and 7 above.)

POL SCI 3NN6 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 3NP3 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 2003 and 2J03

POL SCI 3QQ3 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 3RR3 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 3SP3 SERVICE DELIVERY IN THE MODERN CANADIAN CITY: PLACEMENT EXPERIENCE
A civic placement providing students the opportunity to gain valuable experience and insight into the municipal administration and political process. Provides the essential links between classroom knowledge and civic internship practice.
Placement experience requires a minimum of 80 hours; one term
Prerequisite: Credit or registration in POL SCI 3503; and permission of the instructor

POL SCI 3T03 PROBLEMS OF POSTCOMMUNIST 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 6 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
Enrolment is limited. (See Note 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 2103 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.
(See Note 7 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, 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 CANADIAN PUBLIC SECTOR: IMPLEMENTATION OF POLICIES
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 4AA6 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 4006 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

Prerequisite: (Beginning 2007-2008): One of POL SCI 2E06, 2J03, 3M03; 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
Not open to students with credit in POL SCI 4U06 PROBLEMS OF POLITICAL PHILOSOPHY II taken in 1995-1996.
Enrolment is limited. (See Note 8 above.)

POL SCI 4G06 POLITICS OF PUBLIC POLICY
An examination of the political causes and mechanisms that shape public policies, such as political parties, interest groups, policy legacies, and how they influence policy choices on challenging issues as well as account for cross-national differences.
Three hours (seminar); two terms.
Prerequisite: Six units of Comparative Politics and permission of the Department
Enrolment is limited.

POL SCI 4L03 THE POLITICS OF CHANGE IN SOCIAL WELFARE
An examination of how social welfare policy establishes the boundary between public and private roles, and how the boundary changes.
Three hours (seminar); one term
Prerequisite: HEALTHST 3M03 or POL SCI 3M03; and registration in Level IV of an Honours Health Studies or Political Science program; and permission of the Department
Cross-list: HEALTHST 4L03
Enrolment is limited. (See Note 8 above.)

POL SCI 4M06 TOPICS IN INTERNATIONAL POLITICS
An examination of selected topics in international politics and foreign policy.
Three hours (seminar); two terms
Prerequisite: POL SCI 2103 and 2J03 (or POL SCI 2E06); and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4MM6 TOPICS IN INTERNATIONAL POLITICAL ECONOMY
An examination of selected topics in the international political economy.
Three hours (seminar); two terms
Prerequisite: POL SCI 2103 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 2E06; and registration in Level IV of any Honours program; and permission of the Department
Enrolment is limited. (See Note 8 above.)

POL SCI 4P06 TOPICS IN POLITICAL THEORY
An examination of selected topics in political theory.
Three hours (seminar); two terms
Prerequisite: POL SCI 2B06 and permission of the Department
Antirequisite: POL SCI 4BB6
Enrolment is limited. (See Note 8 above.)
POL SCI 4006 | 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 2X03 and permission of the Department. Enrolment is limited.

POL SCI 4106 | INNOVATION AND ACCOUNTABILITY IN PUBLIC SECTOR GOVERNANCE
An examination of the theory and practice of public sector governance with an emphasis on Canadian, comparative, and international organizations. Three hours (seminar); two terms
Prerequisite: One of POL SCI 2L03, 3Z03, 3Z23; and permission of the Department. Enrolment is limited. (See Note 8 above.)

POL SCI 4107 | TOPICS IN CANADIAN POLITICS
An examination of major issues in contemporary Canadian politics. Three hours (seminar); two terms
Prerequisite: POL SCI 1G06 or 2G05; and permission of the Department. Enrolment is limited. (See Note 8 above.)

POL SCI 4206 | HONOURS ESSAY
A major research paper, supervised by a faculty member. The subject matter is to be different from that covered in 3UU3, 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.

PSYCHOLOGY, NEUROSCIENCE AND BEHAVIOUR

WEB ADDRESS: http://www.mcmaster.ca/psychology
Psychology Building, Room 102
Ext. 23000

Faculty as of January 15, 2006

Chair
Ronald J. Racine

Associate Chairs
Bruce Milliken/Graduate Studies
Louis Schmid/Undergraduate
Tracy Vaillancourt/Undergraduate

Professors
Lorraine G. Allan/B.A., M.A. (Toronto), Ph.D. (McMaster)
Suzanna Becker/B.A., M.Sc. (Queen's), Ph.D. (Toronto)
Pam Anderson/B.S. (Tulsa), Ph.D. (California-Berkeley) Senior Canada Research Chair
Marc D'Alphonso/B.A. (Toronto), M.A. (McGill), Ph.D. (Toronto)
Denys deCotzarz/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)
Daphnee M. Maurel/B.A. (Swarthmore), M.A. (Pennsylvania), Ph.D. (Minnesota)
Kathryn Murphy/B.A. (Western Ontario), M.A., Ph.D. (Dalhousie)
Ronald J. Rechino/B.Sc. (Oregon), M.Sc., Ph.D. (McGill)
Allison Sekula/B.A. (Pomona), M.Sc., Ph.D. (California-Berkeley) Canada Research Chair
Laurel J. Trainor/B.Mus., M.A., Ph.D. (Toronto)

Adjunct Professors
Mortice M. Clark/B.A., Ph.D. (McMaster)
Ivan Kie/B.Sc. (Toronto), M.A., Ph.D. (Concordia)
Bruce A. Lindey/B.S. (Minnesota), Ph.D. (McMaster)

Associate Professors
Sigi Bataineh-Earns/B.Sc. (Toronto), Ph.D. (Cambridge)
Richard B. Day/B.A. (Massachusetts), M.A. (Iowa), Ph.D. (McMaster)
Daniel Goldreich/B.Sc. (California-San Diego), Ph.D. (California-San Francisco)
Bruce Milliken/B.A., Ph.D. (Waterloo)
Louis A. Schmidt/B.A. (Maryland), M.S. (Baltimore), Ph.D. (Maryland)
Judith A. Shadden/B.Sc. (Alberta), M.S., Ph.D. (Pittsburgh)
Hongjin Sun/B.Sc., M.Sc. (Peking), M.A. (Western Ontario), Ph.D. (Queen's)

Assistant Professors
Feuven Dukas/B.Sc. (Jerusalem), Ph.D. (North Carolina State)
Paul Faurot/B.Sc., M.Sc. (Calgary), Ph.D. (Cornell)
Deda C. Gillespie/B.Sc. (Yale), Ph.D. (California-San Francisco)
Karim Humphreys/B.A. (Queensland), A.M. (Illinois), Ph.D. (Illinois)
Annette Ostholm/B.A., M.A. (Queen's), Ph.D. (Western Ontario)
Mel D. Rutherford/B.A. (Yale), Ph.D. (California-Santa Barbara)
David I. Shore/B.Sc. (McMaster), M.A., Ph.D. (British Columbia)
Tracy Vaillancourt/B.A., M.A., Ph.D. (British Columbia)
Scott Watten/B.Ed., M.B.B.S. (Queensland), M.A., Ph.D. (Illinois)

Associate Members
Ian C. Bruce/Electrical and Computer Engineering, B.Eng., Ph.D. (Melbourne)
Charles E. Cunningham/Psychiatry B.A. (California State), M.A. (San Diego State), Ph.D. (The American University)
Kevin W. Evd/Clinical Epidemiology and Biostatistics, B.Sc., Ph.D. (McMaster)
Ellen Hapidoi/Psychiatry B.A. (The American College of Greece), M.A. (New Brunswick), Ph.D. (McMaster)
Joel P. Hendry/Psychiatry B.A., M.A., Ph.D. (Western Ontario)
Ellen Lipman/Psychiatry B.S. (Western Ontario), M.D., Ph.D. (McMaster)
Harriet L. MacMillan/Psychiatry M.D. (Queen's), M.Sc. (McMaster), F.R.C.P.S.
William Mahoney/Pediatrics M.D. (McMaster)
Catherine L. Mannini/Psychiatry B.S., M.Sc., M.D. (Western Ontario)
Allison A. Nicoll/Psychiatry B.A., M.A., Ph.D. (Yale)
Gerd F. Norman/Clinical Epidemiology and Biostatistics B.Sc. (McMaster)
M.A. (Michigan State), Ph.D. (McMaster)
Christopher David Rollo/Biology B.Sc., M.Sc. (Guelph), Ph.D. (British Columbia)
Patricia I. Rosewhite/Psychiatry B.Sc., M.Sc. (Montreal), M.D. (McMaster), F.R.C.P.C.
William Sule/Medical Physics B.Sc. (Carleton), M.D., M.A. (Western Ontario), F.R.C.P.C.
Henry Szechman/Biomedical Sciences B.Sc., Ph.D. (Pittsburgh)
Larry Tuft/Psychiatry B.S., Ph.D. (McMaster)
Michael A. Van Ameringen/Psychiatry B.S., M.D. (McMaster)

Department Notes:

1. The University reserves the right to limit enrolment in any course. Where prerequisites have to be established first consideration will be given to Honours B.Sc. and Honours B.A. Psychology students.

2. The Psychology, Neuroscience and Behaviour Department pre-registration ballot will be done in two phases. The first phase will include the thesis courses (PSYCH 4006, 4009), and the Individual Study courses (PSYCH 2Q03, 3Q03, 4Q03, 4Q05). Students wishing to take these courses must complete and submit a ballot by February 15, 2006. Students will be informed of the outcome of the first phase by March 13, 2006. The second phase will include lab courses (PSYCH 3B03, 3E03, 3L03, 3L33, 3S03, 3V03) and limited enrolment courses (PSYCH 5B03, 4B03, 4B05, 4G03, 4G03, 4G03). Students wishing to take these courses must complete and submit a ballot by March 31, 2006. Ballots can be obtained from the Psychology, Neuroscience and Behaviour Department web site at http://www.mcmaster.ca/psychology. Priority will be given to students registered in Honours Psychology and Combined Honours Psychology programs.

3. PSYCH 1A03 and 1A3 are available for elective credit for students enrolled in a non-Psychology program. In the case of PSYCH 2A03, 2A05, 2Q03, 2Q05, 2Q13, 2Q13, 3A03, 3A03, 3F03, 3F03, 3G03, 3H03, 3I03, 3I03, 3I13, 3I03, 3I03, 3K03, 3K03, 3M03, 3N03, 3T03, 3U03 and 3V03, 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 1A09. Not open to students registered in the B.Sc.N. (D) Stream (Mohawk College and Conestoga College site).

PSYCH 2AA3 SURVEY OF DEVELOPMENTAL PSYCHOLOGY
A general survey of theories and methodologies 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 the advanced developmental courses. Students wishing to do further work in developmental psychology are referred to PSYCH 3G03.
Three lectures; one term
Prerequisite: PSYCH 1A03, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
Antirequisite: PSYCH 2A03, 3G03, 3G3G
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 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, 1AA3; 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, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program or the Honours Linguistic Cognitive Science 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, 1AA3; or registration in Honours Biology and Psychology, the Bachelor of Health Sciences (Honours) program, or the Honours Linguistic Cognitive 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 2F03 FUNDAMENTALS OF NEUROSCIENCE
Fundamentals of nervous system and its clientele functions. In humans and animals, including neurophysiology, neural transmission and neuroanatomy.
Prerequisite: PSYCH 1A03, 1AA3, 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; or credit or registration in BIOLOGY 1A03 or 1K03 and registration in the Honours Linguistic Cognitive 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 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, 1AA3; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program or the Honours Linguistic Cognitive 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 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 2RA3 RESEARCH DESIGN AND STATISTICS IN BEHAVIOURAL SCIENCES I
Advanced research methods, experimental design, and statistics. Topics include parametric and nonparametric techniques; probability; hypothesis testing; central limit theorem; effect size; power; t-tests; linear regression.
Three lectures, one tutorial; one term
Prerequisite: Registration in Honours Biology (Biodiversity Specialization), Honours Biology and Pharmaceutical Science, the Bachelor of Health Sciences (Honours), Honours Linguistic Cognitive Science or any Honours Psychology program
Antirequisite: PSYCH 2RR3, STATS 2D03, 2R06

PSYCH 2RB3 RESEARCH DESIGN AND STATISTICS IN BEHAVIOURAL SCIENCES II
Advanced research methods, experimental design, and statistics. Advanced topics include the general linear model; multiple regression; analysis of variance; repeated measures; data transformations; factor analysis.
Three lectures, one tutorial; one term
Prerequisite: PSYCH 2RA3
Antirequisite: PSYCH 2RR3, STATS 2MB3, 2R06

PSYCH 2TT3 ANIMAL BEHAVIOUR
A discussion of the mechanisms 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, 1AA3 and one of BIOLOGY 1AA3, 1K03; or registration in Honours Biology and Psychology or the Bachelor of Health Sciences (Honours) program
Antirequisite: PSYCH 2TT3, 3P03
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 3AA3 PERCEPTION AND COGNITION OF MUSIC
The perception and neural basis of melody, harmony, rhythm and expectancy will be considered in relation to innate and experiential factors.
Three lectures; one term
Prerequisite: Registration in an Honours program or 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.
PSYCHOLOGY, NEUROSCIENCE AND BEHAVIOUR

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, 2TT3; and one of HTH SCI 1F03, 2A03, PSYCH 2R3A, STATS 1A03, 1CC3, 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 3BB3  PSYCHOLINGUISTICS
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 the connection with theoretical linguistics.

Three lectures (lectures and discussion); one term
Prerequisite: LINGUIST 3L03 or 3M03; or LINGUIST 1A03, 1A33, PSYCH 2H03; or permission of the Department Cross-list: LINGUIST 3B03
Offered in alternate years. Offered in 2006-2007.
This course is administered by the Department of Linguistics and Languages.

PSYCH 3BL3  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, 2TT3; and one of PSYCH 2R23, 2R33 or STATS 2M03
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3BN3  BEHAVIOURAL NEUROSCIENCE: 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, 2TT3; and one of PSYCH 2R23, 2R33 or STATS 2M03
Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3C03  CHILD LANGUAGE ACQUISITION
Language behaviour and development in children, from birth to school age. The course examines how data from children’s language acquisition can inform linguistic theory.

Three lectures; one term
Prerequisite: LINGUIST 1A03 and LINGUIST 1A33 or PSYCH 2H03
Cross-list: LINGUIST 3C03
This course is administered by the Department of Linguistics and Languages.

PSYCH 3CG3  FORENSIC PSYCHOLOGY
Provides students with advanced knowledge of Forensic Psychology. Includes topics such as criminal responsibility, fitness to stand trial, duty to warn, homicide and psychopathy.

Three lectures; second term
Prerequisite: Registration in Level III or IV or a Psychology program

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: One of PSYCH 2R23, 2R33 or STATS 2M03; and PSYCH 2E03; and registration in Level III or IV of an Honours Psychology program or registration in Level III of the Honours Linguistic Cognitive Science program. Enrollment is limited. Permission is by preregistration 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 2T03 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 2D03, 2E03, 2F03, 2H03, 2TT3; and one of HTH SCI 1F03, 2A03, PSYCH 2R3A, STATS 1CC3, 2D03
Antirequisite: PSYCH 2A03, 2AA3, 3G03
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 3HH3  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 2E03, 3G03
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: One of PSYCH 2R23, 2R33 or STATS 2M03; 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 3Q03, 3Q03, 4Q03, 4Q03, 4D06, 4D09) with the same supervisor.
Enrolment is limited. See the heading Limited Enrolment Courses in the Faculty of Science section of the Calendar.

PSYCH 3I13  COGNITIVE DEVELOPMENT
The development of attention, concepts, memory, reasoning and language.

Three lectures; one term
Prerequisite: PSYCH 2H03, 3G03
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, circuitry, and function of visual processing systems.

Three lectures; one term
Prerequisite: PSYCH 2E03; and one of PSYCH 2D03, 2F03 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 3J13  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, 3G03
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 SC 1F03, 2A03, PSYCH 2R03, STATS 1CC9, 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

INTRODUCTION TO BAYESIAN INFERENCE

This course introduces a sophisticated method for data analysis and guide to scientific reasoning, derived remarkably from a single, intuitive equation. Requires only basic mathematical background.

Three lectures; one term

Prerequisite: One of ECON 2B03, PSYCH 2RB3, 2RR3 or STATS 2MB3

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 neurobiology. 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 preregistration ballot. (See Department Note 2 above.)

PSYCH 3L03

GENERAL EXPERIMENTAL PSYCHOLOGY LABORATORY

Working in research teams, students select a topic area, design an experimental 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: One of PSYCH 3RB3, 3RR3 or STATS 2MB3 and registration in Level III or IV of an Honours Psychology program; or registration in Level III of the Honours Linguistic Cognitive Science program.

Enrolment is limited. Permission is by preregistration ballot. (See Department Note 2 above.)

PSYCH 3M03

MOTIVATION AND EMOTION

Theory and data concerning human and nonhuman motivation and emotion, drawing on perspectives from evolution, physiology, learning, and culture.

Three lectures; one term

Prerequisite: One of PSYCH 2F03, 2G03, 2HT03, 2HT03

Not open to students with credit or registration in PSYCH 3Y03 or 4Y03

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: FUNDAMENTALS AND MAJOR DISORDERS

Provides students with a current and comprehensive survey of psychopathology and the fundamentals of clinical psychology, including viewpoints of the nature of behavioural disorders and diagnostic systems.

Three lectures; one term

Prerequisite: Six units from: PSYCH 2D03, 2E03, 2F03, 2H03, 3T03, 2T03; or nine units of Psychology and registration in Level III or IV of a Nursing or Social Work program of the Bachelor of Health Sciences (Honours) program.

Antirequisite: 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 2RB3, 2RR3, 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 the Honours Linguistic Cognitive Science program; 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 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 one of PSYCH 2RB3, 2RR3 or STATS 2MB3 and registration in Level III or IV of an Honours Psychology program; or PSYCH 2H03 and registration in Level III of the Honours Linguistic Cognitive Science program. PSYCH 3V03 is strongly recommended.

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 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 3Z23

TREATMENT APPROACHES FOR PEOPLE WITH DEVELOPMENTAL DISABILITIES

Treatment issues related to problems associated with children and adults with developmental disabilities.

Three lectures; one term

Prerequisite: PSYCH 3Z03 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 psychologists influenced the earliest roots of Psychology as a science. Three lectures; one term.
Prerequisite: Registration in Level IV of an Honours Psychology program. Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 above.)

PSYCH 4B06  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 4QQ3 is taken concurrently with PSYCH 4D06, a different faculty member must supervise each course. PSYCH 4QQ3 may not be taken concurrently with PSYCH 4D09.
Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 above.)

PSYCH 4B09  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. Students are expected to have a C.A. of at least 8.5. PSYCH 3G03, 3Q03, 4G03, or 4Q03 may not 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, 4A03, 4B06, PSYCH 4D09, 4J03.
Enrolment is limited. Permission is by pre-registration 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 Psychology program for which this course is a specified option; and permission of the department. Students are expected to have a C.A. of at least 8.5. PSYCH 3G03, 3Q03, 4G03, or 4Q03 may not 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, 4A03, 4B06, PSYCH 4D09, 4J03.
Enrolment is limited. Permission is by pre-registration 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. Students are expected to have a C.A. of at least 8.5. PSYCH 3G03, 3Q03, 4G03, or 4Q03 may not be taken concurrently with PSYCH 4D09. 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, 4A03, 4B06, PSYCH 4D06, 4J03.
Enrolment is limited. Permission is by pre-registration ballot. (See Department Note 2 above.)
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

RELIG ST 2E03, 2F03, 2I03, 2L03, 2P03, 3A03, 3E03, 3L03, 3P03, 3S03, 3L03, 3U03, 3V03, 4H03

SANSKRIT 3A06, 4B06

II. BIBLICAL STUDIES

RELIG ST 2B03, 2D03, 2EE3, 2G03, 2H03, 2V03, 2Y03, 3Z03, 3D03, 3G03, 3J03, 3K03, 3M03, 3N03, 3R03, 3T03, 4I03

HEBREW 2A03, 2B03, 3A03, 3B03

III. WESTERN RELIGIOUS THOUGHT

RELIG ST 2C03, 2EA3, 2EB3, 2FF3, 2IJ3, 2JL3, 2KK3, 2MM3, 2P03, 2U03, 2V03, 2Z03, 3A03, 3B03, 3CC3, 3DD3, 3GG3, 3KK3, 3LL3, 3MG3, 3NN3, 3W03, 3X03, 3Z03, 3Z23, 4N03

IV. CONTEMPORARY AND COMPARATIVE RELIGIONS

RELIG ST 2BB3, 2H03, 2M03, 2N03, 2QQ3, 2SS3, 2W03, 2WW3, 3EE3, 4P03

Students wishing to specialize in Asian Religions should consider beginning language training in SANSKRT or Japanese, or both early in their program (see offerings listed under these headings). Students wishing to specialize in Biblical Studies should consider work 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

If no prerequisite is listed, the course is open.

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 1E03 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 1E06

RELIG ST 1I03 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 1I03

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

RELIG ST 2B03 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

Enrolment is limited to 475 students.

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 2EE3 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

Prerequisite: Registration in Level II or above

Cross-list: JAPAN ST 3H03

Antirequisite: RELIG ST 3H03

RELIG ST 2FF3 MEDITERRANEAN ENCOUNTERS 1500-1800

This course examines the Mediterranean region as a zone of intense cultural interaction. Particular emphasis will be given to the interaction between Christian, Jewish and Islamic societies.

Three hours (lectures and discussion); one term

Prerequisite: Registration in Level II or above

Cross-list: HISTORY 2H03

This course is administered by the Department of History.

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 relationships between religious representatives of the tradition such as Tolstoy, Gandhi and King and secular or political figures such as Gene Sharp and Martin Luther King.

Two lectures, one tutorial; one term

RELIG ST 2I03 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

Antirequisite: RELIG ST 3I03

RELIG ST 2I13 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 2J03 CHRISTIANITY IN THE REFORMATION PERIOD (1500-1600)

This place of the Reformation in the development of Christian thought and practice -its background, context and sequel. 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

Annette Reed/B.A. (McGill University), M.T.S. (Harvard), M.A., Ph.D. (Princeton)

Celia Rothenberg/B.A. (Wellesley College), M.S. (Oxford), Ph.D. (Toronto)


Donna Samaone/B.A. (Acadia), M.Div. (Waterloo), Ph.D. (California-Berkeley)
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-act; 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

Prerequisite: Registration in Level II or above

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

RELIG ST 2MM3 WAR AND PEACE IN THE CHRISTIAN TRADITION

Christian thinking and practice on militarism, the restraint of war and paths to peace, including just war, nonviolence, pacifism and revolution.

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 origins 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 Soltentology, the "Family" Branch Davidians and Satanism will be covered.

Two lectures, one tutorial; one term

RELIG ST 2SS3 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

RELIG ST 2U03 JAPANESE RELIGION

The spread of Islam, Islam as a minority community, the role of women in Islam and fundamentalism.

Two lectures, one tutorial; one term

Prerequisite: RELIG ST 2U03

RELIG ST 2V03 ISLAM AND THE MODERN WORLD

An examination of narratives from the Hebrew Bible, Intertextual 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 2V03

RELIG ST 2V03 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 2V03 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 2Y3 THE BIBLE AND FILM

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 2223 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, Mendelsohn, Cohen, Buber, Rosenzweig, Strauss, Levinas, Soloveitchik.

Three hours (lectures and discussion); one term

Cross-list: PHIL 3A03

RELIG ST 3A33 POPULAR RELIGION IN THE INDIAN TRADITION

The music, dance, 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

An exploration of the varied theological and artistic conceptions of Jesus Christ in the principal periods of Christian thought: the Biblical, Patristic, Medieval, Reformation, and Modern.

Two lectures, one tutorial; one term

RELIG ST 3C03 SOVEREIGNTY AND SECULARIZATION

Exploration of key modern Western texts concerning the nature of leadership and authority in both religious and secular contexts. Readings by Hobbes, Weber, Schmitt, Buber, plus case studies of important modern or contemporary dilemmas regarding the place of religion in public life.

Three hours (lectures and discussion); one term

RELIG ST 3D03 GOD, REASON AND EVIL

An examination of questions concerning the nature of the place of God in the modern world. Interpretations of ancient and modern understandings of God will be studied.

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

Prerequisite: RELIG ST 2N03

RELIG ST 3E03 JAPANESE RELIGION


Two lectures, one tutorial; one term

RELIG ST 3E03 SACRED JOURNEYS

A study of the significance of travel in various religious traditions, focusing on shrines, pilgrimages, and the interrelationships between secular and sacred travel.

Two lectures, one tutorial; one term

RELIG ST 3F03 APPROACHES 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 3G03 TOPICS IN JEWISH STUDIES

An exploration of selected themes in Jewish thought, history, and culture.

Three hours (lectures and discussion); one term
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

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

Readings 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 the poetry in the Hebrew Bible (in translation). The course will give priority 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

RELIG ST 3MM3 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, Dostoevsky, Kierkegaard, Camus, Sartre, Levinas.

Two lectures, one tutorial; one term

RELIG ST 3N03 JOHN’S PORTRAIT OF JESUS

An examination of the Gospel of John, with emphasis on its historical background, its literary character and its distinctive theology. The history of the Johannine community will also be considered.

Two lectures, one tutorial; one term

Antirequisite: RELIG ST 2003

RELIG ST 3N03 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

RELIG ST 3P03 BUDDHISM IN TIBET

This course takes particular religious themes in Tibetan Buddhism such as revelation, the dying process, or visionary experiences, and locates them within their historical context.

Two lectures, one tutorial; one term

RELIG ST 3R03 DEATH AND THE AFTERLIFE IN EARLY JUDAISM AND CHRISTIANITY

An examination of the variety of ways in which physical death and the afterlife were understood in biblical and post-biblical Judaism as well as in the New Testament and early Christianity. Among the topics to be considered are the netherworld, immortality and resurrection, as well as the relationship of these concepts to issues of faith and morality.

Two lectures, one tutorial; one term

RELIG ST 3S03 THE EAST ASIAN RELIGIOUS TRADITION

Readings in East Asian religious texts in translation will concentrate on themes such as culture vs. nature, virtue vs. power, social responsibility vs. personal cultivation, bookish learning vs. meditation.

Two lectures, one tutorial; one term

Prerequisite: Registration in Level III and above

Cross-list: ARTS&SCI 3S03, JAPAN ST 3S03

RELIG ST 3T03 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

RELIG ST 3U03 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

RELIG ST 3UU3 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 3UU3

RELIG ST 3V03 INDIAN PHILOSOPHY

Exploration of select 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

Antirequisite: RELIG ST 2T03

RELIG ST 3W03 PLATO: RELIGIOUS AND POLITICAL THEMES

An examination of ethical, political, philosophical and religious themes in selected Platonic dialogues, including the Apology of Socrates, Phaedo, Symposium, Gorgias and Republic.

Two lectures, one tutorial; one term

RELIG ST 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, 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 3Z03

Antirequisite: RELIG ST 2X03

RELIG ST 3ZZ3 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 3ZZ3

Antirequisite: RELIG ST 3B03

RELIG ST 4H03 TOPICS IN ASIAN RELIGIONS

Advanced seminar in Asian religions.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4I03 TOPICS IN BIBLICAL STUDIES

Advanced seminar in Early Judaism and Early Christianity.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4N03 TOPICS IN WESTERN RELIGIOUS THOUGHT

An advanced seminar in philosophy, theology and political thought dealing with contemporary and historical materials.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.

RELIG ST 4P03 TOPICS IN CONTEMPORARY AND COMPARATIVE RELIGION

Advanced seminar in contemporary and comparative religion, from the perspectives of the anthropology and sociology of religion.

One term

Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the instructor

Offered in alternate years.
GENED 4Q03 ADVANCED READINGS IN RELIGIOUS STUDIES

Independent study of special topics in Religious Studies.
One term
Prerequisite: Registration in Level III or above of an Honours Religious Studies program or permission of the Instructor
RELIG ST 4Q03 may be repeated, to a total of six units, if on a different topic.

RELIG ST 4R06 HONOURS THESIS

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 of an Honours Religious Studies program with a minimum C.A. of 9.5; or permission of the instructor
Antirequisite: RELIG ST 4Q03

HEBREW...

HEBREW 2A03 INTRODUCTION TO BIBLICAL HEBREW I

An introduction to the basics of grammar, syntax and vocabulary of the language of the Hebrew Bible. The student will begin to read in the Hebrew Bible.
Four hours (two lectures); one term
Prerequisite: HEBREW 2A06

HEBREW 2B03 INTRODUCTION TO BIBLICAL HEBREW II

An introduction to more grammar, syntax and vocabulary of the language of the Hebrew Bible. The knowledge acquired should enable the student to read the simple prose and poetry of the Hebrew Bible.
Four hours (two lectures); one term
Prerequisite: HEBREW 2B03 or permission of the instructor
Antirequisite: HEBREW 2A03

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 3A03

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 3A01

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 READINGS IN SANSKRIT TEXTS

Intermediate course with readings in selected texts.
Three lectures; two terms
Prerequisite: SANSKRIT 3A01

RUSSIAN

(SEE LINGUISTICS AND LANGUAGES, RUSSIAN)

SANSKRIT

(SEE RELIGIOUS STUDIES, SANSKRIT)

SCHOOL OF THE ARTS

WEB ADDRESS: http://www.humanities.mcmaster.ca/-sofa/index.html
Togo Salmon Hall, Room 414 Ext. 27671

Faculty as of January 15, 2006

Director
Hayden B.J. Maginnis

Professors
William Renwick/B.Mus. (British Columbia), Ph.D. (CUNY), A.A.G.O., F.R.C.C.O. (Music)

Associate Professors
Donald F. Carr/B.A. (Guelph), M.F.A. (Chicago) (Art)
Susan Fast/B.M. (Western Washington), M.A., Ph.D. (Iowa) (Music)
Kathleen Graham/B.A., M.A., Ph.D. (McGill) (Theatre & Film Studies)
Frederick A. Hall/Assoc. Dipl., B.Mus. (McGill), M.A., Ph.D. (Toronto) (Music)
Hugh K. Hartwell/Assoc. Dipl., B. Mus. (McGill), A.M., Ph.D. (Pennsylvania) (Music)
Janice Hladki/B.A. (York), M.A., Ph.D. (Toronto) (Theatre & Film Studies)
Keith W. Kinder/Dip.F.A. (Calgary), B.Mus. (Western Ontario), M.Mus. (Northwestern), Ph.D. (Colorado) (Music)
Judy N. Major-Girardin/B.A. (Windsor), M.A., Ph.D. (McMaster) (Art)
Alison McGuen/B.A. (McGill), M.A., Ph.D. (Pittsburgh)
Angela Sheng/B.A. (Toronto), M.A., Ph.D. (Pennsylvania)
Joseph Sokolowski/B.A., M.A., Ph.D. (Toronto) (Theatre & Film Studies)
Graham Todd/D.A.D. Dip. (Chelse School of Art) M.F.A. (Graz, Austria) (Art)

Associate Members
Katherine M.D. Dunabin/Classics M.A., D.Phil. (Oxford)
Michele C. 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)

Music Studio Instructors
Elise Bédard/B.Mus., L.Mus., M.Mus. (McGill) voice
John Brownell/B.F.A., M.A., Ph.D. (York) (Music) percussion
Lita Cassen/B.Mus. (Ottawa), M.Mus. (Vincent d'Indy Montréal) Dipl. Perf. (Vienna) voice
Richard Cunningham/B.Mus. (Toronto) (Clarinet)
Kevin Dumpey/percussion
Colin Desrosiers/B.Mus. (McGill), M.Mus. (Western Ontario) (Piano)
Lance Elbeck/B.Mus. (Conservatory Music, Philadelphia) violin
Paula Elliott/B.Mus. (Oberlin) M.M. (New England Conservatory) flute
Don Engler (Jazz) saxophone
Robert Fekefeke/Dipl. (Mohawk College), B.Mus., B.Ed. (Toronto) (Jazz) bass
Tom Forsyth/B.F.A., M.F.A. (York), B.Ed. (Toronto) (Jazz) drums
David Gerry/A.R.C.T., B.Mus. (Toronto), Dipl Ped. (Japan) flute
Paul Grimwood/B.Mus. (Western Ontario) (Harp) accordion
Willy Jarvis (Electric Bass)
Zoltan Kalmar/Dipl. (Franz Liszt Academy of Music, Budapest) (Clarinet)
Leokadia Kanovich/B.Mus. (Vilnius) M.M. (Moscow) (Piano)
Leon Karten/B.Mus. (Music College, USSR), M.F.A. (Ural'skaya Univ. of Music, USSR) (Piano)
Jeffrey McFadden/B.Mus. (Western Ontario), M.Mus. (Toronto) (Classical Guitar)
Troy Millek/M.M. Perf. (Indiana University) (Double Bass)
Wilmert Mocenbeek/A.R.C.T., B.Sc., M.Sc. (Guelph) (Saxophone)
Rebecca Morton (Cello)
Nancy Nelson/B.Mus. (McMaster) (Jobae)
Stephen Pierre/jazz clarinet
Mike Polc/B.Mus. (Western Ontario) (Instructor)
Philip Serabura/A.R.C.T., B.Mus. (Western Ontario) (告知)
Rob Siedlis/Dipl. (Mohawk), B.Mus. (Toronto) (Jazz) Guitar
Suzanne Shulman/A.R.C.T., Dipl. Perf. (Toronto) (Flute)
Valerie Tryon/L.R.A.M., F.R.A.M., A.R.C.M., D.Lit/Piano
Sonia Vizante/B.A. (Univ. of Bucharest), B.Ed. (Brock) (Violin)
Timothy White/B.Ed. (Toronto), B.Mus., M.Mus. (Michigan) (Trumpet)
Aila Zacarelli/Dipl. Perf. (Odessa, St. Petersburg) (Piano)

School Note:
Art, Art History, Music and Theatre & Film Studies courses can be found listed alphabetically within the Course Listings section of this Calendar.

In order to foster interdisciplinary in the Arts, the School of the Arts offers the following SOTA courses for students who wish to combine various disciplines within the School.
SCIENCE

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: 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).
Pre requisite: ENGINEER 1A00, NURSING 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.
Pre requisite: 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.
Pre requisite: 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.

SOTA 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.
Pre requisite: Three units of Communication Studies and registration in Level II or above.
Cross-list: CMST 2G03.

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.
Pre requisite: 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.
Pre requisite: Registration in Level II or above.
Cross-list: CMST 3F03.

SCIENCE

With the exception of SCIENCE 1A00, 1B00, 2B03, 2C00 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 1X03  Biology For The Humanities And Social Sciences

COMP SCI 1A03  Computing Fundamentals

COMP SCI 1T03  Elementary Computing and Computer Use

GEO 2G03  Natural Disasters

GEO 2W03  Water and the Environment

GEO 3C03  Earth's Changing Climate

GEO 3D03  Geohistory of the Underwater Realm

GEO 3N3  Northern Environments

KINESIOL 1Y03  Human Anatomy and Physiology I

KINESIOL 1Y03  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

SCIENCE 1B00  UNIVERSITY SURVIVAL

SCIENCE 1D03  ASTRONOMY

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.
Note: Students who intend to fulfill the Origins Research Specialization should register in ORIGINS 2B03.
This course is administered by the Origins Institute.

SCIENCE 2C00  SKILLS FOR CAREER SUCCESS IN SCIENCE
Develop career skills (resume, cover letter, interview, job search) necessary to create a career path.
Six one hour lectures/workshops; one term.
Pre requisite: Full-time registration in Level II or above of any program in the Faculty of Science.

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, 1F03, 1AA3.
Offered: alternate years.

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: HTH SCI 4X03, INQUIRY 3S03, 4S03.
Enrolment: Limited.

SOCIAL SCIENCES

Notes:

1. All students are strongly recommended to complete SOC SCI 2E00.
2. Students who previously completed SOC SCI 2E00 and 2F00 may substitute these units as Level II Sociology.
3. SOC SCI 2D03, 2F03, 2Q03 and 2R03 may be substituted as units of Level II Sociology.

Courses

If no prerequisite is listed, the course is open.

SOCIAL SCIENCES

SOC SCI 2E00  INTRODUCTION TO CAREER PLANNING THROUGH EXPERIENTIAL LEARNING
Provides an opportunity for students 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 this relates to making occupational choices and job searching.
Six, two hour lectures/workshops; one term.
Prerequisite: Registration in a Kinesiology or Social Sciences program.
Antirequisite: SOC SCI 3E00.
(See Note 1 above.)
SOC SCI 2L03 | TEACHING AND LEARNING FOR TUTORS
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: COMMERC2Q3, ECON 2B03, 3006, 3U03, GEO 2G03, GEOG 2L13, 2N03, HTH SCI 1F03, 2A03, KINESIO 1B03, 1B06, 3C03, POL SCI 2F06, 3N06, PSYCH 2G03, 2R03, 2RR3, SOCIOLOG 2Y03, 3H06, STATS 1A03, 1CC3 or any Level II, III or IV statistics course.

SOC SCI 2Y03 | 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 if the topic was Canadian Children.
(See Note 3 above.)

SOC SCI 2P03 | CANADIAN ADOLESCENTS
This course deals with a spectrum of issues related to Canadian adolescents such as identity formation, sexuality, peer groups and power and the social politics of career formation.
Three hours (lectures and discussion); one term
Not open to students with credit in SOC SCI 2F08 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES if the topic was Canadian Adolescents.
(See Note 3 above.)

SOC SCI 2Q03 | 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 2F08 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.)

SOC SCI 2R03 | 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 2F08 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES if the topic was Women and Work in Canada.
(See Note 3 above.)

SOC SCI 3F03 | FULL-TIME INTERNSHIP
Full-time, non-credit, paid work opportunities of four, eight, or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.
Normally 30 to 36 hours per week
Prerequisite: Registration in a program in the Faculty of Social Sciences; and credit or registration in SOC SCI 2E03; and permission of the Career Development Coordinator
SOC SCI 3F03 may be repeated.

SOC SCI 3P00 | PART-TIME INTERNSHIP
Part-time, non-credit, paid work opportunities of four, eight, or 12 month duration allowing students to explore careers, develop employability skills and make important contacts for job searches.
Normally 5 to 10 hours per week
Prerequisite: Registration in a program in the Faculty of Social Sciences; and credit or registration in SOC SCI 2E03; and permission of the Career Development Coordinator
SOC SCI 3P00 may be repeated.
SOCIAL WORK

Sociology of Social Work 2A06 - Theory, Process, and Communication

SOCIAL WORK 2B03 - Social Welfare: General Introduction


SOCIAL WORK 2E03 - Human Growth and Development in the Social Environment

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.

Courses
All courses are open only to Social Work students unless otherwise specified. (See Notes 1 and 2 above.)

SOCIAL WORK 1A06 - Introduction to Social Work

SOCIAL WORK 2A06 - Theory, Process, and Communication for Social Work

SOCIAL WORK 2B03 - Social Welfare: General Introduction


SOCIAL WORK 2E03 - Human Growth and Development in the Social Environment

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.

Courses
All courses are open only to Social Work students unless otherwise specified. (See Notes 1 and 2 above.)

SOCIAL 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
(Note: See Note 1 above.)

SOCIAL WORK 2A06 - Theory, Process, and Communication 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, 2C06, 2003
Enrolment is limited.

SOCIAL 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
Antirequisite: SOC WORK 2B06
Students in a Social Work program must register for this course as SOC WORK 2B03.


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
Antirequisite: SOC WORK 2B06
Students in a Social Work program must register for this course as SOC WORK 2B06.

SOCIAL WORK 2E03 - Human Growth and Development in the Social Environment

Human development throughout the life span with emphasis on the interaction between the personal and social contexts and social work concerns at each developmental stage. Lectures, discussion: one term

SOCIAL WORK 3A01 - Social Work with Individuals and Groups

Examination of theories of social work intervention and current practice models of intervention with individuals and groups. Seminars: one term
Antirequisite: SOC WORK 2B03, 3A03, 3A05

SOCIAL WORK 3C01 - Social Aspects of Health and Illness

Examination of the meaning of health and sickness in our society. Organization 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.

SOCIAL WORK 3D06 - General Social Work

Social work intervention processes; interviewing; development of basic skills in formation of relationships with individuals, families, groups, and communities. Seminars, workshops: two terms
Option of equivalent summer block in combination with SOC WORK 3D06 (see note) Priority for B.S.W. students
Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2B03; and SOC WORK 2A06 or both SOC WORK 2C03 and 2D03; and PSYCH 2A03 or SOC WORK 2E03
Corequisite: SOC WORK 3D06
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 3D06.
Enrolment is limited.

SOCIAL WORK 3D06 - Field Practicum I

Field practicum to develop basic intervention and interviewing skills, particularly in the formation of relationships with individuals, families, groups and communities. Students participate in defining learning goals and experiences. Field experience equivalent to 15 hours per week; two terms
Option of equivalent summer block placement in combination with SOC WORK 3D06 (see note) Priority for B.S.W. students
Prerequisite: SOC WORK 2B06 or both SOC WORK 2B03 and 2B03; 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.

SOCIAL 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. 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.

SOCIAL WORK 3H03 - Human Sexuality in Social Context

Basic information on anatomy, physiology, psychology and sociology of sexual identity and roles; analysis of policy issues. Lectures, discussion andselective 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 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.
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 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 relations in Canadian society. Students will have the opportunity to examine variables such as race, ethnicity and cultural specificity in the social assimilation and adaptation process.
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 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
Seminars to deepen understanding and further develop practice skills.
Two terms
Option of equivalent block placement in combination with SOC WORK 4D06
Prerequisite: SOC WORK 3D06, 3DD6
Corequisite: SOC WORK 4D66
Antirequisite: SOC WORK 4D12
Credit in this course is dependent on achieving a minimum grade of C+ and a Pass in SOC WORK 4D66.
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
Prerequisite: SOC WORK 3D06, 3DD6
Corequisite: SOC WORK 4D06
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 4D06.
Enrolment is limited.

SOC WORK 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 4I03  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 affect 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
Antirequisite: GERONTOCL 4S03, POL SCI 4A03, SOC WORK 4A06, 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 4K03  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; discussion, exercises; one term
Prerequisite: Registration in a Social Work program; or SOC WORK 1A06 and registration in Level III or above of any program
Antirequisite: GERONTOCL 4S03, POL SCI 4A03, SOC WORK 4A06, 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 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
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 support caregivers.
Lectures, discussions, skills development; 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.
SOCIETY

WEB ADDRESS: http://socserv.socsci.mcmaster.ca/sociology/
Kenneth Taylor Hall, Room 627
Ext. 24481

Faculty as of January 15, 2006

Chair:
Carl Cuneo

Professors:
W. Peter Archibald/B.A. (McGill), Ph.D. (Michigan)
Carl J. Cuneo/B.A., M.A., Ph.D. (Waterloo)
Margaret Denton (Gerontological Studies) B.A., M.A., Ph.D. (McMaster)
John Fox/B.A., Ph.D. (Michigan)
Cyril H. Levitt/B.A., Ph.D. (Freie Universitat, Berlin)
Charlene Miall/B.A. (Ottawa), M.A. (Calgary), Ph.D. (York)
Victor Satzewich/B.A., M.A. (Saskatchewan), Ph.D. (Glazgow)
William B. Shaffer/B.A., M.A., Ph.D. (McGill)
Philip G. White (Kinesiology) B.Sc. (London), M.Sc., Ph.D. (Waterloo)

Associate Professors:
Robert Andersen/B.A., M.A. (Western Ontario), Ph.D. (McMaster)
Art Budros/B.A. (San Jose State), M.A., Ph.D. (Califonia-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. (Kent), M.A., Ph.D. (Carleton)
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 Sugman/B.A., M.A., Ph.D. (Toronto)

Assistant Professors:
Michael Atkinson/B.A. (Waterloo), M.A. (McMaster), Ph.D. (Calgary)
Lori Campbell (Gerontology) B.A., M.A. (Western Ontario), Ph.D. (Guelph)
Catherine Chiappetta-Swanson/B.A. (York), M.A., Ph.D.(McMaster)
Tina Fether/B.A. (California, Santa Cruz), M.A., Ph.D. (New York)
James Gillett (Health Studies) B.A., M.A. (McMaster), Ph.D. (Toronto)
Andrew Hathaway/B.A., M.A. (McMaster), Ph.D. (Toronto)
Jeremy Stoilow (Communication Studies and Multimedia) B.A., M.A., Ph.D. (York)
David Young/B.A., M.A. (Queen’s), Ph.D. (McMaster)

Associate Members:
Jane Aronson/Social Work) B.Sc. (New University of Ulster), B.S.W.,
M.S.W. (McGill), Ph.D. (Toronto)
Roy Calin/Social Work) B.S.W., M.S.W., Ph.D. (McGill)

Department Notes:

1. Prior to registration, students should consult the Department of Sociology's website or individual course outlines, for fuller course descriptions and any changes in the list of courses offered in 2006-2007. Students should check 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. Prior to registration, students should consult the Department of Sociology's website or individual course outlines.
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 Honours Sociology students, and in all Level IV courses to Honours Sociology students.

4. Limited enrolment courses: Enrolment in all Level IV courses is limited with the exception of SOCIO 4M03, 4MM6 and 4N03. Admission to Level IV courses is by pre-registration ballot. All Level IV courses are normally only open to students registered in a Level IV Honours Sociology program.

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 2D06  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
Prerequisite: SOCIO 1A06
Enrolment is limited.

SOCIO 2E06  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
Prerequisite: SOCIO 1A06

SOCIO 2H03  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 ST 2103, 2106, 3103, SOCIO 2H06

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 Marxian, Weberian and structural-functionalist perspectives.
Three hours (lectures and discussion); one term
Prerequisite: SOCIO 1A06
Antirequisite: SOCIO 2Q06
SOCIOL 2HR3 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: SOCIOL 1A06
Antirequisite: SOCIOL 2006

SOCIOL 2S06 INTRODUCTION TO SOCIOLOGICAL THEORY
An introduction to the foundations, rise and development of sociological theory.
Three hours (lectures and discussion); two terms
Prerequisite: SOCIOL 1A06 and registration in a Sociology program
Antirequisite: SOCIOL 2S03, 3A08

SOCIOL 2T03 SOCIOLOGY OF SPORT
This course provides a detailed theoretical and empirical examination of how sport is culturally organized, experienced and mediated.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Antirequisite: KINESIOL 1H03, 3P03
Not open to students with credit or registration in SOCIOL 3J03 if the topic was Sociology of Sport.
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOL 2U03 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: SOCIOL 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOL 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: SOCIOL 1A06

SOCIOL 2203 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 2Z03
Antirequisite: CMST 2A03, GEO 2HIR3, GERONTOL 2O03, HEALTHST 2B03

SOCIOL 3A03 EUROPEAN SOCIOLOGICAL THEORY
An advanced examination of classical and contemporary European sociological theory.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 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, SOCIOL 3P03 or 3P03.

SOCIOL 3B03 SELECTED TOPICS IN THE SOCIOLOGY OF EDUCATION
An examination of selected topics in the sociology of education.
Three hours (lectures and discussion); one term
Prerequisite: At least 18 units of Sociology. SOCIOL 2P06 is strongly recommended.
Prerequisite (Beginning 2007-2008): SOCIOL 2P06
Enrolment is limited.

SOCIOL 3C03 MEDIA AND SOCIAL ISSUES
An analysis of the relationships between mass media and modern society. Topics may include ideology and agenda-setting in the media, representations of social problems (e.g., homelessness, violence), moral panics, media scandals, or public ceremonies.
Three hours (lectures); one term
Prerequisite: Registration in Level III or above of a Communication Studies program; or SOCIOL 2L03 and registration in a Sociology program
Cross-list: CMST 3C03
Enrolment is limited.

SOCIOL 3C33 SOCIOLOGY 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.

SOCIOL 3D03 SPECIAL TOPICS IN THE SOCIOLOGY OF THE FAMILY
An advanced course allowing detailed study of selected topics in the sociology of the family.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2U06.

SOCIOL 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.

SOCIOL 3H06 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, 3D03, 3J03, 4H03
Enrolment is limited.

SOCIOL 3H33 SOCIOLOGY OF HEALTH
Sociological approaches to the study of health and illness.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
Enrolment is limited. Priority will be given to students registered in a Sociology program.

SOCIOL 3I03 SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS
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.

SOCIOL 3K03 SPECIAL TOPICS IN SOCIOLOGICAL ANALYSIS II
Same as SOCIOL 3J03.
Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 1A06
SOCIOL 3K03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.
SOCIOLOGY

SOCIOLOGY OF AGING

An examination of the social aspects of sexuality and consideration of how sexual experiences are shaped by, and interpreted through, historically specific social contexts.

Three hours (lectures and discussion); one term
Prerequisite: Registration in Honours Sociology.
Antirequisite: GERONTOL 3C03
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, or 3W03.

SOCIAL ASPECTS OF SEXUALITY

An examination of the more or less unique contributions of English Canadians to sociological theory. Emphasis is on the Toronto school, and its left-nationalist progeny and critics.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2506 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 3A06 or 3P01.

SOCIAL ASPECTS OF SEXUALITY

An analysis of the more or less unique contributions of English Canadians to sociological theory. Emphasis is on the Toronto school, and its left-nationalist progeny and critics.

Three hours (lectures and discussion); one term
Prerequisite: SOCIOL 2506 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 3A06 or 3P01.

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Three hours (lectures and discussion); one term
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Alternates with SOCIOL 3P03
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An examination of the more or less unique contributions of English Canadians to sociological theory. Emphasis is on the Toronto school, and its left-nationalist progeny and critics.

Three hours (lectures 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, 3003.

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Three hours (lectures and discussion); one term
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Three hours (lectures 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, 3003.
SOClOL 4J03 \textbf{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.
SOClOL 4J03 may be repeated, if on a different topic.
Enrolment is limited.

SOClOL 4J33 \textbf{SOCIOLOGY 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.

SOClOL 4J03 \textbf{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.
SOClOL 4J03 may be repeated, if on a different topic.
Enrolment is limited.

SOClOL 4M03 \textbf{DIRECTED RESEARCH I FOR HONOURS STUDENTS}
Directed study of a research problem through published materials and/or field inquiry and/or data analysis. Students will be required to write up the results of their inquiry in scholarly form.
One term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOClOL 4M6 \textbf{DIRECTED RESEARCH FOR HONOURS STUDENTS}
Directed study of a research problem through published materials and/or field inquiry and/or data analysis. Students will be required to write up the results of their inquiry in scholarly form.
Two terms
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOClOL 4N03 \textbf{DIRECTED RESEARCH II FOR HONOURS STUDENTS}
Same as SOClOL 4M03.
One term
Prerequisite: Registration in Level IV Honours Sociology. Students wishing to register in this course must seek the permission of the Department.

SOClOL 4P03 \textbf{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 SOClOL 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, SOClOL 4P03
Enrolment is limited.

SOClOL 4R03 \textbf{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.

SOClOL 4U03 \textbf{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.
SOClOL 4U03 may be repeated, if on a different topic, to a total of six units.
Enrolment is limited.

SOClOL 4V03 \textbf{ISSUES IN THE SOCIOLOGY OF OCCUPATIONS AND THE PROFESSIONS}
An advanced course allowing detailed study of one or more topics of special interest.
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.

SOClOL 4W03 \textbf{SOCIAL PROBLEMS}
The focus of the course will be theories concerning social problems or an empirical examination of specific issues that have become the object of public debate and discussion.
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.

SOFTWARE ENGINEERING
(SEE COMPUTING AND SOFTWARE)

SPANISH
(SEE LINGUISTICS AND LANGUAGES, 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. 2767

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 \textbf{INTRODUCTION TO PERFORMANCE ANALYSIS}
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, 1AA3

THTR&FLM 1B03 \textbf{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 2X06
THTR&FLM 2A03 THE ACTOR AS CREATOR

Students learn basic techniques for creating short dramatic performances that reveal and question the social and political norms that structure 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.

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 and 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.

THTR&FLM 2C03 DRAMATIC FORMS

Different performance techniques and conventions demand particular forms of dramatic narrative. By examining 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, 1A3 (or 1A06); or THTR&FLM 1A03, 1B03

Cross-list: CMST 2P03, COMP LIT 2D03

THTR&FLM 2D03 HISTORY OF WESTERN THEATRE PERFORMANCE TO THE EIGHTEENTH CENTURY

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

THTR&FLM 2E03 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 of a program in Theatre and Film Studies or Communication Studies (Cultural Studies or Performance Studies Streams)

Antirequisite: DRAMA 2L03

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, plus one weekly film screening; one term

Prerequisite: Registration in Level II or above

Cross-list: ART HIST 2G03, CMST 2X03 (formerly CMST 2X06)

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 of a program in Theatre and Film Studies or Communication Studies (Performance Studies Stream). Departmental permission required.

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 animations, with an emphasis on the rich legacy of directors such as Akira Kurosawa, Koji 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 of a program in Theatre and Film Studies or Communication Studies (Performance Studies Stream). Departmental permission required.

THTR&FLM 2I03 ITALY THROUGH THE CAMERA LENS

This course traces the Italian cinema from its origins to the present day, focusing on the most significant directors and films. Students will learn basic techniques for creating short dramatic performances.

Three hours (lecture and discussion); one term

Prerequisite: Registration in Level II or above of a program in Theatre and Film Studies or Communication Studies (Performance Studies Stream). Departmental permission required.

THTR&FLM 2J03 MUSIC FOR 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 of a program in Theatre and Film Studies or Communication Studies (Performance Studies Stream).

Cross-list: JAPAN SF 2F03

Offered in alternate years.

THTR&FLM 2K03 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. 60 practicum 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 3D03 or 3B03.

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&FLM 3C03

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 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 Theatre & Film; or registration in Level III or IV of a Comparative Literature program and three units of Theatre & Film

Cross-list: COMP LIT 3C03

Offered in alternate years.

THTR&FLM 3F03 DEVELOPMENT OF CANADIAN THEATRE

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 1957.

Three hours (lecture and discussion); one term

Prerequisite: Six units of Level II Theatre & Film

Antirequisite: DRAMA 3E03

Offered in alternate years.
THTR&FLM 3G03  THEATRE AND COMMUNITY DEVELOPMENT
Students will explore the different approaches to community-based theatre generated in a range of social and cultural milieux and will analyze 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: CMST 3G03
Offered in alternate years.

THTR&FLM 3H03  COMPARATIVE THEATRE
A comparison of two or more theatrical traditions.
Three lectures; one term
Prerequisite: Six units of Level II Theatre & Film; or registration in Level III or IV of a Comparative Literature program and three units of Theatre & Film Cross-list: COMP LIT 3G03
Antirequisite: DRAMA 3G03
Offered in alternate years.

THTR&FLM 3I03  THEORIZING CULTURE
An exploration of contemporary theoretical approaches to the study of 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 2D03, 3A03, CMST 2G03, 2P03, 2S03, THTR&FLM 2C03, 2D03, 2E03
Cross-list: ART HIST 3L03, CMST 3L03
Antirequisite: DRAMA 3G03, DRMA 3L03
Not open to students with credit in DRAMA 2B03, NEW MEDIA AND PERFORMANCES, or credit in THTR&FLM 2E03 if taken in 2001-2003. Offered in alternate years.

THTR&FLM 3J03  CRITICAL STUDY OF PLAYS IN PERFORMANCE
An exploration of the critical study of live theatre performances. Students will be required to attend evening performances of professional theatre companies (i.e., Stratford Festival, Shaw Festival, Hamilton or Toronto theatres).
Two hours, plus weekly play attendance; one term
Prerequisite: Registration in Level II or above
THTR&FLM 3J03 may be repeated, if on a different topic, to a total of six units.
Offered in alternate years.
Enrolment is limited to 45 students.

THTR&FLM 3K03  TOPICS IN DRAMATIC PERFORMANCE I
An exploration of contemporary dramatic performance trends since 1980. Topics will cover dramatic performance in theatre and film.
Three hours lecture and discussion; one term
Prerequisite: One of THTR&FLM 2C03, 2D03, 2E03 or 2F03
Offered on an irregular rotation basis.

THTR&FLM 3K03  TOPICS IN DRAMATIC PERFORMANCE II
An exploration of contemporary dramatic performance trends since 1980. Topics will cover dramatic performance in television and other media.
Three hours lecture and discussion; one term
Prerequisite: THTR&FLM 2C03 or 2D03
Offered on an irregular rotation basis.

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.
Two lectures, plus one weekly film screening; one term
Prerequisite: THTR&FLM 2F03
Cross-list: ART HIST 3XX3, CMST 3XX3
Antirequisite: DRAMA 2X06
Offered in alternate years.

THTR&FLM 3M03  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: THTR&FLM 2F03
Cross-list: CMST 3S03
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 hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: THTR&FLM 2E03 or 2F03
Cross-list: CMST 3N03
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, 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, et cetera.
Two hour lecture and discussion, plus one weekly film screening; one term
Prerequisite: Registration in Level II or above and one of ART HIST 2A03, CMST 2F03, 2I03, DRAMA 2X06, THTR&FLM 1B03 or WOMEN ST 1A06 (or 1A03 and 1AA3)
Cross-list: CMST 3P03, WOMEN ST 3P03
Not open to students with credit or registration in WOMEN ST 3P03 if taken in 2001-2002.
This course is administered by Women's Studies.

THTR&FLM 3Q03  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 THTR&FLM 1B03, 2E03, 2F03
Cross-list: CMST 3T03, COMP LIT 3V03
Antirequisite: DRAMA 3T03
Offered on an irregular rotation basis.

THTR&FLM 3R03  READING FILM
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 THTR&FLM 2F03.
Cross-list: CMST 3C03, COMP LIT 3L03, CSCT 3C03, ENGLISH 3CCS
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
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 8.0 and permission of the School of the Arts
Antirequisite: DRAMA 3S03

THTR&FLM 3T03  INDEPENDENT STUDY IN THEATRE & FILM
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 8.0 and permission of the School of the Arts
Antirequisite: DRAMA 3B03
THEATRE AND FILM

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 & Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2A33. 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 3A03, THTR & FLM 3803
Enrolment is limited to 18 students. Departmental permission is required. Offered on an irregular rotation basis with THTR&FLM 3X03.

THTR&FLM 3X03 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 THTR & FLM 2A06 or 2A33. 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 & FLM 3803
Enrolment is limited to 18 students. Departmental permission required. Offered on an irregular rotation basis with THTR&FLM 3X03.

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 and Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2A33. 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.
Enrolment is limited to 18 students. Departmental permission required. Offered on an irregular rotation basis with THTR&FLM 3Z03.

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 studios; one term
Prerequisite: Registration in a program in Theatre and Film Studies; and a grade of at least B- in THTR & FLM 2A06 or 2A33. 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 3A03, THTR & FLM 3803
Enrolment is limited to 18 students. Departmental permission required. Offered on an irregular rotation basis with THTR&FLM 3Y03.

THTR&FLM 4A06 HONOURS PERFORMANCE PROJECT
Students will work in small groups to create and critique dramatic performances.
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 2L03, THTR & FLM 2A06, 2A33, 2C03 or 2D03; and one of THTR & FLM 2F03, 2B03, 3A03 or 3B03, 3C03, 3Y03, 3X03, 3W03, 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
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: THTR&FLM 2C03 or 2E03; and registration in Level III or IV of an Honours program in Theatre & Film Studies
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
An examination of theoretical documents, with an emphasis on contemporary theories of the nature of dramatic performance.
Seminar (two hours); one term
Prerequisites: THTR&FLM 2C03 or 2E03; and registration in Level III or IV of an Honours program in Theatre & Film 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
This seminar introduces students to the study of the relationship 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: 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
Senior seminar: An examination of selected films.
Seminar (two hours); one term
Prerequisite: 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 4F03
Antirequisite: DRAMA 4F03
Enrolment is limited. Priority will be given to students registered in Level IV of any Theatre & Film Studies program, and to students registered in Level IV of the Communication Studies program.

THTR&FLM 4F03 INDEPENDENT STUDY IN THEATRE AND FILM STUDIES II
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 4G03 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 Linguistics and Languages.

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 3Q03 European Drama
ENGLISH 2B08 The Development of English Drama
ENGLISH 2L03 Shakespeare: Selected Plays
ENGLISH 3D03 Contemporary Canadian Drama
ENGLISH 9K03 Shakespeare
FRENCH 3B03 Contemporary Quebec Theatre
FRENCH 3Q03 17th-Century French Literature
GERMAN 4I03 The Holocaust in German Film and Fiction
HISPANIC 4Q03 Spanish and Latin American Culture Through Cinema
### WOMEN’S STUDIES

**WEB ADDRESS:** [http://www.humanities.mcmaster.ca/~womenst](http://www.humanities.mcmaster.ca/~womenst)

Office of Interdisciplinary Studies  
Togo Salmon Hall, Room 726  
Ext. 23112

The Honours B.A. Women’s Studies and Another Subject Program is taught by an Interdisciplinary Committee of Instruction.

**Director**  
Vera Chouinard

**Assistant Professors**  
Diane Enns (Philosophy and Women’s Studies), B.A. (Ottawa), M.A. (Carleton), Ph.D. (SUNY Binghamton)  
Melinda Gough (English and Cultural Studies and Women’s Studies), B.A. (McGill), M.A., Ph.D. (Yale)

**Committee of Instruction as of January 15, 2006**

**Chair**  
Vera Chouinard (Geography and Earth Sciences)  
Marcousia Ahmed (French)  
Karen Balcom (History)  
Diane Enns (Philosophy and Women’s Studies)  
Ruth Frager (History)  
Catherine Graham (School of the Arts)  
Catherine Grise (English and Cultural Studies)  
Janice Hadzik (School of the Arts)  
Susan Sears Giroux (English and Cultural Studies)  
Charlotte Yates (Labour Studies)

### Courses

If no prerequisite is listed, the course is open.

**WOMEN ST 1A03  WOMEN, CULTURE, POWER**  
An interdisciplinary introduction to Women’s Studies focusing on how women and men shape and are shaped by culture (including popular culture), systems of power and institutional ideologies.  
Three hours (two lectures, one tutorial); one term  
Prerequisite: Registration in Level II or above  
This course is administered by the Department of History.

**WOMEN ST 1A06  WOMEN TRANSFORMING THE WORLD**  
An interdisciplinary introduction to Women’s Studies that explores women’s historic and current collective efforts to transform social, economic and political conditions both nationally and globally.  
Three hours (two lectures, one tutorial); one term  
Prerequisite: Registration in Level II or above  
This course is administered by the Department of History.

**WOMEN ST 2A03  HUMAN RIGHTS AND SOCIAL JUSTICE**  
An introduction to the growing national and international discussion of human rights, exploring the value and limitations of universal rights, equality under the law and social justice.  
Three hours; one term  
Prerequisite: WOMEN ST 1A06 (or 1A03 and 1AA3) or permission of the Director of Women’s Studies  
This course is administered by the Department of History.

**WOMEN ST 2A23  INTRODUCTION TO FEMINIST THEORY**  
An introduction to various schools of feminist thought, including global feminism, poststructural feminism, radical feminism, cultural feminism, socialist feminism and the “third wave”.  
Three hours; one term  
Prerequisite: WOMEN ST 1A06 (or 1A03 and 1AA3) or permission of the Director of Women’s Studies  
This course is administered by the Department of History.

**WOMEN ST 2F03  HISTORY OF WOMEN IN EUROPE TO 1550**  
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: HISTORY 2F03  
Antirequisite: HISTORY 2B06, WOMEN ST 2B06  
This course is administered by the Department of History.

**WOMEN ST 2F23  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 2F23  
Antirequisite: HISTORY 2B06, 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 2103

**WOMEN ST 2H43  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 (or 1AA3) is recommended.  
Antirequisite: SOCIOL 4U03

**WOMEN ST 2J03  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.  
Cross-list: in Communication Studies or Women’s 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 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: Registration in Level II or above. WOMEN ST 1A06 (or 1A03 and 1AA3) is recommended.  
Cross-list: CMST 2K06, ENGLISH 2K06

**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 (or 1A03 and 1AA3) is recommended.  
Cross-list: ENGLISH 2L03

**WOMEN ST 3A03  DOING FEMINIST RESEARCH**  
An examination of feminist research methods, focusing on experience, power and knowledge and on learning methods such as how to do oral history, interviews and participatory action research.  
Three hours; one term  
Prerequisite: WOMEN ST 2A23 or permission of the Director of Women’s Studies

**WOMEN ST 3A23  ADVANCED FEMINIST THEORY**  
An advanced course in feminist theory that explores the critical impact of recent work on identity and difference, nationalism, race, queer theory, poststructuralism and postcolonialism.  
Three hours; one term  
Prerequisite: WOMEN ST 2A23 or permission of the Director of Women’s Studies
**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 the relationships between the fields will be examined where appropriate.

Three hours; one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A06 (or 1A03 and 1A03) 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 visuality in forms such as film, video, television, advertising, etc. Other media.

Two hour lecture and discussion, plus one weekly film screening; one term

Prerequisite: Registration in Level III or above and one of ART HIST 3A03, CMST 2F03, 2I03, THTR&FLM 1803 or WOMEN ST 1A06 (or 1A03 and 1A03). Cross-list: CMST 3B03, 3B10, 3B12.

Not open to students with credit or registration in WOMEN ST 3B03, if the topic was Images of Women: Reading, Art, Media and Popular Culture.

**WOMEN ST 3DD3  WOMEN IN A MULTICULTURAL SOCIETY**

An interdisciplinary exploration of women's experiences in subcultures within a multicultural society, examining class, ethnicity and gender, ideology and identity. Topics may include immigration, voice, mobility, identity, hybridity.

Three hours; one term

Prerequisite: Registration in Level II or above. WOMEN ST 1A06 (or 1A03 and 1A03) is recommended.

Cross-list: CMST 3DD3.

**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 (or 1A03 and 1A03) 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 3G03.

Antirequisite: WOMEN ST 3X03.

This course is administered by the Department of History.

**WOMEN ST 3GG3  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 3GG3.

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 or Women's Studies. Cross-list: COMP LIT 3RR3, CSCT 3A03, ENGLISH 3A03, PEACE ST 3A03.

This course is administered by the Department of English and Cultural Studies.

**WOMEN ST 3H33  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 or Women's Studies. Cross-list: COMP LIT 3AA3, CSCT 3A03, ENGLISH 3A03.

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 (or 1A03 and 1A03) is recommended.

Offered in alternate years.

This course is administered by the Department of Philosophy.

**WOMEN ST 3NN3  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 Linguistics and Languages.

**WOMEN ST 3WW3  INTERNATIONAL WOMEN WRITERS**

A critical analysis of a selection of literary works by women authors from across the globe, with an emphasis on theories of gender and sexuality.

Two hours; one term

Prerequisite: Registration in Level II or above. Cross-list: COMP LIT 3WW3.

This course is administered by Comparative Literature.

**WOMEN 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: PEACE ST 3Z03.

This course is administered by Peace Studies.

**WOMEN ST 4A05  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 II or the Women's Studies Program.

**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.

Enrollment is limited.

**WOMEN ST 4C03  TOPICS IN FEMINIST SCHOLARSHIP:**

This course explores a range of 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 or Women's Studies. Cross-list: COMP LIT 3AA3, CSCT 3A03, ENGLISH 3A03.

This course is administered by the Department of English and Cultural Studies.

**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 of the Department of Women's Studies.
WOMEN'S STUDIES

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 4106 Women and Social Movements in the Nineteenth- and Twentieth-Century United States

KINESIO 4T03 Gender, Sport and Leisure

LABR ST 3E03 Women, Work and Unionism

RELIG ST 2SS3 Women and Religion

SOC WORK 4R03 Social Work with Women

SOCIO 2Q06 Sociology of Gender
ACADEMIC FACILITIES, STUDENT SERVICES AND ORGANIZATIONS

ACADEMIC FACILITIES

THE UNIVERSITY LIBRARY

Web Address
http://library.mcmaster.ca/

Email Addresses
libinfo@mcmaster.ca (Business, Humanities, Social Sciences, Science and Engineering)
hslib@mcmaster.ca (Health Sciences)

University Librarian (Acting)
Charlotte Stewart, 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.

Associate University Librarian (Collection Resources)
Anne Pottier, B.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 Unkert/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 2005 contained more than 2 million volumes, and over 12,000 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://dotmac 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, Maps, Music, 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, an extensive 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 Genera 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 SUP/CUC 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)

Web Address
http://www.mcmaster.ca/uts

Email Address
uts@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.Ed., M.B.A.

Associate Director, Enterprise Networks
Robin Griffin, B.Sc., Ph.D.

Associate Director, Enterprise Systems
Brian McEntegart, B.Sc.

UTS provides computing services in support of both administrative and networking activities. UTS manages a campus-wide network. UTS 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 600's, are located in Burke Sciences Building, Rooms 240-245, John Hodgins Engineering Building, Room 234, Arthur Bourne Building, Room 166, Kenneth Taylor Hall, Rooms B111, B120 and B123. All labs provide access to the Internet, popular word processing 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 and a printing account ($0.10 per page for laser printing). All of the McMaster residences 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

- General Sciences Building, Room 217, ext. 24540

Web Address
http://www.mcmaster.ca/cll

Email Address
riselays@mcmaster.ca

Academic Director
Del Harmish, B.Sc., M.Sc., Ph.D.
Executive Director
Dale Roy, B.A., M.A.

Assistant Professor
Anne Milne, Ph.D.

Educational Consultants
Erika Kustra, Ph.D.

Graduate Student Network Coordinator
Michael Potter, M.A.

Administrative Assistant
Sylvia Riselay

The primary goal of the Centre for Leadership in Learning is to be a resource centre for people who teach at McMaster. The Centre serves individual instructors, departments and other groups directly affecting teaching and learning at McMaster. Our main goals are:

1. To provide opportunities for faculty and graduate students to build teaching skills and, in particular, to develop skills in self-directed learning, inquiry and other innovative teaching models.
2. To support faculty in investigating and using new technologies to enhance learning for our students.
3. To offer advice on policy and projects that support good teaching (e.g., award programs and the evaluation of teaching).
4. To assist individual faculty members and groups of faculty in conducting educational research to understand how students learn and what makes for effective teaching within a university environment.
5. To support and encourage innovation.
6. To assist and support the testing and evaluation of new learning models that build upon the inquiry approach and other innovative teaching models pioneered by McMaster University.
7. To share our knowledge of best teaching practices in higher education to improve the quality of education locally, nationally and internationally.
8. To enable the circulation of teaching and learning insights.

The Centre's activities include:

**The Inquiry Project:** The CLL assists and supports the development, evaluation and dissemination of the McMaster Inquiry Project as part of its larger Program for Active Learning. The central goal is to incorporate the concept of student as active learner throughout the entire undergraduate experience.

**Learning Innovation Grants:** These grants will assist faculty to apply and evaluate a variety of innovative educational strategies and will support applied research into teaching and learning in higher education.

- The Centre invites applications for projects aimed at the improvement of teaching and learning at McMaster. Groups of individual instructors, teaching assistants, students or departments may apply. Applications for grants up to $1,000 may be submitted at any time. Applications for grants over $1,000 are solicited annually, usually in January, with a deadline of mid-February. Detailed criteria are available on request.
- A Special Grant for New Faculty of $10,000 to refine course content for the first three years.
- Five Departmental Grants of $25,000/year will be available to assist major departmental initiatives that take place over several years.

**Learning Technologies:** Characteristics of technology offer a new tool to promote learning, and to complement active and self-directed learning. The CLL will be able to put you in contact with people who have expertise in technology and its use 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 experienced the process as a client as well as a consultant.

**Refining a Course:** This model of course consultation takes approximately 2.5 hours. The course consultant(s), 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 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 CLL 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 much of our library from our web site.

**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**
moorcr@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**

- DeGroote School of Business, Room B111, ext. 24447
- Health Sciences Centre, Room 175, 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.

**VIDEOCONFERENCE**

- Health Sciences Centre, Room 1G1, ext. 22301

Videoconferencing is available in our in-house facility. Our completely interactive system is available for departmental, teaching or personal 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 the Department of Health, Aging and Society. (Further information can be obtained by contacting Margaret Denton in Kennedy Taylor Hall, Room 226, ext. 24449.)
McMASTER CENTRE FOR
GERONTOLOGICAL STUDIES

> Kenneth Taylor Hall, Room 226, 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 various degree options are described in this Calendar in the Faculty of Social Sciences section, Gerontological Studies.

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 Officers
May Zhai
Tania Hakim

Executive Assistant
Laurine Mollinga

McMaster University has become increasingly involved around the world in exchange agreements, institutional linkages and externally funded international programs concerned with collaborative research, education and human resource development, and with improving the delivery of services in such sectors as business, environmental protection, community health, engineering and technology development and transfer. The Office of International Affairs (OIA) has taken on an expanded international role that seeks to coordinate and facilitate McMaster's expertise in a highly complex and changing global environment. OIA participates in four broad areas including international student recruitment, development of international projects and linkages, international programs and international fund-raising and development. OIA facilitates and coordinates the development of international agreements with other institutions, research and education agencies, including government and non-government organizations.

The Office of International Affairs is situated within the Office of the Vice-President, Research and International Affairs.

McMASTER MUSEUM OF ART

> Brockhouse Way, ext. 23081

Director
Appointment pending
Email:pierce@mcmaster.ca

Collections and Operations Manager
G. Loveys, B.A.
Email: loveys@mcmaster.ca

Installations/Preservation Officer
J. Petteplace, B.A.
Email: jpette@mcmaster.ca

Director's Assistant
Z. McLachlan, B.A., B.Ed.
Email: molachz@mcmaster.ca

Assistant Curator
I. Mayrhofer, B.F.A., M.A.
Email: mayrhof@mcmaster.ca

Communications 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 Brockhouse Way, 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.

McMaster's permanent art collection contains more than 6,000 art works with a specialized collection of over 250 German Expressionist prints and the Levy Collection of Impressionist and Post Impressionist paintings. The central emphasis is on the use of the collection as a cultural learning resource through exhibitions, access, exhibitions and related programs.

Contact the Museum for exhibition listings. Hours: Tuesday to Friday, 11:00 a.m. - 5:00 p.m.; Saturday, 12:00 p.m. - 5:00 p.m. Voluntary admission fee of $2.00; free for students and seniors.

Museum Memberships available. Wheelchair accessible.

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 available to meet with students 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. Academic Skills Online is now available, which offers academic skills content and online videos 24 hours a day.

Academic Skills services 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 and to see what workshops are currently available, 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, and for students with low vision or blindness, or a mobility/functional disability. For students with a learning disability or ADHD, CSD offers the ATLAS Program. It also offers counselling, advice, support and workshops to help students meet their educational objectives.

For more information visit http://csd.mcmaster.ca/sswd.

Assistant 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 or ADHD with their reading, writing and organizational skills. In addition, computer stations with assistive technology software are available in the lab for students to use.

Students can learn various reading, writing, time management, test preparation and study strategies from our Learning Strategist. Support is also offered to assist students to understand the nature of their learning disability. Students can meet with the LD Coordinator to determine their eligibility for the service, or to receive information if they are wondering if they have a learning disability. For more information, drop by our lab in Commons Building Room B104, call (905) 525-9140, ext. 24354, or visit http://csd.mcmaster.ca/atlas.

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 and speaking, academic reading, academic writing, presentation skills, and English pronunciation; 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/esl, or contact the ESL coordinators at csdesl@mcmaster.ca.

The Dr. Mary E. Keyes Leadership Program

The goal of the Dr. Mary E. Keyes Leadership Program and Leadership Certificate is to assist students in developing personal and professional skills necessary to become responsible community leaders and role models. The focus of the program is on becoming a collaborative team player and leader, and the Certificate courses and workshops aim to introduce and teach students some of those skills.

The Certificate is comprised of a series of required and elective courses and workshops, community service and a short written component. Additional resources are available on the Leadership website and events such as a Poster and Speaker Series are offered during the year. Please note that the certificate does not qualify for credit towards an undergraduate degree. For more information and to register for courses and workshops, please visit our website at: http://csd.mcmaster.ca/leadership.

Peer Helper Program

Peer Helpers are full or part-time undergraduate and graduate student volunteers who play an integral role in delivering programs and services at the Centre for Student Development and Career Services at McMaster. All faculties and levels of study are represented within the Peer Helper Program.

Peers are trained and supervised by professional staff and assist students with academic, disability, personal and career needs. The Peer Helper Program represents one of the premier student personal and professional development opportunities at the University. For more information, please visit our web site at http://csd.mcmaster.ca/peerhelper.

International Student Services (ISS)

The major purpose of the office is to assist international students, visiting scholars, post-doctoral fellows and faculty. ISS provides a number of services such as:
- reception and orientation for newly arriving students,
- information on a range of preliminary immigration matters,
- liaison with sponsoring agencies, foreign governments, consulates and embassies,
- general advising and counselling regarding personal, financial and academic problems.

ISS is also the Plan Administrator for the University Health Insurance Plan (UHIP) which is mandatory for all international students.

Student Exchanges/Work and Study Abroad

International Student Services provides information on a range of options from independent study and externally sponsored programs, to summer session and McMaster’s formal student exchanges. As well, information concerning opportunities for work and volunteering abroad is provided. McMaster University formal student exchanges with universities in 26 countries abroad. If you have any questions about our services, please visit our office in Gilmour Hall, Room 104, telephone us at (905) 525-9140 ext. 24748, or access our web site at http://olisa.mcmaster.ca (or http://csd.mcmaster.ca/iss).

Events and Volunteer Opportunities

Throughout the academic year, the Centre holds various workshops, events and groups relating to its wide range of services. Visit http://csd.mcmaster.ca/events for current offerings.

There are many ways for students to use their special skills to help someone else. Some of the many volunteer opportunities are:
1. Speakeasy/conversation Circle
2. Note taking Program (volunteer or one-on-one)
3. Volunteer (Students with Disabilities)
4. Peer Helper Program
THE OFFICE OF ACADEMIC INTEGRITY

- McMaster University Student Centre, Room 211, ext. 24303

Web Address
http://www.mcmaster.ca/academicintegrity

Email Address
thyreta@mcmaster.ca

Academic Integrity Officer
Andrea Thyret-Kidd

The Office of Academic Integrity serves as the primary resource to students, faculty and staff on all matters related to academic integrity. Please visit the website to find information on plagiarism, inappropriate collaboration and to test your knowledge of academic integrity.

THE OFFICE OF HUMAN RIGHTS AND EQUITY SERVICES (HRES)

- McMaster University Student Centre, Room 212, ext. 23641

Web Address
http://www.mcmaster.ca/hres

Email Address
hres@mcmaster.ca

Director
Mark Walma
ext. 23641

Email: walma@mcmaster.ca

Program Coordinator
Vilma Rossi
ext. 24235

Email: rossiv@mcmaster.ca

Human Rights Educator
Appointment Pending

Administrative Assistant
Elaine Hay
ext. 27561

Email: hayelain@mcmaster.ca

HRES is responsible for human rights issues on campus and educates students on Sexual Harassment and Anti-Discrimination policies for McMaster University. The goal of the office is to ensure that students, staff and faculty can live, learn and work in an environment free from all forms of harassment and discrimination. HRES takes two avenues of approach to accomplishing this goal: education/training and resolution of complaints.

The services offered by HRES are available to the entire McMaster community. Our staff are available to listen to questions or concerns regarding situations that may involve harassment, discrimination or other human rights issues. We provide advice, explain strategies for dealing with discrimination or harassment and identify options for how to approach such situations, either through informal mediation or the lodging of a complaint under university policies. Except in rare circumstances where the situation involves immediate danger to a member of the community, HRES services are completely confidential and advice is offered without obligation to the person contacting the office.

In addition to services related to specific situations, HRES is also responsible for developing and implementing training workshops and educational programs dealing with human rights, anti-discrimination and anti-harrassment topics. In meeting this mandate, we offer regular awareness-raising programs and situation-specific workshops as well. HRES also works with two liaisons within the Faculty of Health Sciences: Dr. David Groves (905)-527-0271, ext. 46114) and Dr. Anne Niec (905)-521-2100, ext. 73100.

The HRES office is located on the second floor of the Student Centre and is completely wheelchair accessible. The office's fax number is (905) 522-7102. Our office hours are 8:30 a.m. to 4:30 p.m., or after hours by appointment.

ATHLETICS AND RECREATION

Web Address
http://www.athrec.mcmaster.ca

Email Address
iwynne@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, 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. This fall McMaster will open a new Athletic and Recreation complex, featuring one of the largest fitness centres in Canada (17,000 square feet), a cycling studio, fitness studio, new locker rooms, two additional gyms (seven gymnasia in total), a 200-metre indoor track, international squash courts and an indoor climbing wall.

McMaster Athletics and Recreation facilities also include a 50-metre pool, an outdoor 400-metre track, dance studio, activity studio and seven North American squash courts.

The Department of Athletics and Recreation ALTITUDE program utilizes the 50-foot Alpine Tower and Team Development Course. The first of its kind in Canada, it includes 33 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 34 teams competing at the Club, provincial (OUA) and national (CIS) level. 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
bookstr@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 technical 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.
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 Fairservice

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 (physical); 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 or counselling for any personal health concern.

A specialist in sports medicine is available for sports-related injuries. Our health centre provides on-site access to an array of complementary health services including: 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 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/tobacco use. A smoking cessation service is offered during the academic year. Free access is available to many educational pamphlets, videos, computer programs as well as a lending library of books, reference material and information packages. Further information and an update on services offered can be obtained by calling the Campus Health Centre office at (905) 525-9140, ext. 27700 or visit our web site at http://www.mcmaster.ca/health.

HOSPITALITY SERVICES

- Commons Building, Room 110, ext. 24422

Web Address
http://hospitality.mcmaster.ca

Director, Hospitality Services
Albert Y. Ng

McMaster Hospitality Services is a self-supporting department dedicated to providing you with healthy, nutritious and flavourful food. We offer vegetarian choices, international food menus, healthy options as well as quick snacks and made-to-order entrees. Our goal is to make the university dining experience exciting and fun, at the same time providing high quality food services, variety and good value.

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 2005-2006 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. 27448, express@mcmaster.ca or visit our web site.
Hospitality Services has five full-service dining locations located conveniently across campus:

- **Bridges Café**, developed from a student-based initiative, is an exciting vegetarian concept cafeteria catering to the ideological and religious dietary needs of students, staff and faculty on campus. The renovated Refectory basement provides a vibrant and comfortable location for programming focusing on intercultural dialogue and celebrating campus diversity.

- **Café for in Michael G. DeGroote Centre for Learning and Discovery** provides Tim Hortons' 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 Dell and Pizza+++

- **East Meets West Bistro**, our fine dining facility is located in the Mary E. Keyes 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. Right next door, **Mac's Mini Mart** offers Needa Pita and Tim Hortons in addition to a number of convenience store products.

- **La Piazza**, an open 'Marché Style' marketplace is located in the John W. Graham Technology Building and features Pizza Pizza, Tim Hortons, Piller's Dell and Creation X International Grill. You will also find **Made in Japan**, Tim Hortons and **Williams Coffee Pub** kiosks in the Centre.

- **The Café 2000** is located in the Institute for Applied Health Sciences and features Mr. Sub, Pizza Pizza, Tim Hortons, a 'wrap' station and more.

- **The Wokshop**, 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 Hodsds Engineering Building and Chester New Hall. **Math Café** 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 Café** 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: Insham Hall and Maison Francaise for those interested in learning about other cultures; Halcyon (Quiet) House and quiet floors; 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. Keyes 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 admission average to his/her academic program. All unattached students with a 75% admission average are guaranteed a space in residence provided they meet the established residence application and deposit deadline.

First-year students will receive instructions regarding application procedures with their offer of admission to the University. To accept the offer of residence, students must complete their Residence Application and a deposit on-line 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 waiting list. The waiting list is organized by academic average for applications received in the Residence Admissions Office by the deadline date. After this date, students will be added to the waiting list in order of date received. No deposit is required from students who apply to be on the waiting list. If a student is guaranteed a residence space but no longer requires it, the student is responsible for advising Housing and Conference Services in writing by the specified deadline. Failure to do so by the specified deadline, will result in the forfeiture of the full amount of the deposit. Refer to the 2006-2007 **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. Students 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. Keyes Residence, is available in the 2006-2007 Campus Living booklet.

The responsibility for policy, budget and the overall administration of the University residence system lies with the Director of Housing and Conference Services. The department has four distinct function units: Admissions, Residence Life, Facilities and Conference Services.

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; enrolment by academic average for on-campus and various and various off-campus students. All residence applications, deposits and applications 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 and personal development interest programs, and positive and inclusive social activities. Residence Life provides leadership opportunities including student staff, peer helper and elected residence council positions.

Residence students and staff are supported by five full-time Residence Managers, all of whom live in residence. The staff are available to answer questions, ensure community standards are followed and coordinate programs and activities.

All students agree to be bound by the Residence Agreement/ Contract and the Residence Code of Conduct 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, security and safety 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. 24781

Web Address
http://housing.mcmaster.ca/conf/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 web site.

OFF-CAMPUS HOUSING

- McMaster University Student Centre, Room B112, ext. 24086

Web Address
http://www.maccoho.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, Room 102, McMaster University, Hamilton, Ontario L8S 4K1

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 using 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: Security and Parking Services, E.T. Clarke Centre, Room 102, McMaster University, Hamilton, Ontario L8S 4K1. Cheques post-dated after 4:00 p.m. on the last business day of July will not be accepted. (Parking applications and/or parking permits will be withdrawn and additional fees applied for NSF cheques or declined credit cards.)

If any applicable zone is oversubscribed, there will be a lottery draw.

Undergraduate students not in residence may apply for available spaces in Zone 6 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 Security and Parking Services Office or on the web at: http://parking.mcmaster.ca.

The Security and Parking Services 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, Room 102, (905) 525-9140 ext. 24232 or 27416 and is open Monday to Friday from 8:00 a.m. to 4:00 p.m.

McMaster University Chaplaincy Centre

- 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 members of the campus community. The Chaplaincy Centre is staffed by Carol Wood, Ecumenical Chaplain; Michael Fallon, Christian Reformed Chaplain; Father Peter Nguyen, Roman Catholic Chaplain and Mary Dingle, Assistant to the Chaplains. Regular office hours fall between 8:30 a.m. and 4:30 p.m., Monday through Wednesday, 10:00 a.m and 7:00 p.m. Thursdays, 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 counseling 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 18,000 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), the Gay, Lesbian, Bisexual and Transgendered Centre, a yearbook (The Maroons), a food bank, and more than 170 clubs, including academic, political, religious, cultural and general interest.

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. 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 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/pmbuds
- Email Address: ombuds@mcmaster.ca

Ombudspersons
- Shelley Lancaster
- Carolyn Brendon

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 is designed to look after the special interests of part-time degree (taking less than 19 units) and certificate students who have a different educational experience from full-time. University fees for these students include an assessment for student aid and benefits, alumni communication, and involvement of current students.

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 graduation, all graduates of McMaster University automatically become members of the McMaster Alumni Association (MAA) and join our over 100,000 alumni living in 125 countries. The Association’s mission statement addresses a number of areas: 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 Association 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, students and friends, and the Albert Leger Event Series expands the 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. In the Fall, Homecoming is another important highlight of the alumni calendar.

The Association also gives its members the chance to obtain unique or discounted products or services through its Services and Benefits portfolio. Alumni can experience fantastic trips, obtain unique McMaster merchandise, use their McMaster MasterCard to help benefit the Association, receive high-quality home, auto, life, and extended health insurance at group rates, or investigate the other services offered through the MAA.

The McMaster Alumni Association also acts as an advocate, with representatives on the University Senate and Board of Governors. These representatives, along with other elected alumni, compose the 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.
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-Ontario Integrated Student Loan
- Canada Study Grants
- Ontario Special Bursary Plan
- Ontario Work-Study
- Child Care Bursary
- Bursaries for Students with Disabilities/Canada Study Grant for the Accommodation of Students with Permanent Disabilities
- Queen Elizabeth II (Aiming for the Top) Scholarship
- Millennium Bursary
- Part-time Canada Student Loans/Canada Study Grants for High-Need Part-time Students

To be eligible, students 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 programs. 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 restructured 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 Loan Officer in the Office of Student Financial Aid & Scholarships as early as possible and review program details and eligibility criteria at http://osap.gov.on.ca.

Canada-Ontario Integrated Student Loans

Eligible 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 and have passed a credit check may be eligible for loan funding. Loans are interest-free while the student is studying full-time.

Part-Time Canada Student Loans

The federal government also provides Canada Student Loans for eligible part-time students demonstrating financial need, who are enrolled in 20-59% of a full course load (students with permanent disabilities may enrol in 20-59% 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 incidental and are interest-bearing after 30 days. Repayment responsibilities begin within 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.

Canada Access Grants/Millennium Ontario Access Grants

The Canada Access Grants for Low-Income Families and the Millennium Ontario Access Grants assist eligible first-time first-year students from low-income families with their tuition costs to a maximum of $3000. The Canada Access Grants for students with Permanent Disabilities replace the Canada Study Grant for High-Need students and fund eligible students to a maximum of $2000. The Ontario Access Grants assist eligible second-year students from low-income families with their tuition costs to a maximum of $3000. These grants do not have to be repaid; however, they are taxable. See detailed eligibility requirements at http://osap.gov.on.ca.

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. This bursary does not require repayment; however, it is taxable.

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 and qualified for OSAP and who demonstrate financial need. Eligible students must have three or more dependent children, 11 years of age and under living with the student full-time throughout the study period. This bursary does not require repayment; however, it is taxable.

Bursaries for Students with Disabilities/Canada Study Grant for the Accommodation of Students with Permanent 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. A single application is used to be considered for this funding. This bursary is taxable. For more information, contact the Centre for Student Development at http://csd.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 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 2005/2006 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 2006/2007 academic year; and
- meet all other application requirements/deadlines.

Scholarship funding is taxable.
**STUDENT FINANCIAL AID**

**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 website at http://www.millenniumscholarships.ca. The value of the bursary is $3,000. The Millennium Bursary does not require repayment, however, it is taxable.

**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 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 in any program 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. (90763)

**THE HAMLIN FAMILY FOUNDATION WORK PROGRAM**
Established in 1996 by the Hamlin Family Foundation. A variable number of employment opportunities are 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. (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 Edward and Margaret Lyons Humanitarian Communications Centre. A variable number of employment opportunities will be made available to students in programs who demonstrate financial need. Preference will be given to students in Humanities and Social Sciences. 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)

**EMERGENCY FUNDING**

**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.

**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.

**THE IVOR WYNNIE MEMORIAL LOAN FUND**
Established in 1971 in memory of Ivor Wynne, Dean of Students. To assist students in any program.

**EMERGENCY BURSARIES**
Assistance in the form of emergency bursaries is sometimes available to students who have dire need. Students with extreme circumstances must meet with a representative from the Office of Student Financial Aid & Scholarships to discuss their situation.

**BURSARIES**
Bursaries are granted by the University Bursary 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, Gilmour Hall, Room 120 or on our website at http://sfas.mcmaster.ca. Any government-sponsored student financial assistance program should be notified of the existence of the bursary.

**GENERAL BURSARIES**

**THE 4 WINDS BURSARIES**
Established in 1997 by John F. Evans, Q.C. and Patricia Peacock-Evans in recognition of John's long-standing association with McMaster as Chair of The President's Club, Executive Committee. 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 1996. To be granted to undergraduate students in any program who demonstrate financial need. Preference to be given to female students. (90578)

**THE PHYLLIS MAY AITKEN 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 BURSARY**
Established in 1997 by AMEX Canada Inc. in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90805)

**THE AUBURN INDUSTRIAL SERVICES LTD BURSARY**
Established in 1997 by Auburn Industries 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. (90997)

**THE JOY BÀBY BURSARY**
Established in 1997 by Joy Baba under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90809)

**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. (90560)

**THE DFL. C. HOWARD BENTALL AND DR. SHIRLEY P. BENTALL BURSARIES**
Established in 1989 by Dr. C. Howard Bentall (Class of '37) and Dr. Shirley P. 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. (90866)

**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. (90580)
THE BIRK’S FAMILY FOUNDATION BURSARY FUND
Established in 1987 by The Birk’s 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 Terrence Aurini 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 BURSARY
Established in 2000 by the Brantford Alumni Branch of the McMaster Alumni Association in support of 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. (90969)

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. (90939)

THE BUSINESS MANAGEMENT SERVICES BURSARIES
Established in 1996 by bequest 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. (90564)

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. (90851)

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. (90517)

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 medalist 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. (90532)

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 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. (90585)

THE CHAWKERS FOUNDATION BURSARIES
Established in 1996 by The Chawkers Foundation, Ottawa, Ontario in support of its belief that all students should be able to pursue their educational goals. To provide assistance to students who demonstrate financial need. Value: $1,800 (90587)

THE CIBC BURSARIES
Established in 1997 by the Canadian Imperial Bank of Commerce in support of 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. A variable number of bursaries to be granted to students enrolled in any program who demonstrate 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 ’38 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. (90594)

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 1989. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90531)

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. (90688)

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 1959, 50th ANNIVERSARY BURSARY
Established by the Class of ’59 in honour of their 50th Anniversary. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (91021)

THE CLASS OF 1960 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. (90442)

THE JANET HOLDER AND NEAL COCKSHUTT BURSARY
Established in 2004 by Janet Holder (M.B.A. ’83) and Neal Cockshutt in honour of Ignatius Cockshutt, founder of Cockshutt Farm Equipment Co. Ltd. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students from Brant County. (91020)

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 BURSARY
Established in 1996 by Connor, Clark & Lunn in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a McMaster student in any program who demonstrates financial need. (90680)

THE HEIN & 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. (90693)

THE THOMAS DAILY BURSARIES
Established in 1996 by family, friends and colleagues of Thomas Daly. A variable number of bursaries to be granted to students in any under-graduate program who demonstrate financial need. (90592)

THE EDWARD FRANK DAVIS MEMORIAL BURSARY
Established in 1996 by bequest 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 DEEPER 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. (90689)

THE DEBORAH AND TERENCE DEMPSLEY BURSARY
Established in 2003 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals. To be granted to students in any Faculty who demonstrate financial need. (91049)

THE DETENBECK FAMILY BURSARIES
Established in 2005 by bequest of Patricia Detenbeck (Class of ’32). To be granted to students enrolled in any program who demonstrate financial need. (91031)
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. (90586)

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 EWARD 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 EILEEN GRAY FAYLAR BURSARY
Established in 1998 by Eileen Gray Fawley (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. (90639)

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 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 EDITH E. FERIE BURSARIES
Established in 1965 by the late Edith E. Ferrie. To be granted to students in any program who demonstrate financial need. (90511)

THE W.H. FLEMING BURSARIES
Established in 2005 by bequest of W.H. Fleming, To be granted to undergraduate students in any program who demonstrate financial need. (90834)

THE FORRESTER/GREGORY BURSARY
Established in 1997 by Shelley Forrester and Douglas Gregory in support of McMaster students. To be granted to a student in any program who demonstrates financial need. (90707)

THE JOHN C. FORSTER BURSARIES
Established by bequest of John Clifton Henry Forster of Windsor, Ontario. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90600)

THE EMMA FOX BURSARIES
Established in 1961 by the Wallingford hall Committee of which Emma Fox was treasurer from 1918 to 1958. To assist female students in any program. (90512)

THE GENERAL ELECTRIC CANADA INC. BURSARY
Established in 1997 by General Electric Canada Inc. under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in any program who demonstrates financial need. (90711)

THE GRAND & TOY BURSARIES
Established in 1996 by Grand & Toy in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90602)

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 GUARDIAN CAPITAL INC. BURSARIES
Established in 1996 by Guardian Capital in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90647)

THE GUPTA FAMILY EMERGENCY BURSARY FUND
Established in 2005 by Kuldip Gupta and family. To be granted to international students who demonstrate urgent financial need due to exceptional circumstances as determined by the Office of Student Financial Aid & Scholarships. (91041)

THE HALCYON HOUSE BURSARY
Established in 1999 by past residents of Halcyon House 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 a student in residence at Halcyon House. (90599)

THE HAMILTON PORCELAINS BURSARIES
Established in 1997 by Hamilton Porcelains Limited in the 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. (90727)

THE HAMILTON SPECTATOR BURSARY
Established in 1997 by The Hamilton Spectator in support of its belief that all students should have the opportunity to pursue their educational goals. To be granted to a student enrolled in any program who demonstrates financial need. (90728)

THE HAMLIN FAMILY FOUNDATION BURSARIES
Established in 2004 by The Hamlin Family Foundation under the McMaster Student Opportunity Fund II Initiative. To be granted to students enrolled in any program who demonstrate financial need. (91016)

THE DAMIAN MIGUEL HEADLEY BURSARY
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of '89) under the McMaster Student Opportunity Fund Initiative. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Damian Miguel Headley Award. (90902)

THE MIKE AND MURIEL HEDDEN BURSARIES
Established in 1996 by family in memory of her husband, D.M. (Mike) Hedden, former Vice-President (Administration), who faithfully served McMaster for over 25 years. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90603)

THE RUDY HEINZL BURSARY
Established in 1996 by family, friends and colleagues upon his retirement as Dean of Student Affairs in recognition of 32 years of dedicated service to students and to the McMaster University Community. To be granted to students in any program who demonstrate financial need. Preference will be given to the recipient of the Rudy Heinzl Award. (90577)

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 HILLGARTNER BURSARIES
Established in 1997 by bequest of Lloyd Andrew Hillgarter. A variable number of bursaries to be granted to students enrolled in any program who demonstrate financial need. (90854)

THE WILLIAM NELL HOTHUR BURSARIES
Established in 2004 by Mr. William Nell Hothur under the McMaster Student Opportunity Trust Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals. Preference will be given to students who demonstrate financial need. Preference will be given to (i) students from the Hamilton area and (ii) students from a single parent family. (91026)

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. (90680)

THE JADDOO ANDERSON BURSARY
Established in 1997 by Jaddeo 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 JONES-TURNER BURSARY
Established in 1997 by Sheila Lang (Class of '53) in honour of her family's long-standing association with the University. To be granted to a student enrolled in any program who demonstrates financial need. (90743)

THE DR. RONALD V. JOYCE BURSARIES
Established in 2003 by Dr. Ronald V. Joyce (Class of '98) to support students at McMaster. A variable number of bursaries to be granted to undergraduate students in any program who demonstrate financial need. (90779)

THE JUNIOR LEAGUE OF HAMILTON/BURLINGTON, INC. BURSARIES
Established in 1997 by the Junior League of Hamilton-Burlington, 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 Junior League of Hamilton/Burlington, Inc. Award. (90805)
THE MURIEL McBRIEN KAUFFMAN BURSARIES
Established in 1997 by the Muriel McBrien Kaufmann 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 annually to students enrolled in any program who demonstrate financial need. (90744)

THE ROBERT ALAN KENNEDY BURSARIES
Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyses, long-time teacher, coach, administrator and mentor at McMaster University. To be granted to a student who demonstrates financial need with a minimum Cumulative Average of 8.0 and who show leadership and participation in McMaster student life. (90746)

THE MARY KEYES MEMORIAL BURSARY
Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyses, long-time teacher, coach, administrator and mentor at McMaster University. To be granted to a student who demonstrates financial need with a minimum Cumulative Average of 8.0 and who show leadership and participation in McMaster student life. (90747)

THE KHALI UNIVERSITY AND YOUNG MEN'S CHRISTIAN ASSOCIATION MEMORIAL BURSARIES
Established in 1921 by the Khali University of Canada and the Young Men's Christian Association. To assist students in any program who demonstrate financial need. (90523)

THE RAYMOND C. LABARGE MEMORIAL BURSARIES
Established in 1996 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 LAIDLAW INC. BURSARIES
Established in 1996 by Laidlaw Inc. a major provider of transportation services to municipalities and the general public throughout Canada and the United States, in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to assist students in any program who demonstrate financial need. (90525)

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 McMaster Women's Association. To assist students in any program who demonstrate financial need. (90526)

THE LANCASTER SHEET METAL LIMITED BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. (90527)

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 enrolled 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. (90610)

THE GARY LAUTENS MEMORIAL BURSARIES
Established in 1996 by Mr. Jackie Lautens, the Toronto Star, family and friends, in memory of Gary Lautens (Class of '80), columnist and editor of the Toronto Star (1962-82), 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. (90611)

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 1996 by Lincluden 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 MURIEL McBRIEN KAUFFMAN BURSARIES
Established in 1997 by the Muriel McBrien Kaufmann 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 annually to students enrolled in any program who demonstrate financial need. (90744)

THE ROBERT ALAN KENNEDY BURSARIES
Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyses, long-time teacher, coach, administrator and mentor at McMaster University. To be granted to a student who demonstrates financial need with a minimum Cumulative Average of 8.0 and who show leadership and participation in McMaster student life. (90746)

THE MARY KEYES MEMORIAL BURSARY
Established in 2002 by family and friends as a tribute to Dr. Mary E. Keyses, long-time teacher, coach, administrator and mentor at McMaster University. To be granted to a student who demonstrates financial need with a minimum Cumulative Average of 8.0 and who show leadership and participation in McMaster student life. (90747)

THE KHALI UNIVERSITY AND YOUNG MEN'S CHRISTIAN ASSOCIATION MEMORIAL BURSARIES
Established in 1921 by the Khali University of Canada and the Young Men's Christian Association. To assist students in any program who demonstrate financial need. (90523)

THE RAYMOND C. LABARGE MEMORIAL BURSARIES
Established in 1996 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 LAIDLAW INC. BURSARIES
Established in 1996 by Laidlaw Inc. a major provider of transportation services to municipalities and the general public throughout Canada and the United States, in support of students pursuing their post-secondary studies at McMaster. A variable number of bursaries to assist students in any program who demonstrate financial need. (90525)

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 McMaster Women's Association. To assist students in any program who demonstrate financial need. (90526)

THE LANCASTER SHEET METAL LIMITED BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative. To be granted to students enrolled in any program who demonstrate financial need. (90527)

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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 enrolled in any program who demonstrate financial need. (90609)

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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 1996 by Lincluden 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 McMaster STUDENTS' UNION BURSARIES
Established in 1982 by the McMaster Students' Union. To assist those undergraduate MSU members who demonstrate financial need. (90530)

THE McMaster UNIVERSITY FACULTY ASSOCIATION BURSARY
Established in 1997 by the McMaster Faculty Association under the McMaster Student Opportunity Fund initiative to assist those students who demonstrate financial need. (90776)

THE A.J. MELLONI MEMORIAL FUND
To be granted to a student in any program. (90532)

THE MELOCHI MORNEX INC. BURSARY
Established in 1997 by Melochi Monnex Inc. under the McMaster Student Opportunity Fund initiative in support of the belief that all students should have access to educational opportunities. To be granted to a student enrolled in any program who demonstrates financial need. (90776)

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. (90780)

THE JOHN DOUGLAS MOYER BURSARY
Established in 1966 by bequest of John Douglas Moyer to assist needy students. (90534)

THE HELEN K. MUSSALLEM BURSARY
Established in 1998 by Dr. Helen K. Mussallem (C.C., B.N., Ed.D., L.L.D (Queen's), D.S.C., D.S.I., F.R.C.N., M.R.S.H.) 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 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 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. (90781)

THE NELSON STEEL BURSARY
Established in 1997 by Nelson Steel in support of the 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 who participate in the 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 the belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries to be granted to students in any program who demonstrate financial need. (90534)

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. (90535)

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. (90938)

RBC Financial Group Bursary
Established in 1997 by the Royal Bank of Canada in support of the 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 the 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, 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. (90951)

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 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 the 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. (90798)

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. (90641)

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. (90920)

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 LOUIS SR. AND ROSITA SERAFINI BURSARY
Established in 2004 by Louis Jr. and Lori Ann Serafini, graduates of McMaster University, in honour of Louis Sr. and Rosita Serafini under the McMaster Student Opportunity Fund II initiative. To be granted to a student enrolled in any program who demonstrates financial need. (91024)
HE 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 any Faculty who demonstrate financial need. Preference will be given to students from single-parent families, foster or group homes, or to students who are self-supporting. To be granted to students enrolled in any program who demonstrate financial need. (90927)

THE MEENA AND NARESH SINHA BURSARY
Established in 1996 by Meena and Naresh 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 Naresh Sinha Award. (90921)

THE ALBERT EDWARD SMITH AND JEAN MCTAVISH SMITH BURSARY
Established in 1996 by Mrs. Jean Mctavish 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. (90589)

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 enrolled 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. (90881)

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 enrolled in any program who demonstrate financial need. Preference will be given to the recipient of The Adam Sudar Printmaking Award. (90923)

THE TARBUTT CONSTRUCTION LTD. BURSARY
Established in 1997 by Tarbutt Construction Ltd. under the McMaster Student Opportunity Fund Initiative. To be granted to students enrolled in any program who demonstrates financial need. (90732)

THE STEPHEN H. THREIKEL BURSARY
Established in 1997 by friends and colleagues of Stephen H.H. Threikel 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 H.H. Threikel Award. (90824)

THE TDK INC. BURSARY
Established in 1997 by TDK 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 TDK Inc. Awards. (90529)

THE RAY AND JOYCE TRULL BURSARY
Established in 1996 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. (90637)

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 GEORGE ELIAS TUCKETT BURSARIES
Established in 2005 in memory of George Elias Tuckett, a prominent Hamilton businessman and community leader who founded the oldest tobacco manufacturing company in Canada - a company that has been part of Imperial Tobacco since 1930. To be granted to students in any Faculty who demonstrate financial need. (91047)

THE EDITH H. TURNER FOUNDATION BURSARIES
Established in 1996 by the Edith H. Turner Foundation in support of students pursuing their post-secondary studies at McMaster. 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 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. (90896)

THE VALLEY CITY BURSARY
Established in 1998 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. (90997)

THE WALLENGFORD HALL BURSARIES
Established through anonymous donations to assist students in any program who demonstrate financial need. (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. (90828)

THE ROSS FAWCETT WEBB BURSARY FUND
Established in 1993 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 WEISZ BURSARY
Established in 2004 by Arthur Weisz (LLD. 2004) and Margaret Weisz under the McMaster Student Opportunity Fund Initiative. To be granted to students enrolled in any program who demonstrate financial need. (91008)

THE LLOYD WERDEN MEMORIAL BURSARIES
Established in 1998 by bequest of Lloyd Warden 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. (90551)

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. (90929)

THE ALLAN AND JOY WILLIAMS BURSARY
Established in 1996 by Mary Williams (Class of '87), Anne Williams (Class of '89) and Ellen and Dan Walker under the McMaster Student Opportunity Fund Initiative. 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. (90649)

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. (90678)
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 Award. (90031)

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. (90032)

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) GRELICH MEMORIAL BURSARY
Established in 1991 in memory of Jamie Grellich (Class of '86) 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. (90033)

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. (90750)

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 1950 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 University of Canada West regulations for Athlete Bursaries. Verification of eligibility will be done in consultation with the Department of Athletics.

THE ELVA CARROLL BURSARY
Established in 1998 by Elva Carroll under the McMaster Student Opportunity Fund Initiative. To be awarded to a female athlete who participates on an Inter-university team and demonstrates financial need. Preference will be given to the recipient of The Elva Carroll Award. (90899)

THE CROSSTOWN 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 a varsity men’s or women’s cross country team. (90899)

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. (90897)

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 Inter-University sport. (90897)

THE KAP MARSHALL BURSARY
Established in 2005 under the Ontario Trust for Student Support initiative. To be granted to a student enrolled in the DeGroote School of Business who demonstrate financial need and who have demonstrated outstanding athletic achievement in an interuniversity sport. (91032)

THE SADIE LUDLOW BURSARIES
Established in 1998 by 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 interuniversity women’s tennis. (90015)

THE JOHN MCMIGHILL MEMORIAL BURSARY
Established in 2001 in loving memory of John (Jack) Woodhouse McCall the memory of 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. (90668)

THE McMASTER ATHLETIC COUNCIL (Mac) BURSARY
Established in 1997 by the Men’s Athletic Council and the Women’s Intercollegiate Athletics Council under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in any program who demonstrates financial need and who is a member of any inter-university team at McMaster. (90090)

THE McMASTER 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 McMASTER 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 McMASTER 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 McMASTER 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 McMASTER 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 interuniversity sport. (90889)

THE HAROLD NOLAN MEMORIAL FOOTBALL BURSARY
Established in 2003 by Elis 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 athletic 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 as well as the community-at-large. To assist student-athletes who demonstrate 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 Services. (90837)

COMMUNITY SERVICE BURSARIES

THE ERIC JOHN BREITZLER BURSARY
Established in 1997 by family and friends in memory of Eric John Bretzler (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 Students Union. (90814)
THE ARCHIBALD R. CROZIER BURSARIES
Established in 1992 in memory of Archibald (Archie) Crozier (Class of '35), former professional football player and Chair of the Ontario Energy Board for 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 LYNDEN LIONS CLUB BURSARY
Established in 1989 by the Lynden Lions Club under the McMaster Student Opportunity Fund initiative to exemplify the Lions international objective to take an active interest in the civic, cultural, social and moral welfare of the community. 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)

THE GEORGE SORGER BURSARY IN BIOLOGY
Established by the friends of Dr. George Sorger. To be granted to a student in Level IV of a Biology program who demonstrates financial need. Preference will be given to students who have attained a Cumulative Average of at least 9.0 at the most recent review and who are also involved in community service. (91029)

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 demonstrates financial need. Preference to be given to students who currently reside in the town of Ancaster. (90804)

THE CITY OF HAMILTON BURSARIES
Established in 1997 by the City of Hamilton to commemorate the visit of Her Majesty Queen Elizabeth II and His Royal Highness Prince Philip to Hamilton in July 1959. To assist Hamilton students who demonstrate financial need. (90515)

THE JANET HOLDER AND NEAL COCKSHUTT BURSARY
Established in 2004 by Janet Holder (M.B.A. '83) and Neal Cockshutt in honour of Ignatius Cockshutt, founder of Cockshutt Farm Equipment Co. Ltd. To be granted to students enrolled in any program who demonstrate financial need. Preference to be given to students from Brant County. (91029)

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 that they are residents of an Aboriginal community in Canada and who demonstrate financial need. (90597)

THE DUNDAS BURSARIES
Established in 1989 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. (90444)

FIRSTONTARIO CREDIT UNION
Established in 1869 by members in celebration of 50 years of service in the Hamilton area. Two or three bursaries to be granted to students in any program who, are from the Regional Municipality of Hamilton-Wentworth (City of Hamilton, Regional Municipality, or Town of Halldimd-Norfolk, who have demonstrated financial need.

Value: $700 each (90504)

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. (90725)

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 enrolled in any program who demonstrate financial need. (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 to be given to one who has graduated from a secondary school in Hamilton. (90521)

THE WILLIAM NEIL HOTRUM BURSARIES
Established in 2004 by Mr. William Neil Hotrum under the McMaster Student Opportunity Trust Fund II initiative in support of his belief that all students should have the opportunity to pursue their educational goals. To be granted to students who demonstrate financial need. Preference will be given to (i) students from the Hamilton area and (ii) students from a single parent family. (91029)

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. (90749)

THE KIWANIS CLUB OF HAMILTON EAST BURSARIES
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 to be given to members and former members of the Hamilton East Kiwanis Boys' and Girls' Club. (90749)

THE LEFLER FOUNDATION BURSARY
Established in 1997 by The Leffler 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 to be given to students who are from the Owen Sound area. (90753)

THE PAUL R. MacPHERSON BURSARY
Established in 1986 by Paul R. MacPherson (Class of '57) and augmented with funds from 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 (i) students from Bracebridge and Muskoka Lakes Secondary School and (ii) Aboriginal students from a First Nations community in Ontario. (90838)

THE MALLOCH FOUNDATION BURSARIES
Established in 1996 by the Malloch Foundation, Hamilton, in the belief that all students should be able to achieve their educational goals. A variable number of bursaries to be granted to students in any program who demonstrate financial need. Preference to be given to students from the Hamilton area. (90618)

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 to 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 pursue 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 Marilyn 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. (90894)

THE ROSA MAUDE SHEARDOWN BURSARY 
Established in 1997 by Gordon R. Baker, 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 will be given to students from single-parent families, foster or group homes, disadvantaged backgrounds or King Township. (90867)

THE TOWNSHIPS OF NORTH DUMFRIES AND WOOLWICH IN WATERLOO REGION OF CENTRE WELLINGTON AND CITY OF GUELPH IN WELLINGTON COUNTY BURSARY 
Established in 2005 under the Ontario Trust for Student Support program to ensure that all students have the opportunity to pursue their educational goals. To be granted to students in any Faculty who demonstrate financial need. Preference will be given to students residing in the Townships of North Dumfries and Woolwich in Waterloo Region and Township Centre Wellington and City of Guelph in Wellington County. (91037)

FACULTY OF ARTS AND SCIENCE BURSARIES

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 LOUIA BRAYFORD MEMORIAL BURSARY 
Established in 1998 by Mrs. Janet Leenaars in memory of her late mother, Mrs. Louila Brayford (nee Bingham, 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) (90870)

THE HORDON H. DEAN BURSARIES 
Established in 1995 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 I of a program in Arts and Science or Level II 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 the student who wins 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. (90568)

THE KATHLEEN AND DENNIS McCALLA BURSARIES 
Established in 2005 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. (90867)

THE SAM AND IRENE WATSON BURSARY Fund 
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)

FACULTY OF BUSINESS BURSARIES

THE GARY ALLEN MEMORIAL BURSARY 
Established in 1987 by friends and family of the late Gary Allen (Class of '84) and augmented in 1996 in conjunction with the McMaster Student Opportunity Fund initiative, to assist a Commerce student in Year III or IV whose major area of study is accounting and who demonstrates financial need. Preference will be given to a mature student. (90501)

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. (90681)

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. (90568)

THE AUBREY 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 BURSARIES 
Established in 1997 by the DeGroote School of 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. (90699)

THE STEPHEN DULMAGE BURSARY 
Established in 2005 by Stephen Dulmage "64 (B.A.). To be granted to students enrolled in the Bachelor of Commerce program at the DeGroote School of Business who demonstrate financial need. (91048)

THE GEORGE AND MARGARET EDRUPP BURSARY 
Established in 1997 by Sandra Edrupp in honour of her parents George and Margaret Edrupp. 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 Finance. (90714)

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 1997 by the Hamilton Chapter of the Financial Executives Institute in support of its belief that all students should have the opportunity to achieve their educational goals. 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 in Accounting and 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. (90869)

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 GOULD FAMILY 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. (90716)

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)
I THE HAMILTON CHAPTER 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. (90518)

THE HANNAH MICHAEL HOLMOBE MEMORIAL BURSARY
Established in 2004 by bequest of Ruth Anna 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 or Rehabilitation Science. To be granted to students who demonstrate financial need. (90841)

THE MARK JANITZI MEMORIAL BURSARY
Established in 2004 by Paul and Hanne Janitzi under the McMaster Student Opportunity Fund II Initiative, in memory of their son Mark Janitzi, 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 KNAP MARSHALL BURSARY
Established in 2003 under the Ontario Trust for Student Support initiative. To be granted to students enrolled in the DeGroote School of Business who demonstrate financial need and who have demonstrated outstanding athletic achievement in an intervarsity sport. (91032)

THE KPMG BURSARIES
Established in 1996 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. (90607)

THE 3M CANADA INC. BURSARY
Established in 1996. 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 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 enrolled in the Faculty of Business who demonstrate financial need. (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 MINCH FAMILY BURSARIES
Established in 1996 by E. A. Minch 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. (90629)

THE CAROL R. MITCHELL BURSARY
Established in 2005 by Carol R. Mitchell (M.B.A. ’82). To be granted to students enrolled in the Bachelor of Commerce program in the DeGroote School of Business who demonstrate financial need. (91081)

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 PROCTOR BURSARIES
Established in 1997 by Proctor 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 RICH CANADA BURSARIES
Established in 1998 by Rich 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. (90840)

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. (90800)

THE GINO AND ROBERTA SCAPILLATI BURSARY
Established in 2004 by Gino Scapillati ’81 and Roberta Scapillati ’79 under the McMaster Student Opportunity Fund initiative. To be granted to a student enrolled in the Faculty of Business or Faculty of Social Sciences who demonstrates financial need. (91005)

THE SCOTT AND LEON BURSARY
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 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 TROY FAMILY BURSARY
Established in 2004 by Kenneth B. Com. ’75) and Brenda Troy in honour of Anthony and Mary Troy. In support of their belief that all students should have the opportunity to pursue their educational goals. To be awarded to a full-time student enrolled in Level II or above of the Bachelor of Commerce program who demonstrates financial need and was on the Dean’s Honour List at the most recent review. (91027)

MOSADIQ AND YASMIN UMEDAL BURSARIES
Established in 1999 by Mosadq (M.B.A. ’74) and Yasmin Umedal 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. (90668)

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 6.0 in the Arts and Social Sciences program or any of the Faculties of Business, Engineering, Humanities, Science and Social Sciences.

Value: $2,000 (90840)
332 STUDENT FINANCIAL AID

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 are 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 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 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. (90520)

FACULTY OF ENGINEERING

THE ROSE (NÈE D'ALESSIO) AND PAUL ALLISON BURSARY
Established in 2004 by Rose (née D’Alessio) Allison (B. Eng. ’81) and Paul Allison (B. Eng, Mgt. ’80 and M.B.A. ’81) in support of their belief that all students should have the opportunity to pursue their educational goals. To be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (91023)

THE ANDREW FOUNDATION BURSARIES
Established in 1997 by the Andrew Foundation under the McMaster Student Opportunity Fund initiative. A variable number of bursaries are 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. (90805)

THE A.H. ATKINSON BURSARIES
Established in 1999 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 are to be awarded to undergraduate students in a full-time program in Engineering who demonstrate financial need. (90500)

THE BARTEK BURSARIES
Established in 1996 by Bartek Ingredients Inc. of Stoney Creek in support of McMaster students. A variable number of bursaries are 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 Cancom Canada Inc. - OE Division, and augmented in 2005, in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in an Earth and Environmental Sciences program, the Honours Geography and 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 students enrolled in Mechanical Engineering. (90819)

THE COMPSUAMRT 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 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 are to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90969)

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. (90898)

THE GENERAL CONTRACTORS ASSOCIATION OF HAMILTON BURSARIES
Established in 1987 by the General Contractors Association of Hamilton under the McMaster Student Opportunity Fund initiative. A variable number of bursaries are to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. (90712)

THE GRAY FAMILY BURSARY
Established in 1997 by Donald Gray (Class of ’72) and Glenn Gray (Class of ’73) and Terry Gray (Class of ’70) under the McMaster Student Opportunity Fund initiative. To be granted to a third year student enrolled in the Engineering and Management programs who demonstrate financial need. Preference to be given to students who permanently reside in the Hamilton-Wentworth Region. (90718)

THE HATCHE 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 1997 by Paul F. Inglis of Mississauga. A variable number of bursaries are to be granted to students enrolled in a program in Commerce or Engineering Management who demonstrate financial need. Preference to be given to students enrolled in Engineering Management. (90606)

INTERNATIONAL SCIENCE AND ENGINEERING FAIR 1995 BURSARY
Established in 2005 by the Board of the International Science and Engineering Fair 1995 under the Ontario Trust for Student Support initiative. A variable number of bursaries are to be granted to students enrolled in Level I in the Faculties of Science or Engineering who demonstrate financial need. Preference will be given to students who have participated in local science fairs. (91066)

THE IVISON FAMILY BURSARY FUND
Established in 1997 by Don and Betty Iverson in support of McMaster students under the McMaster Student Opportunity Fund initiative. A variable number of bursaries are 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. (90641)

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. (90752)

THE LIBURDI ENGINEERING LIMITED BURSARY
Established in 1997 by Libardi 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/TISHMAN 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 Anne 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. (90863)

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. (90885)
THE ROCZT JOHN MORRIS BURSARIES
Established in 1995 by family, friends and colleagues of Robert John Morris. A variable number of bursaries to be granted to students enrolled in the Faculty of Engineering who demonstrate financial need. Preference will be given to students who have demonstrated leadership in their school and community. (90851)

THE ZONTA CLUB OF HAMILTON BURSARIES
Established in 1997 by the Zonta Club of Hamilton in support of students enrolled in 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. Preference will be given 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. (90856)

FACULTY OF HEALTH SCIENCES

THE BACHELOR OF HEALTH SCIENCES (HONOURS) BURSARIES
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. (90985)

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. (90846)

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 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. (90943)

THE JEAN, MARTHA AND LAURIE DOUCET MEMORIAL BURSARIES
Established in 1998 by the family in memory of Jean, Martha and Laurie Doucet for their years of service and commitment to the nursing profession. A variable number of bursaries to be granted to students enrolled in the School of Nursing at both the undergraduate and graduate level 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 1989 by Margot (Class '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. (90945)

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 and Midwifery 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. Values: 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 II or IV of the B.Sc.N. program (basic and/or post-diploma stream). (90519)

THE HAZEL MAY HINKS BURSARIES
Established in 1998 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 of Business 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 Philip 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 a specialization. (90768)

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 HARRISON MAYNARD MEMORIAL BURSARY IN MIDWIFERY
Established in 2005 in memory of Harrison Maynard by his family and friends. To be granted to students enrolled in Level II or above of the Midwifery Education Program who demonstrate financial need. (91030)

THE JANET MCKNIGHT MEMORIAL BURSARIES
Established in 1996 in memory of Janet McKnight by the Pambam Family. A variable number of bursaries to be granted to students enrolled in the final level of the Nursing program who demonstrate financial need. (90923)

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. (90391)

THE KATHERINE M. COLLYER McNALLY BURSARY
Established in 1997 by four 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)

THE PERC AND JOAN NORMAN NURSING BURSARY
Established in 2005 by Perc and Joan Norman in support of students pursuing a career in healthcare. To be granted to students who demonstrate financial need and are enrolled in the Nursing program. (91019)

THE O'SHAUGHNESSY BURSARY
Established in 1996 by the family and friends of the late Margaret O'Shaughnessy, R.N., this bursary is to be used to alleviate financial need for students pursuing an education in Nursing (basic or post-diploma stream). (90991)

THE V. S. MAYNARD MEMORIAL BURSARY
Established in 1996 in memory of and in honour of Margaret V. S. Maynard, R.N., this fund is tenable for up to four years. Established in 1997 by William Beanie (Class of '68) in honour of his mother, Margaret V. S. Maynard. To be granted to a student enrolled in an Art History program in the School of the Arts. (90992)

THE MARJORIE E. WATSON BEATTIE BURSARY
Established in 1997 by William W. Beattie (Class of '58) in memory 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. (90861)

THE WILLIAM DAVID BROADHEAD MEMORIAL BURSARY
Established in 2003 by family in memory of William David Broadhead (Class of '39') under the McMaster Student Opportunity Fund II Initiative. 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 CASEY BURSARIES
Established in 1996 by June Caseky 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. (90585)

THE GERALDINE LORETTA COSFORD BURSARIES
Established in 1997 by Geraldine Loretta Cosford under the McMaster Student Opportunity Fund Initiative. A variable number of bursaries 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. (90982)

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 Saas, in memory of Earl Franklin Damude (Class of ’36). To be granted to a student who demonstrates financial need and has completed Level II 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. (90879)

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. (90954)

THE MARGERY E. DIXON MEMORIAL BURSARY
Established in 2003 in loving memory of Margery E. Dixon (Class of ’35) by Geraldine Phenix under the McMaster Student Opportunity Fund II initiative. A variable number of bursaries to be granted to students in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in a program in the Department of English and Cultural Studies. (90984)

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. (90656)

THE ENERSYSTEM INSULATION LTD. BURSARY
Established in 1997 by Ener/System 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 a program in French 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 Linguistics and Languages, 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. (90857)

THE BILL AND HELEN HIGHT BURSARY
Established in 2004 by Helen (Class of ’49) and Bill Hight 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 female students. (90729)

THE HARWOOD BURSARIES
Established in 1995 by Dr. William Harwood of Hamilton in memory of his beloved wife Grace and devoted daughter Willa Ruth Laurie (Class of ’50). A variable number of bursaries to be granted to students studying Music who demonstrate 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. (90794)

THE JULIA HURTIG BURSARY
Established by family and friends of the late Julia Hurtig in 1995. This bursary will be granted to a student entering Level II 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. (90529)

THE IVY BURSARY
Established in 1997 under the McMaster Student Opportunity Fund Initiative. Preference will be given to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to recipients of The Ivy Scholarship. (90872)

THE STUART AND MARJORIE IVISON BURSARIES
Established in 1997 by Donald Ivson (Class of ’53) and Betty Ivson (Class of ’52) in honor of his parents Stuart and Marjorie Ivson (Class of ’28 (Arts)). To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to recipients of The Stuart and Marjorie Ivson Award. (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 1939 to 1961. A variable number of bursaries to be granted to students enrolled in a program in a Faculty of Humanities, in good standing, who has made a special contribution to the McMaster community through involvement in University affairs. Preference will be granted to students who have attained an average Cumulative Grade Point of 7.0. (90982)

THE HAROLD J.L. KRUGEL BURSARY
Established in 2000 by Mrs. J. Beverly Krugel (Class of ’53) in honor 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 Linguistics and Languages. (90933)

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. (90812)

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 1935 to 1951. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. Preference will be given to students enrolled in the Department of Linguistics and Languages. (90620)

THE J. B. McARTHUR BURSARY
Established in 2005 by Joseph B. McArthur, son of J. B. McArthur, a 1905 graduate of McMaster University, who conscientiously served his alma mater for forty two years as President of the McMaster Alumni Association (1911), member of McMaster’s Senate (1911-1931) and member of McMaster’s Board of Governors (1931-1953). To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (91039)
THE KATHLEEN AND DENNIS MCCAULA BURSARIES
Established in 2003 by Kathleen and Dennis McCella, 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. Preference will be given to students who have completed Level II of a program in the Faculty of Humanities who demonstrate financial need. (90907)

THE McMMASTER HISPANIC SOCIETY BURSARIES
Established in 1999 by the McMaster Hispanic Society under the McMaster Student Opportunity Fund Initiative. To be granted to students who demonstrate financial need enrolled in the Faculty of Humanities who have a minimum admission average of 80% and who are from Grey or Bruce Counties. Value: Minimum $1,000. (90970)

THE JAMES C. MOORE MEMORIAL BURSARY
Established in 1998 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. (90966)

THE THERESA M. MOORE BURSARY
Established in 2003 by David M. Moore '00 in honour of his mother, Theresa M. 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 Munro '72 and Sheila Sammon 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 History. (90982)

THE PATTENSON-WILSON BURSARIES
Established in 2003 by the bequest of Laurence T. Wilson and William E. Patterson under the McMaster Student Opportunity Fund II Initiative. To be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90995)

THE DR. HOLLAND AND MRS. ELVIRA PETERSON BURSARY
Established in 1999 by Dr. Holland and Mrs. Elvira Peterson under the McMaster Student Opportunity Fund II Initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in Psychology. (90879)

THE ELVIRA AND HOLLAND PETERSON BURSARY
Established in 2000 by Mrs. Elvira Peterson (Class of '66) and Dr. Holland Peterson. To be granted to a student enrolled in a program in the Faculty of Humanities who demonstrates financial need. Preference will be given to a student enrolled in a program in Psychology. (90810)

THE LILIAN PLUMB BURSARY
Established in 1998 by David Plumb in honour of his mother, Lilian Plumb. To be granted to a student enrolled in a program in English and Cultural Studies 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 demonstrate financial need and are enrolled in a program in Art History. (90868)

THE SMYRNA BURSARY
Established in 1996 by Dr. and Mrs. W. Smyrna. To be granted to students who are Canadian citizens or permanent residents who demonstrate financial need in programs in the Faculty of Humanities above Level I. (90861)

THE DONALD W. THOMAS BURSARIES
Established in 1996 by Donald W. Thomas of Dundas, Ontario. A variable number of bursaries to be granted to students enrolled in the Faculty of Humanities who demonstrate financial need. (90845)

THE DONALD WILLIAM THOMAS MEMORIAL BURSARY
Established in 2005 by Jack Craig in memory of Donald William Thomas (B.A. '70). To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference will be given to students enrolled in a program in the School of the Arts. (91050)

THE GRAHAM RONALD TOOP BURSARIES
Established in 1997 under the McMaster Student Opportunity Fund Initiative. Preference will be given to students who are enrolled in the Faculty of Humanities who demonstrate financial need. (90883)

THE ROBERTA TRAEGER TOOP BURSARY
Established in 1997 by Roberta Gray Traeger under the McMaster Student Opportunity Fund Initiative. To be granted to a student enrolled in the Faculty of Humanities who demonstrates financial need. Preference will be given to students enrolled in a program in the School of the Arts. (90735)

THE TRESSILIA TRUBY MEMORIAL BURSARY
Established in 1992 by the bequest of Tressil Truby (Mc.G.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. (90556)

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 enrolled 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. Preference will be given to students who 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 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 performance 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. (90559)

THE MARY DRYDEN WILLIS BURSARY
Established in 1997, in memory of Mary Willis (Class of '26), her daughter, Mary Lou Dingle and son-in-law Allan (both Class of '56), under the McMaster Student Opportunity Fund Trust Fund Initiative. 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 Enal British Sports Celebrity Dinner, to be awarded to a student with financial need enrolled in a program in Theatre & Fil um 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 students who demonstrate financial need and is enrolled in the Arts and Science program, the Faculty of Social Sciences or the Faculty of Science. Preference given to students who are studying Environmental Studies or Environmental Science. (90810)

THE HELEN AND MORRIS BAUGHMAN BURSARY
Established in 2005 by Marvin Baughman in honour of Helen and Morris Baughman. To be granted to students enrolled in the Faculty of Science who demonstrate financial need. Preference given to students in Level III or IV of a Biology program. (91025)

THE CANADA DIRECT SALES DIVISION BURSARY
Established in 1997 by Canon Canada Inc. - OE Division, and augmented in 2005, in support of its belief that all students should have the opportunity to pursue their educational goals. A variable number of bursaries will be granted annually to McMaster students who demonstrate financial need and are enrolled in an Earth and Environmental Sciences program, the Honours Geography and Environmental Studies program or an Engineering and Society program. (90820)
THE DOUGLAS AND BEVERLY COLEMAN BURSARY
Established in 2005 by Douglas and Beverly Coleman, both of Class of '54. To be granted to students enrolled in the Department of Biochemistry and Biomedical Sciences in the Faculty of Science who demonstrate financial need. (91043)

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 GEORGE AND MARGARET EDRUP BURSARY
Established in 1997 by Sandra Edrup in honour of her parents George and Margaret Edrup 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 Asma Hafez. To be granted to a student enrolled in Level I of the Faculty of Science who demonstrates financial need. (90721)

INTERNATIONAL SCIENCE AND ENGINEERING FAIR 1995 BURSARY
Established in 2005 by the Board of the International Science and Engineering Fair 1995 under the Ontario Trust for Student Support initiative. A variable number of bursaries to be granted to students enrolled in Level I in the Faculties of Science or Engineering who demonstrate financial need. Preference will be given to students who have participated in local science fairs. (91036)

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 1980 by family and friends in honour of Dr. Norman D. Lane, distinguished geometer and member of the Department of Mathematics and Statistics from 1952 to 1987 and now Professor Emeritus. 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 1998. To be granted to two students in their final year of studies who demonstrate financial need. One to an M.S.A. student who has attained a minimum Cumulative Average of at least 9.0 at the most recent review. (90629)

THE JOHN AND HELEN MAXWELL BURSARIES
Established in 1996 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 given to students enrolled in a program in Earth Sciences or Chemistry. (80621)

THE NELD M. McCARTHY BURSARIES
Established in 1987 by the Anne and Neil McCarthy Foundation in memory of Mrs. McCarthy’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 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 60% 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, a former 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 TD BANK FINANCIAL GROUP BURSARIES
Established in 2005 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 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 to be given to a female student enrolled in the Faculty of Science. (90670)

THE SAM AND IRENE WATSON BURSARY FUND
Established in 1997 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 or Science. Preference will be given to students enrolled in the Department of Materials Science and Engineering. (90644)

THE FRIDA AND JOACHIM WOLTER BURSARY
Established in 1997 under the McMaster Student Opportunity Fund initiative by Claus Wolter (Class of ’50) in honour of his parents, Frida and Joachim Wolter. To be granted to a student enrolled in the Kinesthetics 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 I or a program in Anthropology and who demonstrate financial need. Preference will be given to students entering Level II. (90579)

THE FRED AND JEAN ARMER BURSARY
Established in 2006 by Jean Armer in memory of her husband Frederick B. Armer (B.A., ’75) and in support of her belief that all students should be able to pursue their educational goals. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to students enrolled in Level II or Level III of a program in Anthropology. (91044)

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. (90896)

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 Berti, active Stelco employee for 34 years and recognized by the Hamilton Council of Women as Woman of the Year for her charitable community contributions. To be granted to a student who demonstrates financial need and is enrolled in a program in Labour Studies. Preference will be given to undergraduate students registered in the summer term in SOC WORK 3D06. (90506)

THE SIOENY L. BLUM BURSARY
Established in 1989 by friends and associates in memory of Sidney L. Blum. To be granted to one undergraduate and one graduate student enrolled in a program in Social Work who demonstrate financial need. Preference will be given to the undergraduate students registered in the summer term in SOC WORK 3D06. (90506)

THE DR. RICHARD A. BRYMER MEMORIAL BURSARY
Established in 1996, under the McMaster Student Opportunity Fund initiative, by Mrs. Isabella 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. (90645)

THE JODIE ANNE BULL MEMORIAL BURSARIES
Established in 1996 by her family in memory of Jodie Anne Bull. A variable number of bursaries will be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. At least one bursary will 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, and augmented in 2005. 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 Faculty of Social Sciences program, the Honours Geography and Environmental Studies program or an Engineering and Society program. (90820)

THE ELEANOR TURNER CARMEN 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. (90884)

THE CLASS OF ’46 BURSARIES
Established by the YMCA of Hamilton in honour of their 40th class reunion. To be granted to a student in a program in Gerontology. (90821)

THE CREATIVE IMPACT COMMUNICATIONS BURSARY
Established in 2005 by Natalie Munro, Class of ’80 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. (90996)

THE MRS. MARGARET CUDMORE BURSARY
Established in 2005 under the Ontario Trust for Student Support initiative. To be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in an Economics or Political Science program. (91084)

THE BEN F. DESROCHES BURSARIES
Established in 1998 as a tribute to Ben F. Desroches, Stelco employee from 1943 to 1986 and elected Municipal Councillor for Sallifleet and Stoney Creek from 1969 to 1978, in recognition of his outstanding contributions to labour and to men and women in the greater Hamilton area. A variable number of bursaries will 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 DICICCO MEMORIAL BURSARY
Established in 1988 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’s 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 1961-62 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 Holse, founding member of Local Union 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. (90733)

THE JOHN B. ISBISTER BURSARY
Established in 1996 under the McMaster Student Opportunity Fund initiative, by John B. Isbister of Stoney Creek, valued member of the United Steelworkers of America for 39 years and honored 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. (90605)
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, in honour of Dr. James A. Johnson, to recognize his nine years as Dean of Social Sciences and his thirty-five years of dedicated service to the Department of Economics and McMaster University. A variable number of bursaries will be granted to students enrolled in the Faculty of Social Sciences who demonstrate financial need. Preference will be given to students enrolled in the McMaster Student Opportunity Fund initiative. To be granted to a student in Humanities or Social Sciences who demonstrates financial need and involvement in student government. (90619)

THE ANDREW JOHNSTONE MEMORIAL BURSARY
Established in 2002 by colleagues, family and friends in memory of Andrew Johnstone. To be granted to a Level III student enrolled in the Faculty of Social Sciences who demonstrates financial need. Preference will be given to a student in an Economics program. (90972)

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. (90962)

THE KELLY DAWN LAPP MEMORIAL BURSARY
Established in 1997 by family and friends under the McMaster Student Opportunity Fund initiative in memory of Kelly Dawn Lapp who received her B.A. (Hons) in economics in 1997. 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 JOHN A. 'JACK' MACDONALD BURSARIES
Established in 1998 as part of the Hamilton Sesquicentennial Celebrations to honor 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. (90615)

THE EWAN MACINTYRE BURSARIES
Established in 1999 by the Social Work Alumni Branch, 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 Union and local union chairman 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 637 in honour of Enrico Henry Mancinelli, LIUNA Canadian Director and Vice President and Local 637 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 in the most recent review. (90819)

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 Economics program. (90622)

THE GARY JAMES MINNET BURSARY
Established in memory of Gary James Minnett (B.A./B.P.E. '72) by his wife, Barbara, and daughters, Samantha and Erin. To be awarded to a student enrolled in a Kinesiology program who demonstrates financial need. Preference will be given to a student enrolled in Kinesiology from a high school in the Hamilton area. (90866)

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. (90868)

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. (90848)

THE CAROLE AND ALEXANDER NAKKEF BURSARIES
Established in 2000 by Carole Anne Nakoff (Class of '69') and Dr. Alexander Nakoff. A variable number of bursaries to be granted to students enrolled in a Political Science or Environmental Studies program who demonstrate financial need. (90946)

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. (90536)

THE PEVENING BURSARIES
Established in 1996 by David Hannaford (Class of '64). 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 BETH PHINNEY BURSARY
Established in 2003 by Beth Phinney (B.A. '78), and Member of Parliament for Hamilton Mountain for 18 years. To be granted to a student enrolled in the Faculty of Social Sciences who demonstrates financial need. (91038)

THE PHYSICAL EDUCATION CLASS OF 90 25TH ANNIVERSARY BURSARY
Established by the Bachelor of Physical Education Class of '80 in honour of their 25th Anniversary. To be granted to students in Level II or above of a program in Kinesiology who demonstrate financial need. (91040)

THE GEORGE PLUMB MEMORIAL BURSARY
Established in 1996 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. (90836)

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. (90798)

THE WILLIAM F. SCANDLAN BURSARIES
Established in memory of William F. Scandlan, a long-time member of the United Steelworkers of America for 44 years including terms as International Representative (1953) and Area Supervisor (1976 to 1986), Alderman to the City of Hamilton (1964-1976) and Regional Councillor (1973-1976). 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. (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 VERN Simpson BURSARY
Established in 1987 by the McMaster Student Opportunity Fund initiative. Preference will be given to students who have demonstrated financial need. (90886)
STUDENT FINANCIAL AID

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 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 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 EDWIN A. TAYLOR BURSARY
Established in 2005 by Edwin A. Taylor (B.A. '54) and (M.B.A. '63). To be granted to a student in the Faculty of Social Sciences who demonstrates financial need. (91046)

THE HERMANTEN CAT 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. (90972)

THE TRILLIUM NON PROFIT VENTURES FOR YOUTH BURSARIES
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 UNITED STEELWORKERS OF AMERICA BURSARY
Established in 1997 by the United Steelworkers of America. To be granted to students enrolled in any program who demonstrate financial need. Preference will be given to students enrolled in a program in Labour Studies. (91042)

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 LYNN R. WILLIAMS BURSARY
Established in 1987 as a tribute to Lynn R. Williams (Class of '44), International President of the United Steelworkers of America from 1983-1994, in recognition of his outstanding contributions to labour and labour studies. 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. (90793)

THE ZONTA CLUB OF HAMILTON I BURSARIES
Established in 1956 by the Zonta Club of Hamilton in support of the McMaster Student Opportunity Fund I 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. Gilmore Memorial Scholarship
- The Dundas Scholarships
- The Gary Lautens Memorial Scholarship
- The Somerville Scholarships

TRAVEL BURSARY PROGRAM

Travel bursaries assist students taking McMaster courses that include a placement 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 summer placement 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. (90963)

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. Students should contact the Department of Religious Studies. (90818)

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 BEAULIEU-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 Harold 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 social and scientific implications of scientific developments. (90977)

THE CHAN YIN 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. (90882)
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 a formal McMaster Exchange Program. (90656)

THE LVIV POLYTECHNIC STATE UNIVERSITY EXCHANGE PROGRAM BURSARIES
Established in 2010 by the Hamilton Ukrainian Community. To be granted to students who have demonstrated financial need and are attending Mcmaster as participants in the Lviv Polytechnic State University Exchange Program. (90954)

THE MCLAY BURSARY
Established in 1997 by David and Jean McLay 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. (90767)

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 1998 by family and friends in memory of Dr. Randolph E. Ross, who was a dedicated and cherished faculty member for over 25 years at McMaster University. 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. (90864)

THE JAMES MASON YOUNG BURSARY
Established in 1996 by James Mason Young in honour of his family's long-standing 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)

INDEX OF BURSARIES

Legend
- AS: Arts & Science
- EX: Exchange
- HS: Health Sciences
- AT: Athletics
- H: Humanities
- R: Regional
- CS: Community Service
- S: Science
- Social Sciences
- D: Disabilities
- SS: Social Sciences
- E: Engineering
- T: Travel
- U: University-wide

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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 or second year's 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.

These awards have no monetary benefit but a notation will appear on the student's transcript. The recipient of these awards will 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 Student Financial Aid Office, by April 15.

THE ATKINSON CHARITABLE FOUNDATION
Established in 1997 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)

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)

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 in an inter-university women's team and has demonstrated leadership and fair play. (80025)

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 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 DAMIAN MIGUEL HEADLEY AWARD
Established in 1997 by family and friends in memory of Damian Miguel Headley (Class of ’89). 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. (80060)

THE RUDY HEINZL AWARD
Established in 1996 by family, friends and colleagues upon the retirement of Rudy Heinzl as Dean of Student Affairs, in recognition of 32 years of dedicated service to students and to the McMaster University community. 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)

THE STUART AND MARJORIE IVISON AWARDS
Established in 1997 by Donald Ivison (Class of ’55) and Betty Ivison (Class of ’52) in honour of their parents Stuart and Marjorie Ivison (Class of ’28 (Arts)). A variable number of awards to be granted to students enrolled in a program in the Department of English and Cultural Studies who demonstrate a lively interest in English/Cultural Studies, involvement in extra-curricular activities and service to the University or community-at-large. (80061)

THE JAMES A. JOHNSON COMMUNITY CONTRIBUTION AWARD
Established in 1997 by the McMaster Social Sciences Society Executive Committee in recognition of 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 in the Faculty of Social Sciences, has provided outstanding service to McMaster University or the community-at-large. Preference will be given to students whose service has been recognized within the Faculty of Social Sciences at McMaster University. (80032)

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)

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. Preference to be given to students whose service has been recognized within the Faculty of Social 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)

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 I or higher who exhibit leadership and dedication to sport and prove to be an overall asset to their team(s). (80033)

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)

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.J., F.R.C.N., M.P., S.H.) to stimulate interest in professional nursing affairs through participation in meetings, conferences, professional 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)

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)

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. (80005)

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. (80049)
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. To be awarded to a student enrolled in any program who demonstrates commendable service to the community-at-large. Preference will be given to a student enrolled in an Environmental Science Program. (80044)

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 outstanding service to the community-at-large. Preference will be given to a student enrolled in the Biology program. (80050)

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 awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. Preference will be given to a student from the Burlington area. (80041)

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. Preference will be given to a student enrolled in the Faculty of Engineering. (80042)

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 demonstrates outstanding service to the community-at-large. Preference will be given to students entering Level III or IV. (80030)

THE MEENA AND NARESH SINHA AWARD
Established in 1996 by Meena and Nares Sinha. To be awarded to a student enrolled in the Faculty of Engineering who demonstrates superior leadership or innovative skills through participation in the Faculty of Engineering. (80031)

THE LORNA AND DAVID SOMERS AWARD
Established in 1997 by Lorna Somers (Class of '81) and David Somers. To be awarded to a student enrolled in any program who demonstrates superior leadership or innovative skills through participation in extra-curricular activities. Preference will be given to a student enrolled in the Faculty of Engineering. (80032)

THE ADAM SUDAR AWARD
Established by the Rotary Club of Burlington Central in keeping with Adam Sudar's memory. To be awarded to a student enrolled in any program who demonstrates outstanding service to the community-at-large. Preference will be given to a student enrolled in the Faculty of Engineering. (80033)

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 a selection committee, have demonstrated superior leadership or innovative skills through participation in either university or community activities. (80029)

THE TTK INC. AWARDS
Established in 1997 by TTK Inc. in recognition of the contributions of McMaster students. To be awarded to students enrolled in the Faculty of Engineering who demonstrate outstanding service and commit to participation in extra-curricular activities. (80045)

THE ROGER TROLL AWARD
Established in 1997 by friends and colleagues in recognition of Roger Trol's ten years of service and commitment to the McMaster University community in general. The award will be granted annually to a student who demonstrates outstanding service and superior leadership in extra-curricular activities in the McMaster community. (80046)

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. Preference will be given to a student enrolled in the Faculty of Engineering. (80047)

THE ALLAN AND JOY WILLIAMS AWARD
Established in 1996 by Mary Williams (Class of '82) and Ellen 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 and Cultural Studies, has made a notable contribution to campus and community life and demonstrates a lively interest in English studies. (80019)

THE WESCAST INDUSTRIES CONTINUOUS LEARNING AWARD
Established in 1997 by Wescast Industries Inc. in recognition of the contributions of McMaster students. To be awarded to a student enrolled in the Faculty of Engineering who displays superior leadership or innovative skills. Preference will be given to a student enrolled in the Faculty of Engineering. (80048)

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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 a selection committee, have demonstrated superior leadership or innovative skills through participation in either university or community activities. (80029)
UNDERGRADUATE ACADEMIC AWARDS

WEB ADDRESS: http://sfas.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 Continuation Students, Cumulative Average (CA), Level, Post-Degree Students, In-course 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. Graduand 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. Reviewing Period for scholarship purposes, normally refers to work completed during the Fall/Winter session. Please refer to 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. 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 non-monetary 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 (major) award greater than or equal to the value of a Senate Scholarship ($500 in 2005-2006) and one (minor) award of less than the value of a Senate Scholarship; or two awards of less than the value of a Senate Scholarship; and
   e) an academic grant.

When a student is named the winner of an award but may not receive 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 the terms of the award, at McMaster University in the next Fall/Winter session after the award was earned and will be credited to the student's University account.

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 University account are not refundable in cash if there is an outstanding balance.

6. Students wishing to defer the benefits of an award to a later session (other than an award for entering students) should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic, and deferments 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 such courses should apply to the Office of Student Financial Aid & Scholarships. Approval of applications is not automatic.

8. The University reserves the right not to grant an award in the absence of a suitable candidate, and to limit the number of awards where there are too few suitable candidates. The University also 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 by the Awards Officer in Gilmour Hall, Room 120.

10. The particular terms for University Academic Awards are listed in AWARDS FOR ENTERING STUDENTS, AWARDS FOR IN-COURSE, GRADUAND, PART-TIME AND SECOND DEGREE STUDENTS and ACADEMIC GRANTS.

CATEGORIES OF AWARDS

1. Awards for Entering Students (page 349)
2. Awards for In-Course, Graduand, Part-time and Second Degree Students (page 350)
3. Academic Grants (page 370)

LISTING OF AWARDS AND ACADEMIC GRANTS BY FACULTY (page 370)
To find awards offered to students in a specific Faculty or program

INDEX OF AWARDS, ACADEMIC GRANTS AND COMMUNITY CONTRIBUTION AWARDS (page 378)
To find a specific award, use the Index of Awards.
CONDITIONS FOR AWARD CATEGORIES

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 after graduation from secondary school will not be considered for an entrance award.

3. Canadian citizens and permanent residents are eligible for any entrance award regardless of where they complete their secondary school education.

4. Students completing the final year of secondary school in Canada are also eligible. International students studying outside Canada are not eligible for entrance awards administered by the Office of Student Financial Aid & Scholarships.

5. To be considered for an entrance award, students must obtain at least an average of 80% or equivalent 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 education.

6. Final admission for entrance awards is calculated using the prerequisites for program of study plus the next best Grade 12 U or M courses to a total of six final grades.

7. Registration in, or transfer to, another program of study at any time may result in forfeiture, or adjustment in the value, 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 award.

9. Recipients may retain an entrance award which provides for awards beyond Level II while registered in a first baccalaureate degree program and until graduation or for four years, whichever is less. To receive the next installment of an award, students must complete 24 units in the Fall/Winter session. Each Faculty at the University maintains a Sessional Average of at least 9.5, obtain no failures and register as a full-time student in the subsequent Fall/Winter session.

10. Co-op/Internship students are eligible to retain their entrance scholarship provided they meet the minimum course load requirement for their program of study as defined in the Undergraduate Calendar, but funding will be deferred until they return to full-time study.

11. Once an entrance award is lost, it will not be reinstated.

12. In addition to meeting the General Conditions, entrance award recipients will maintain their scholarship while they are registered as a full-time student in their first baccalaureate degree program.

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 part-time first baccalaureate degree students who 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. Recipients may retain their entrance award which provides for awards which are based on competition across the University or within a Faculty or program.

3. These awards are based on competition across the University or within a Faculty or program.

4. These awards, which are granted in June or November, are provided exclusively for full-time, first baccalaureate degree students who 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.

5. Co-op/Internship students are eligible for full-time awards provided they meet the minimum course load requirement for their program of study as defined in the Calendar.

6. Students who participate in a formal exchange program are eligible for full-time, in-course awards on the basis of 15 units completed in one term at McMaster. In order to be considered, students should identify themselves to their Faculty by October 15 when they return to full-time study the following Fall/Winter session. Students on exchange for the full year may not be eligible.

Awards for Graduating Students (E)

The following 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 graduating 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 to be reviewed. Normally, these awards will be granted to In-Course students. A number of awards under this category are also listed under Category F for Second Degree Students.

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.

Awards for Second Baccalaureate Degree Students (F)

The following awards are granted 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 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). Students must have completed a minimum of 18 units to be reviewed. Normally, these awards will be granted to In-Course students. A number of awards under this category are also listed under Category G for Second Degree Students.

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.
Academic Grants for Full-Time, In-Course Students (G)
The following awards are granted based on competition within a Faculty or program.
1. Academic Grants are provided exclusively for students registered full-time in a baccalaureate degree program at McMaster University. Students must be taking 24 units or more, with a Sessional Average of 9.5 or greater, and no failures.
2. The grants will be given to the student with a high Sessional Average and demonstrated financial need. The greater financial need will be used to break any tie.
3. The grants are given in August based on the previous Fall/Winter Sessional Average for students continuing as full-time students and who have completed Grade 12 in the previous Fall/Winter session.
4. A student may receive only one academic grant per Fall/Winter session and will remain eligible for McMaster bursaries and scholarships.

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 per year
* The President’s Award is renewable at the same value provided that students remain full-time (24 units or greater) and achieve a Sessional Average of 9.5 (approximately 80%), with no failures in each year of University study. Awards may be held until graduation or for four years, whichever is less.

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 per year
- 85 - 89.99% $1,000 per year
- 80 - 84.99% $750 per year
* The Honour Awards are renewable at the same value provided that students remain full-time (24 units or greater) and achieve a Sessional Average of 9.5 (approximately 80%), with no failures in each year of University study. Awards may be held until graduation or for four years, whichever is less.

McMaster’s Awards for Entering Students are supported by the following:

The Asa Briggs Scholarships
Established in 1983 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 1991 by the A.H. Atkinson Education Fund. To be awarded to a student entering the Faculty of Engineering. (20141)
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-I program. (20116)
The Class of 1956 50th Anniversary Entrance Scholarships
Established in 2006 by the Class of 1956 in honour of its 50th anniversary. Two scholarships to be awarded to students entering any Level-I program. (20166)
The Coca-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. Currey Scholarship
Established in 1941 by bequest of Helen Maud Currey of Drumbro, Ontario. To be awarded every four years; the 15th award was made in 2000. (20146)
The De Villiers - Mahaffy Merit Awards
Established in 1941 by bequest of Nina De Villiers and Leslie Mahaffy of Burlington, by contributions from the local community and the employees of several area companies including Sears Canada, Boehringer Ingelheim, Smithkline Beecham, Monsanto and the Royal Bank. Two scholarships to be awarded to outstanding students graduating from a secondary school in the Hamilton area who plan to enter a full-time program of study; and (b) one to a student entering full-time study in Science I or Music I. Preference will be given to women students. (20130)

The Dundas Scholarships
Established in 1964 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 an additional award 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 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 her. 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. (20131)
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 1965 by bequest of Nellie P. Hogg of Hamilton. One scholarship to be awarded to a woman 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. Kaafe Merit Award
Established in 1988 in memory of Cathryn E. Kaafe (Class of ‘78) by family and friends. (20136)
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. (20126)
The Lloyd Memorial Scholarship
Established in 1996 in memory of Henry Hoyes and Lizzie Lloyd by their children. Grade 12 U or M subjects to be included are: Physics, Chemistry, two credits of Mathematics, and either Biology or a third credit of Mathematics. (20162)
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 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 subjects to be included are French and either German or Spanish. (20155)
The Isabella Campbell McNeely Scholarship
Established in 1915 and augmented in 1926. Grade 12 U or M subjects to be included are three credits of Mathematics and Physics. (20156)
The Moulton 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 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. (20130)

THE LILLIAN AND LEROY PAGE SCHOLARSHIP
Established in 1982 by donation of the Lillian and Leroey 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. (20126)

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. (20158)

THE D.E. THOMSON SCHOLARSHIP
Established in 1909 and augmented in 1915. Grade 12 U or M subjects to be included are English and either Latin or French. (20159)

THE TYNOWSKI SCHOLARSHIP
Established in 1969 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 WALLINGFORD HALL ENTRANCE SCHOLARSHIP
Established in 1993. To be awarded to a student entering a full-time program of study. (20135)

THE WHEELEER SCHOLARSHIP
Established in 1915. Grade 12 U or M subjects to be included are: History, English and a language other than English. (20161)

Music Awards
The Music awards are for one year.

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 (20099 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 THOROLFSON MEMORIAL SCHOLARSHIPS
Established in 1976 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 NORTEL NETWORKS ENTRANCE SCHOLARSHIPS
Established in 1999 by Nortel Networks. A variable number of scholarships to be awarded to students entering the Faculty of Engineering. Students must remain registered in the Faculty of Engineering to retain the second installment.
Value: $6,000 each ($3,000/yr) (20120 878)

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, one to a female student and one to a male student, 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 Sessional 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
The following awards are provided exclusively for international students qualifying for admission to Level I of a first baccalaureate degree program and are administered by the Office of International Affairs (Gilmour Hall, Room 307).

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 Joe Ng Engineering Limited in memory of Joe Ng’s father Ng Man-Chung.

THE WOO FAMILY INTERNATIONAL ENTRANCE SCHOLARSHIPS
Established in 1999 by Mr. Chuang How Woon in honour of his late wife, Mrs. Ching Yung Chiu-Woo, mother and mother-in-law of four McMaster graduates.

AWARDS FOR IN-COURSE, GRADUAND, PART-TIME AND SECOND DEGREE STUDENTS

No application is required for any award unless noted in the listing of Awards and Academic Grants by Faculty.

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 (30248 800)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE ACHIEVEMENT AWARDS OF EXCELLENCE
Established in 1998. 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 ACI (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 an 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. One scholarship to be awarded to a student entering a Level II or III program in Chemical Engineering, Materials Science and Engineering and/or Mechanical Engineering who, in the judgment of the Faculty of Engineering, has demonstrated outstanding academic achievement. The recipient must attain a minimum Sessional Average of 8.5 at the most recent Fall/Winter session.
Value: $1,500 (30028)

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 1939 and augmented in 1948 by Sir Douglas Alexander, and members of his family, in memory of Archibald Greg Alexander. A variable number of scholarships to be awarded to students who have completed Level I and an additional 30 - 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.

THE W.K. ALLAN MEMORIAL SCHOLARSHIP
Established in 1994 in memory of William Keillock 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 attains the highest Cumulative Average.
Value: $1,100 (30221 355)

THE CAMERON D. ALLEN BOOK PRIZE
Established in 1978 in memory of Cameron D. Allen. 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 of Geography and Earth Sciences, shows outstanding achievement in studies in a fourth year climatology course. Preference will be given to a graduating student.
Value: $550 for books (40115)

THE ALUMNI ASSOCIATION SCHOLARSHIP
Established in 1974 by the McMaster University Alumni Association and later augmented by bequest of Harold E. Amy. One scholarship to be awarded to a part-time student who has attained the highest Cumulative Average at the most recent review.
Value: $375 (50002 005)

THE ALUMNI CANADIAN GEOGRAPHY PRIZE
Established in 1985 by the Geography Branch of the McMaster University Alumni Association in recognition of Dr. Lloyd G. Reeds for his contribution to teaching during more than 35 years of service. To be awarded to the student who attains the highest grade in GEO 2H2G (Canada).
Value: $300 (40115)

THE AMBASSADOR OF SPAIN BOOK PRIZE
Established in 1982. To be awarded to a graduating student in a program in the Department of Linguistics and Languages who, in the judgment of the Department, has achieved notable proficiency in Spanish.
Value: Book (50002 005)

THE E.H. AMBROSE GOLD MEDAL
Established in 1971 by Clarkson Gordon in memory of their former Hamilton partner, E.H. Ambrose, member of the University’s Board of Governors from 1957 to 1967 and its Chair, 1965 to 1967, and augmented by Mrs. E.H. Ambrose in 1987. To be awarded to the student in the graduating class of a program in Commerce who, on the basis of scholarship and leadership, is judged to be the outstanding student of the class.
Value: $1,000 and a medal (40088 847)

THE ANATOMY PRIZE
Established in 1982. To be awarded every other year to a student who has completed Level III Sessional Average and who, in the judgment of the Education Program in Anatomy, has demonstrated excellence in Anatomy.
Value: $1,000 and a medal (40088 847)

THE ANTHROPOLOGY PRIZE
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.
Value: $100 (50004)

THE HERBERT S. ARMSTRONG MEMORIAL FUND
Established in 1982 to a student who has completed at least 50 units beyond Level I who, in the judgment of the School of Geography and Earth Sciences, has achieved notable academic standing and who has made a significant contribution to university life through extra-curricular activities.
Value: $375 for books (30234 558)

THE ARTS AND SCIENCE EXPERIENTIAL LEARNING TRAVEL GRANT
Established in 2002 by Arts and Science alumni. To be awarded to a student who has completed at least Level II as the level II of the Honours Arts and Science Program, is currently registered in an Arts and Science Experience Learning course, and who, in the judgment of the Arts and Science Program, has achieved notable academic standing.
Value: $1,000 (30290)

THE ARTS AND SCIENCE PROGRAM BOOK AWARD
Established in 1995. To be awarded from time to time to an Arts and Science student who, in the judgment of the Arts and Science Programs Committee, has demonstrated outstanding academic achievement in both arts and science.
Value: $75 (40078 390)

THE EDGAR R. ASHALL SCHOLARSHIP
Established in 1965 by bequest of his wife, Edith M. Ashall.
Value: $200 for books (30162)

THE ASM INTERNATIONAL (ONTARIO CHAPTER) SCHOLARSHIP
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 an additional 30 - 85 units of the Honours Materials Science or Materials Engineering program and who attain the highest Sessional Average (at least 9.5).
Value: $1,000 each (30003 003)

THE A.H. ATKINSON PRIZE
Established in 1980 by Atkinson Engineering Consultants Limited. To be awarded to the student in a Civil Engineering program who achieves the highest average in CIV ENG 3G03 and 3J04, taken in one session.
Value: $200 (30001 342)

THE ATOMIC ENERGY OF CANADA LIMITED SCHOLARSHIPS
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.
Value: $2,500 each (30276 1544)

THE AUDCOMP COMPUTER SYSTEMS SCHOLARSHIPS
Established in 2005 by Audcomp computer Systems to support the dreams and aspirations of students attending university. To be awarded to a student who has completed Level II or above and who has attained the highest Sessional Average.
Value: $2,000 each (30308)

THE MACBOOL AZIZ MEMORIAL SCHOLARSHIP
Established in 2001 by family, friends and colleagues in memory of Macbool Aziz, Professor of English from 1969 to 2000. To be awarded to a student in an English program who attains the highest grade in ENGLISH 2006 (Modern British Literature).
Value: $425 (40105 1513)

THE LAURA BALDWIN SCHOLARSHIP
Established in 2005 from the bequest of Laura Baldwin. To be awarded to a student registered in a program in English who, in the judgment of the Department of English and Cultural Studies, has submitted an original literary work or poem that demonstrates the highest degree of literary excellence.
Value: $500 (30313)

THE CHARLES MURRAY BALL SCHOLARSHIPS IN EARTH SCIENCES
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 a 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. Ordinarily, not more than one scholarship will be awarded to any one program.
Value: $2,300 each (30182)

THE BANK OF MONTREAL HUMANITIES MULTIMEDIA SCHOLARSHIPS
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, demonstrate outstanding academic achievement in the Humanities Multimedia program or great promise in the area of Humanities multimedia.
Value: $1,000 each (30293)

THE J. DOUGLAS BANKIER MEMORIAL SCHOLARSHIP
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 3D35.
Value: $375 (30075)
THE WILLIAM AND LIDA BARNES MEMORIAL PRIZE IN HISTORY
Established in 1958 by their son, William L. Barnes, of Morgantown, West Virginia. To be awarded to the graduating student who, in the judgment of the Department of History, has attained notable standing in an Honours History program.
Value: $150 (50050)

THE SCOTT BARTLETT MEMORIAL PRIZE
Established in 1985 in memory of Scott N. Bartlett by his family and friends. To be awarded to a student who has completed an Honours Commerce Program and who has, in the judgment of the Faculty of Business, has achieved high standing in COMMERC 3F3A and 3FB3, taken in one session.
Value: $200 (30134 012)

THE BASU MEDAL
Established in 1984 in memory of Professor Sanjoy Basu by his family and colleagues and accounting organizations. To be awarded to the graduating student who, in the judgment of the Department of Commerce, has demonstrated outstanding achievement in accounting and has attained an average of at least 70 in any four of COMMERC 4A3A, 4A3C, 4A3D, 4A3E, 4A3F.
Value: $1,000 and a medal (50006 013)

THE M. BANKER BATES SCHOLARSHIP
Established in 1975 by Dr. M. Banker Bates and augmented in 1978 by his friends, colleagues and accounting organizations. To be awarded to the student who has completed Level I and an additional 60 - 75 units of a program in Commerce and who attains the highest Sessional Average.
Value: $1,400 (30102 257)

THE MARION BATES BOOK PRIZE
Established in 1967, Centennial Year, by the Alumni members of the McMaster-Alumni Association in honour of Marion Bates, Dean of Women from 1935 to 1953. To be awarded to the 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: $150 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 GERONTOLOGY INTERNSHIP AWARD
Established in 2001 by Barbara and Ronald Bayne to provide practical learning 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 Department of Health, Aging and Society, has indicated a clear interest in a career in Gerontology.
Value: $450 (40106 1571)

Note: Application required (500 word essay outlining internship plans).
To be submitted to the Chair of the Department of Health, Aging and Society 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 have demonstrated high academic standing and are participating in one of McMaster's formal exchange programs. Preference will be given to students enrolled in a program in Biochemistry, Biology, Chemistry, Commerce, Commerce Studies and Critical Theory, Earth and Environmental Sciences, Engineering Physics, English, French, Geography, History, Materials Science, Mathematics, Modern Languages, 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 1950 by Beauty Counselors of Canada Limited. To be awarded to the student graduating with the highest Sessional Average and who is entering Level II of the Honours Bioclinics, or Honours Chemistry program.
Value: $350 (30008 014)

THE BENNELL SCHOLARSHIPS
Established in 2001 by Dr. C. Howard Benfell (Class of '37) and Dr. Shirley F. Bentall (Class of '46). A variable number of scholarships to be awarded to students in any Faculty who demonstrate outstanding academic achievement.
Value: $1,500 each (30281 1547)

THE LOUISE E. BETTGER SCHOLARSHIPS IN MUSIC
Established in 1982 in memory of Louise E. Bettger of New Hamburg, Ontario, by her nieces and nephews. 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 an additional 30 - 75 units; and (c) one to a student who has completed Music I and who has demonstrated overall musical excellence.

Value: $1500 each (30235 559)

THE J.P. BICKEL FOUNDATION MINING SCHOLARSHIP
Established in 2002 by the J.P. Bickel 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 who have completed Level II of an Honours Earth and Environmental Sciences, Honours Geology (Geosciences) B.Sc. Honours program.
Value: $500 minimum (30281 259)

THE BINKLEY MEDAL
Established in 2000 by the University, friends and colleagues of Margaret Beale (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 (50005 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 BIOL 1A03 or the highest passing in BIOL 1A03.
Value: $150 each (50000 017)

THE ABE BLACK MEMORIAL PRIZE
Established in 1982 by friends and colleagues of Dr. A. H. Black in memory of a distinguished member of the Department of Psychology, Neuroscience and Behaviour from 1958 to 1978. To be awarded to the student who, in the judgment of the Department of Psychology, Neuroscience and Behaviour, has demonstrated outstanding achievement in PSYCH 4006 (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, Neuroscience and Behaviour from 1958 to 1978. Three prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours Science program on completion of Level I and an additional 60 - 75 units; (b) one to a 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 1999 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: $95 for books (50096)

THE BRIAN BLAKEY MEMORIAL SCHOLARSHIP
Established in 1979 in memory of Dr. Brian Blakey, Professor of French, by his friends, colleagues, and former students, on behalf of his wife, Dorothy. To be awarded to the student who attains the highest Sessional Average on completion of Level I and an additional 60 - 75 units of an Honours program in Classics, Cultural Studies and Critical Theory, Theatre & Film Studies, English, French or Linguistics and Languages. Students in all programs except Theatre & Film Studies must have achieved a B- in both LANGUAGES 1A03 and 1A3A.
Value: $500 (30013 0 6)

THE HILDA DOROTHY BORMAN SCHOLARSHIP
Established in 1936 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 students in any Honours program in Music who, in the judgment of the School of the Arts, have demonstrated excellence in Music.
Value: $1600 each (30235 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 an additional 30 - 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 (30004)

THE JOSEPH TAYLOR BRIEN SCHOLARSHIP
Established in 1926 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)

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 an additional 29 - 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 ($600 each year) (30051 019)

THE TEN BROEKE-BENSEN MEMORIAL SCHOLARSHIP
Established in 1950 in memory of Dr. James Ten Broeke and Dr. Roy C. Bensen, former Heads of the Department of Philosophy and Psychology. To be awarded to a student who has completed Level I and an additional 30 - 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 (30116)

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 CEE SCHOLARSHIPS IN COMPUTING AND SOFTWARE ENGINEERING
Established in 2001 by CAE 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 (30282 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 2P3A and 2PB3, 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 1998 by William F. Campbell of Ottawa, Ontario in memory of his wife Betty Taylor Campbell, a 1937 McMaster graduate, an Olympic medallist in 1936 and 1990 inductee into the Athletics Hall of Fame. To be awarded to a student who has completed Level I in a program in Kinesiology and Sport Science, in 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)

THE ELLA HALSETH CAMPBELL SCHOLARSHIP
Established in 1976 by Mrs. Verns Caskey and Miss June Caskey in memory of Ella Halseth Campbell and augmented by Mrs. Edna M. Miller in 1978. 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 1992 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 (30062 102)

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 an additional 60 - 85 units of a program in Engineering with the highest Cumulative Average. Value: $300 (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 any Level I program for the most creative essay in a Level I English course. Value: $200 (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 year of any program. Value: $1,500 (30150 373)

THE CANADIAN INSTITUTE OF 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 an additional 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 (40011 349)

THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION (CISC) AWARD
Established in 2005 by The Canadian Institute of Steel Construction (CISC). To be awarded to a student who attains high standing in CIV ENG 3P03 and who, in the judgment of the Department of Civil Engineering, has an interest in steel structure research. Value: $2,000 (40116)

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING PRIZE
Established in 1947 by the Chemical Institute of Canada. To be awarded to the student who is entering his/her final year of study of a program in Chemical Engineering and who attained the highest Sessional Average. Value: $50, medal and certificate (30016 027)

THE CANADIAN SOCIETY FOR CHEMICAL ENGINEERING (CSCHE) SCHOLARSHIP
Established in 2004 by the organizing committee of the 2003 CSChE Annual Meeting. To be awarded to a student entering Level II of a program in the Department of Chemical Engineering who has attained the highest academic standing in Level I. Value: $500 (30307)

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: (a) one to a student in an Honours program in Chemistry or Honours Applied Chemistry who attained high standing in Chemistry; (b) one to a student in the Honours Biochemistry or Honours Biochemistry and Chemistry programs who attained high standing in biochemistry and organic chemistry. Value: Medal and certificate (30017 028)

THE CANADIAN SOCIETY OF CIVIL ENGINEERS (HAMILTON SECTION) PRIZE
Established in 1987. 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 (30018 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 of 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 R. 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 1984 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 HISTORY 2K03 and 2J03 (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 an additional 30 - 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 (30013 011)

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 2A03, 3A03, 4AC3 and 4A43.
Value: $150 (30004 013)

THE CLARA 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 (30283 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 an additional 29 - 36 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 (30004 035)

THE CITIZEN ACTION GROUP PRIZE*
Established in 1984 by the Citizen Action Group, Hamilton, to honour Professor Harry L. Perry, 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 an additional 30 - 45 units, and two to students who have completed Level I and an additional 60 - 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 of moving to Hamilton. To be awarded to the student who has completed Level I and an additional 60 - 75 units of an Honours program in Social Sciences and has demonstrated leadership at McMaster.
Value: $1,950 (30065 239)

THE CLASS OF ’37 TRAVEL SCHOLARSHIP IN ARTS AND SCIENCE
Established in 1989 by the Graduating Class of 1937 in celebration of their fiftieth anniversary and augmented by friends of the Arts and Science Program. To be awarded to a student who has completed Level I and an additional 30 - 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 1953 50TH ANNIVERSARY SCHOLARSHIP
Established in celebration of the Class of ’43 in celebration of their 50th anniversary. To be awarded to the student who has completed Level I and at least an additional 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: $950 (30214 329)

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: $1,500 (30224 361)

THE CLASS OF ’50 SCHOLARSHIP IN HONOURS ECONOMICS
Established in 1962 by members of the Class of 1950 who graduated in 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 Faculty 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 (50091 1557)

THE CLASSICS PRIZE
Established in 1978 by Professor D.M. Shepherd. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Classics and who, in the judgment of the Department, 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 (50013)
THE COMPARATIVE LITERATURE PRIZE
Established in 1988. 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: $250 (40008)

THE CONSUL GENERAL OF ITALY BOOK PRIZE IN ITALIAN
Established in 2003 by the Istituto Italiano di Cultura as Cultural programs in the Department of Linguistics and Languages 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 1980 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 Linguistics and Languages, has achieved notable standing in Italian. Value: $125 (40004)

THE CRANSTON PRIZES
Established in 1998 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 D.M. DAVIES PRIZE
Established in 1984 by friends, colleagues and former students in recognition of Professor Douglas Davies for his outstanding contribution to the Department of Biology during 34 years of service. To be awarded to a student who has completed Level I and at least an additional 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-animal biology, taken in one session. Value: $575 (40099 047)

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 an additional 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-animal biology, taken in one session. Value: $575 (40099 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 an additional 60 - 80 units of Electrical and Computer Engineering program and who elects to do a fourth 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 an additional 60 - 75 units of the Honours Commerce program who, in the judgment of the Faculty 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 (40087 047)

THE DeGRoote SCHOOL OF BUSINESS ALUMNI UNDERGRADUATE SCHOLARSHIP
Established in 2004 through the generosity of the DeGroote School of Business alumni and friends. To be awarded to a student who has completed Level I in the Faculty of Business who, in the judgment of the Faculty of Business, has achieved academic excellence in COMMERCE 1E03, ECON 1B03 and 1B93, and has demonstrated leadership ability through school activities, work and/or community involvement. Value: $600 (30089)

THE DELOTTIE & TOUCHE SCHOLARSHIP
Established in 2000 by Deloitte & Touche. A variable number of scholarships to be awarded to students who have completed Level I and an additional 60 - 75 units of the Honours Commerce program who, in the judgment of the Faculty of Business, has achieved notable academic standing in COMMERCE 3A03 and 3AC3 (taken in one session), and have demonstrated qualities of leadership at McMaster University or in the community. Value: $1,600 each (30288 057)

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 grade in ENGLISH 2G06 or 2I06. Value: $103 for books (40005 348)

THE MARGERY E. DIXON MEMORIAL SCHOLARSHIP
Established in 2003 in loving memory of Margery E. Dixon (Class of '35) by Geraldine Phoenix. 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 (30031)

THE LAURA DODDSON PRIZE
Established in 1985 by Laura Doddson (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 (50031 049)

THE ROSEMARY DOUGLAS-MERCER MEMORIAL PRIZE
Established in 1989. To be awarded to a student who has completed Level I and an additional 50 - 75 units of an Honours program in French who, in the judgment of the Department of French, has attained the highest average in French 2J03 or 2J43 and one of French 2W03 or 2W33. Value: $175 (30124)

THE DUBBECK BIOCHEMISTRY AWARD
Established in 2004 by Dr. Michael Dubeck (B.S.CH. '51 and M.Sc. '52). To be awarded to a student who has completed Level I and an additional 58 - 75 units of an Honours program in Biochemistry who, in the judgment of the Department of Biochemistry and Biomedical Sciences, has achieved notable academic standing and has an interest in pursuing an academic career in basic biochemical research. Value: $1,000 (30069)

THE DUBBECK CHEMISTRY AWARD
Established in 2004 by Dr. Michael Dubeck (B.S.C.H. '51 and M.Sc. '52). To be awarded to a student who has completed Level I and an additional 58 - 75 units of an Honours program in Chemistry who, in the judgment of the Department of Chemistry, has achieved notable academic standing and has an interest in pursuing an academic career in basic chemical research. Value: $1,000 (30064)

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 '59), LL.D (Class of '55) 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 an additional 60 - 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 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 (30158)

THE CLARA I. ELMAN SCHOLARSHIPS
Established in 2002 by Clara I. Graham Elman (Class of '46), faculty member of the School of Nursing from 1949 to 1953. 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: $1,600 each (30289)
THE HELEN EMMY SCHOLARSHIPS IN ENVIRONMENTAL SCIENCE
Established in 1990 by Miss Helen Emmony of Barrie, Ontario. Two scholarships are 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 9.0 or greater.
Value: $1,650 each (30184 360)

THE MURRAY AND ELEANOR ENKIN MIDWIFERY AWARD
Established in 2005 by Mr. Murray Enkin and his wife, Eleanor Enkin to reflect their belief in the importance of midwifery within Canadian maternity care. One scholarship is to be awarded to a graduating student in the Midwifery program who, in the judgment of the Midwifery program, exemplifies superior achievement in the humanitarian, professional and academic domains of midwifery practice.
Value: $5000 (50098)

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 GABRIELLE ERASMI TRAVEL SCHOLARSHIP TO ITALY
Established in 2003 by the Dante Alighieri Society of Hamilton, the Department of Languages, the Julian-Dalmatian Centre, McMaster University and friends, in honour of Dr. Gabrielle Erasmi, distinguished Faculty member of the Department of Linguistics and Languages. 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 Linguistics and Languages.
Value: $3000 (300289)
Travel Scholarship applications are due February 15th.

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 in 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 part-time student who has completed at least 30 units beyond Level I of an Honours program with notable standing and has demonstrated a scholarly interest in some aspect of Asian languages, history or cultures, with preference being given to a student wishing to study in China.
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 1SS3 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 1SS3.
Value: $500 (40091 270)

THE FEDERATION OF CHINESE CANADIAN PROFESSIONALS EDUCATION FOUNDATION SCHOLARSHIPS
Established in 1988 by the Foundation. Two scholarships are to be awarded: (a) one to a student in a program in Arts and Sciences, 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 is 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 (30089 168)

THE NEIL FORSYTH PRIZE
Established in 1992 by The Steel Founders' Society of America in honour of Neil Forsyth, president of the organization in 1989 and 1990. To be awarded to the student who attains the highest grade in MET 3E04.
Value: $120 (40067 121)

THE BARBARA FRANCIS GAGE SCHOLARSHIP
Established in 1985 by students in the Arts and Science Program, on the occasion of Professor R. Louis Gentilcore's retirement. Two scholarships to be awarded to a student in an Honours program in Earth Sciences and (b) one, on a rotating basis, to a student in a program in Chemistry, Mechanical Engineering and Physics.
Value: $120 (40067 121)

THE HAROLD AND GERTRUDE FREEMAN SCHOLARSHIP IN FRENCH
Established in 1981 by members of the class of '43 as a grateful tribute to Harold and Gertrude Freeman, Professor Freeman was honored professor of French at McMaster University. To be awarded to the student returned from completing Level III abroad as part of the Humanities Study Abroad Program and entering the final session of an Honours program in French who, in the judgment of the Department of French, has attained the highest level of accomplishment in knowledge of French language, literature and culture. The recipient must obtain a Cumulative Average of at least 8.0 and no failures in the review at the end of the Fall/Winter session immediately prior to entering the Humanities Study Abroad Program.
Value: $1,000 (30054 059)

THE FRENCH GOVERNMENT BOOK PRIZES
To be awarded from time to time to in-course students for proficiency in Level I French.
Value: Book (40017)

THE KLAUS FRITZE MEMORIAL PRIZE
Established in 1980 by friends of Professor K. Fritz. To be awarded to the student who has completed Level I and an additional 30 - 45 units of an Honours program in Music and who, in the judgment of the Department 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 II of an Honours program in History who, in the judgment of the Department of History, has attained notable academic standing.
Value: $425 for books (30261)

THE R. LOUIS GENTICORE 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: $150 (40062 064)

THE GWEN GEORGE MEDAL
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) (30240 773)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE GWEN GEORGE MEDAL
Established in 2001 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) (30240 773)
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.
THE GERMAN EMBASSY BOOK PRIZE
To be awarded from time to time for in-course students for proficiency in Level II or III German.
Value: Book (40016)

THE J.L.W. GILL PRIZES
Established in 1944 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical High. Nine scholarships to be awarded on the basis of cumulative averages to students who have completed Level I and an additional 58 - 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 1983 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical High. Nine scholarships to be awarded on the basis of cumulative averages to students who have completed Level I and an additional 58 - 75 units of Honours B.Sc. programs. Ordinarily, not more than one scholarship will be awarded in any one discipline.
Value: $125 (40019)

THE GEORGE P. GILMOUR MEMORIAL SCHOLARSHIP
Established in 1987 by the Graduating Class of 1962 in honour of Dr. George P. 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 2G93 or D2H3.
Value: $250 (40019)

THE RUTH AND JACK HALL PRIZE
Established in 1985 by Jackie MacDonald in memory of her parents. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Computer Science, or Level I and an additional 60 - 90 units of a program in Computer Engineering, and who attains the highest cumulative average.
Value: $225 (30311)

THE HAMILTON INDUSTRIAL SCHOLARSHIPS AND DISTRICT SCHOLARSHIP
Value: $800 each (30165)

THE HAMILTON PORT AUTHORITY SCHOLARSHIP
Established in 1994 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 an additional 60 - 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 GEORGE S. HAMMOND MEMORIAL SCHOLARSHIP
Established in memory of George S. Hammond, B.A. (Class of '37), a former student and member of the Arts Council. To be awarded to a student who has demonstrated outstanding achievement in the Arts and who has been an active member of the Arts Council.
Value: $1,000 (30098 057)

THE HAMLET MEMORIAL SCHOLARSHIP
Established in 1999 by members of the Class of '38 in recognition of Mrs. Havelock Ham, B.A. (Class of '38), a former student and member of the Arts Council. To be awarded to a student who has demonstrated outstanding achievement in the Arts and who has been an active member of the Arts Council.
Value: $1,000 (30098 057)

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.
Value: $1,000 (30231 556)

THE J.E.L. GRAHAM MEMORIAL SCHOLARSHIP
Established in 1997 in memory of a former student and dedicated servant of the University, by her friends, family and Professor Emeritus J.E.L. 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: $975 (30034 242)

THE J.K. HAMPTON MEMORIAL SCHOLARSHIP
Established in 1955 in memory of John K. Hampton, B.A. (Class of '38), a former student and member of the Arts Council. To be awarded to a student who has demonstrated outstanding achievement in the Arts and who has been an active member of the Arts Council.
Value: $1,000 (30098 057)

THE J.L.W. GILL PRIZES
Established in 1944 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical High. Nine scholarships to be awarded on the basis of cumulative averages to students who have completed Level I and an additional 58 - 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 GERMAN EMBASSY BOOK PRIZE
To be awarded from time to time for in-course students for proficiency in Level II or III German.
Value: Book (40016)

THE J.L.W. GILL PRIZES
Established in 1944 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical High. Nine scholarships to be awarded on the basis of cumulative averages to students who have completed Level I and an additional 58 - 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 1983 by bequest of J.L.W. Gill, B.A., Principal of Hamilton Technical High. Nine scholarships to be awarded on the basis of cumulative averages to students who have completed Level I and an additional 58 - 75 units of Honours B.Sc. programs. Ordinarily, not more than one scholarship will be awarded in any one discipline.
Value: $125 (40019)

THE GEORGE P. GILMOUR MEMORIAL SCHOLARSHIP
Established in 1987 by the Graduating Class of 1962 in honour of Dr. George P. 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 2G93 or D2H3.
Value: $250 (40019)

THE RUTH AND JACK HALL PRIZE
Established in 1985 by Jackie MacDonald in memory of her parents. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Computer Science, or Level I and an additional 60 - 90 units of a program in Computer Engineering, and who attains the highest cumulative average.
Value: $225 (30311)

THE HAMILTON INDUSTRIAL SCHOLARSHIPS AND DISTRICT SCHOLARSHIP
Value: $800 each (30165)

THE HAMILTON PORT AUTHORITY SCHOLARSHIP
Established in 1994 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 an additional 60 - 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 HAMILTON UTILITIES CORPORATION ENERGY CONSERVATION AND ALTERNATIVE ENERGY UGDERGRADUATE SCHOLARSHIP
Established in 2003 by the Hamilton Utilities Corporation to encourage excellence in research in the areas of energy conservation and alternative energy. To be awarded to a student who has completed at least Level I of any program who, in the judgment of the McMaster Institute for Energy Studies, has demonstrated outstanding achievement in research in energy conservation or alternative energy.
Value: $1,000 (30303)

THE DONALD HART SCHOLARSHIP
Established in 1985 by Mrs. 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 an additional 30-45 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 HAWKRIGG FAMILY SCHOLARSHIPS IN BUSINESS
Established in 1989 by the Hawkrigg 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 HAWKRIGG FAMILY SCHOLARSHIPS IN KINESIOLOGY
Established in 1989 by the Hawkrigg 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) (30255 868)

THE HIDDEN HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessonal Average (at least 8.5) in an undergraduate program, with the exception of those in their graduating session.
Value: $750 (30198)

THE HELLENIC PRIZE
Established in 1995 by the Greek communities of Hamilton and district and the Greek Community of Burlington and district. 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 achievement in Greek studies.
Value: $1,000 (30226 380)

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 (30208 300)

THE ROSE HILL SCHOLARSHIPS
Established in 1985 by the alumini, faculty and staff of the School of Physical Education and Athletics in a tribute to Professor Rose Hill, long-time teacher, coach and administrator in the School. Two scholarships to be awarded to students who have completed 60 units of the Kinesiology program and who, in the judgment of the Department of Kinesiology, best demonstrate the philosophy of physical education espoused by Professor Hill throughout her career, namely, excellence in scholarship and leadership and participation in sport, dance or fitness.
Value: $1,200 each (30130 077)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE DR. 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 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 HOOPER SCHOLARSHIP
Established in 1957 by bequest of Isobel F. Hooper. To be awarded in Arts.
Value: $250 (30161)

THE NINA LOUISE HOOPER SCHOLARSHIP
Established in 1959 by bequest of Bertram O. Hooper.
Value: $500 (30200)

THE HUGHES SCHOLARSHIP
Established in 1980 by Heidi Dickensen-Hughes in memory of her husband, Peter Hughes (Class of '69). To be awarded to a student who has completed Level I and an additional 30-75 units of the Music Program who, in the judgment of the School of the Arts, has demonstrated outstanding achievement in Music Education.
Value: $200 (40006 330)

THE HUMAN RIGHTS AWARD
Established in 1998 by the Thane School on International Justice and HumanRights. To be awarded to the student who attains the highest grade in POL SCI 3Y03 or 4D06.
Value: $275 for books (40007 028)

THE HUMANITIES MEDALS FOR SPECIAL ACHIEVEMENT
Established by the University in 1982. Up to five medals to be awarded to graduating students in the Faculty of Humanities in recognition of outstanding achievement in scholarship and contributions to the cultural and intellectual life of the University including such areas as the creative and performing arts and faculty government.
Value: Medal (30209)

THE WILLIAM D.G. HUNTER PRIZE
Established in 1981 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 achieved 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 daughter, 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 (30027 079)

THE PAUL HYPER PRIZE
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 2MAS.
Value: $250 for books (40039 060)

THE INCO SCHOLARSHIP IN ENVIRONMENTAL SCIENCE
Established in 2000 by Inco Limited. To be awarded to a student entering Level III, IV (or Year V of a Co-op program) in the Honours Earth and Environmental Sciences program who, in the judgment of the School of Geography and Earth Sciences 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: $1,900 (30274 1514)

THE INTERMETCO LIMITED SCHOLARSHIP
Established in 1977. To be awarded to the student who has completed Level I and an additional 66-90 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 084)
THE INTER-NATIONS (BONN) BOOK PRIZE*
To be awarded from time to time to in-course students for proficiency in German studies.
Value: Book (40024)

THE INTER-RESIDENCE COUNCIL SCHOLARSHIP
Established in 1935 by the McMaster Inter-Residence Council in recognition of the student’s leadership and in support of the University and its students. To be awarded to a student who has completed at least Level 2 of any program who, in the judgment of the 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 Paardeburg Chapter and 67th University Battery Chapters of the IODE. To be awarded to a student enrolled in the Bachelor of Science program who has completed at least Level II and who, in the judgment of the Faculty of Science, has attained notable academic standing. Preference will be given to a student from a secondary school in Hamilton.
Value: $500 (30235)

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 (40003 081)

THE IROQUOIS TROPHY
Established in 1970 by the Department of Mechanical Engineering. To be presented to a graduating mechanical engineering student for excellence in engineering design. A replica of the Trophy is permanently held by each winner.
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 an additional 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 087)

THE H.L. JACKSON MEMORIAL SCHOLARSHIP
Established in 1969 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 an additional 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 3A3.
Value: $425 (40021 911)

THE JENSEN MEDAL
Established in 1965 by friends and colleagues as a tribute to Dr. J. F. H. Jensen in recognition of his contributions 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 Honours Biology and Pharmacology (Co-op) Program who, in the judgment of the Committee of Instruction, demonstrates outstanding academic achievement and excellence in co-op placements.
Value: $150 (40096 249)

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 an additional 30 - 45 units of the Honours History program and who attains the highest Sessional Average.
Value: $2,500 each (30295)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE KENNEDY MEMORIAL SCHOLARSHIP
Established in 1965 by Mrs. I. E. the parents of Mrs. French in memory of J. F. H. Jensen. To be awarded to the student who has completed Level I and an additional 60 - 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 their studies in the field of medical research.
Value: $800 each (30254 846)

THE GERALD L. KEECH MEDAL
Established in 1994 by his friends and colleagues as a tribute to Gerald L. Keech in recognition of his outstanding contributions to McMaster University during his 33 years of service in Computer Science and computer services. To be awarded to the graduating student from a program in Computer Science who attains the highest Cumulative Average. (50069 244)

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 768)

THE MARY E. KEYES RESIDENCE SCHOLARSHIP
Awards to the student with the highest Sessional Average (at least 8.5) 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. Students will be chosen on the basis of the student's University record and the corresponding Supplementary Bursary Aid, Fund if eligible.
Value: $500 each (30057 061)

THE KARL KINANEN ALUMNI SCHOLARSHIP in GERONTOLOGY
Established in 1990 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 Department of Health, Aging and Society, 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 Chair of the Department of Health, Aging and Society by April 15th.

THE KINESIOLOGY PRIZE
Established in 1982. To be awarded to the graduating student who, in the judgment of the Department of Kinesiology, has submitted an outstanding paper or project.
Value: $100 (50058)

THE KINESIOLOGY PRIZES
Established in 1982. 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 a student who has attained the highest average in Kinesiology courses taken in Levels I, II and III.
Value: $100 each (40011)

THE KIT MEMORIAL SCHOLARSHIP
Established in 1936 by the Hamilton Branch of the Canadian Women’s Press Club (now the Media Club of Canada, Hamilton Branch) in memory of the brilliant journalist and writer, the first president of the Canadian Women’s Press Club, Kathleen Blake Coleman, widely known on this continent as Kit. To be awarded to a woman student either on completion of Level I and at least an additional 30 units in the basis of journalistic ability or, if completed, Level I and an additional 60 - 75 units of an Honours program in English on the basis of Sessional Average.
Value: $200 (30095 092)

THE KPMG SCHOLARSHIP
Established in 1956 by Petit, 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 an additional 60 - 75 units of a program in Commerce. Preference will be given to students who plan 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: $100 (50070 995)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Anthropology by April 15th.

THE LATIN PRIZE
Established in 1987 by Dr. John E. Clinner. To be awarded to a student who, in the judgment of the Department of Classics, has demonstrated notable achievement in LATIN 1Z03 and 12Z3.
Value: $150 (40031 096)

THE GARY LAUTENS MEMORIAL SCHOLARSHIP
Established in 1982 by family, friends and colleagues in memory of Gary Lautens (Class of ’50), columnist and editor of the Toronto Star (1962-82), the Hamilton Spectator (1950-82) and the McMaster Silhouette (1948-50), remembered as a journalist with wit and insight. To be awarded to a student who has completed an Level I program who, in the judgment of the Selection Committee, has achieved notable academic standing and has demonstrated journalistic skills in the written media. 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: $4,000 ($2,000 each year) (30012 321)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th. A written essay and two examples of published material are required.

The recipient of this award is eligible to receive additional aid through the corresponding Supplementary Bursary Aid Fund if he/she demonstrats financial need. Please see the section on Supplementary Bursary Aid for Award Recipients in the Student Financial Aid section of this Calendar.

THE E. DORIS LAWRENCE SCHOLARSHIP
Established in 1999 in memory of E. Doris Lawrence (Class of ’47). To be awarded to a student who, in the judgment of the Department of French, has demonstrated academic excellence in French.
Value: $2,200 (30253 845)

THE MEGAN LAWRENCE SCHOLARSHIP
Established in 1988 by the Zonta Club of Hamilton. To memory of Megan Lawrence, Zontian and educator in the City of Hamilton. To be awarded to a student who has completed 90 units of the Kinesiology program and who, in the judgment of the Department of Kinesiology, demonstrates excellence in scholarship, leadership and participation in sport, dance and fitness.
Value: $700 (30109 376)

Students who wish to be considered for this award are encouraged to submit a resume to the Department of Kinesiology by April 15th.

THE SAM LAWRENCE PRIZE
Established in 1957 by the East Hamilton Independent Labour Party C.C.F. Club in honour of Sam Lawrence. To be awarded to the student who, in the judgment of the Department of Economics, has demonstrated outstanding academic achievement in courses in labour economics.
Value: $175 (40048)

THE JAMES B. LAWSON SCHOLARSHIP
Established in 1999 by a grateful student and friend of Professor Lawson. To be awarded to a student who has completed either GERMAN 1Z06 or 18B3 in Level I or to a student who has completed GERMAN 2Z23 in Level II and who, in the judgment of the Department of Linguistics and Languages, has demonstrated progress and interest in German. Eligibility for this award is restricted to non-native speakers of German. The award may be used for travel and study in a German-speaking country and/or for other expenses associated with the student’s German studies.
Value: $150 (30090 255)

THE RAY LAWSON SCHOLARSHIPS
Established in 1975 by the Honourable Ray Lawson, O.B.E., D.C.L., D.Com., LL.D., K.G.St.J., Lieutenant-Governor of Ontario from 1948 to 1952. Two scholarships to be awarded for the highest Sessional Averages in an Engineering and Management program: (a) one to a student who has completed Level I and an additional 70 - 90 units, and (b) one to a student who has completed Level I and at least an additional 109 units beyond Level I.
Value: $275 each (30126 096)
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 at least one year 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 (40003 208)

THE LINGUISTICS PRIZE
Established in 2000 to be awarded to a student in an Honours program in Modern Languages and Linguistics who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in Level II courses in Linguistics.
Value: $250 (40032)

THE CLAUDE G. LISTER SCHOLARSHIP
Established in 1990 by bequest of Pauline Detwiller 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 FELIKS LITKOWSKI MEMORIAL PRIZE IN POLITICAL SCIENCE
Established in 1987 by Albert Litkowski (Class of '78) and Richard Litkowski (Class of '56) in honour of their father. To be awarded to a full-time student graduating from an Honours program in Political Science who, in the judgment of the Department of Political Science, has demonstrated outstanding academic achievement.
Value: $750 (50032 100)

THE ALLAN LUDBROOK MEMORIAL SCHOLARSHIP
Established in 2004 by the family and friends of Allan Ludbrook ('04). To be awarded to a mature student enrolled in a Music program who, in the judgment of the School of the Arts, has attained notable standing.
Value: $1,000 (40014)

THE MACGIBBON MEMORIAL SCHOLARSHIP*
Established in 1979 by bequest of Professor Duncan A. MacGibbon (Class of '08). To be awarded to the student in Economics who, in the judgment of the Department of Economics, stands highest in courses in economic history.
Value: $475 (40034)

THE BERT MacKINNON MEMORIAL SCHOLARSHIP
Established in 1986 in memory of Bert MacKinnon, B.A. (Class of '43), LL.D. (Class of '77), first Associate Chief Justice of Ontario (1978 to 1986). One scholarship to be awarded to a graduating student who enrolls in a Bachelor of Laws degree program in the academic session immediately following graduation. The student selected will have demonstrated high academic achievement and leadership in extracurricular activities.
Value: $750 (50061 288)

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 3T03 (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 BETTY MacMILLAN PRIZE
Established in 1960 by her classmates in memory of Elizabeth Johnstone MacMillan (Class of '50). To be awarded to the student who has completed Level I and an additional 60 - 75 units in an Honours program in Sociology and who, in the judgment of the Department of Sociology, is the most promising major.
Value: $150 (30010)

THE AGNES AND JOHN MacNEILL MEMORIAL PRIZE
Established in 1946 by bequest of Annie May MacNell (Class of '03). To be awarded to the student graduating from an Honours program in English who has attained the most notable standing in English throughout the degree program.
Value: $500 (50001)

THE CATHERINE MacNEILL PRIZE
Established in 1946 by bequest of Annie May MacNell (Class of '03). To be awarded to a woman student in her graduating year who has attained notable standing in scholarship and has shown qualities of leadership.
Value: $175 (50011)
Students should submit an application 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, has attained outstanding achievement in 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 has attained the highest Cumulative Average. (50076 997)

THE LIANNE MARKS SCHOLARSHIP
Established by her family, in 1980 as a bursary and in 1985 as a scholarship, in honour of Lianne Marks, a student at McMaster University (1977-80). To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours program in Sociology and who, in the judgment of the Department of Sociology, has demonstrated outstanding academic achievement and has made notable contribution to the campus or community by participation in activities other than sports.
Value: $500 (30100 102)

THE ELEANOR DORNBUSH MARPLES PRIZE IN ART HISTORY
Established in 1965 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 attained outstanding academic achievement.
Value: $175 (40015 103)

THE ELEANOR DORNBUSH MARPLES PRIZE IN THEATRE & FILM STUDIES
Established in 1987 by Vaughan W. Marples in memory of his wife. To be awarded to the student who attains the highest grade in THTR/FILM 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 106)

THE MATTHEWS HALL RESIDENCE SCHOLARSHIP
Awarded to the student who resides in the residence with the highest Sessional Average at the most recent review.
Value: $750 (30157)

THE JOHN MAYBERRY SCHOLARSHIPS
Established in 1988 by John Mayberry. One scholarship to be awarded to a student who has completed Level II or III of a program in Chemical Engineering, Mechanical Engineering or Materials 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 (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 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 (30001)

THE WILLIAM J. McCallion SCHOLARSHIPS
Established in 1984 in honour of Professor McCallion (B.A. '43, M.A. '46), first Dean of the School of Adult Education from 1970 to 1978, in recognition of his outstanding contribution to adult education and to the Department of Mathematical Sciences during 41 years of service. 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 1984 by friends and colleagues in memory of Professor E.L. McCandless, a humanitarian and distinguished member of the Department of Biology from 1964 to 1983. 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, in the judgment of 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 in athletic endeavours.
Value: $700 (50030 107)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE H.W. McCREACY PRIZE IN BRITISH HISTORY
Established in 1989 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 2004.
Value: $100 (40022)

THE MCGREGOR-SMITH-BURR MEMORIAL SCHOLARSHIP
Established in 1910 by the Class of 1912 in Arts, in memory of their classmates, Percy Niel McGregor, Lee Wilson Smith and George William Burr, and supplemented in 1944 by bequest from Professor R. Wilson Smith, father of Lee Wilson Smith. To be awarded to a student who has completed Level I and an additional 60 - 75 units of the Honours English and History program and who has the highest Sessional Average.
Value: $525 (30105)

THE R.C. McIVOR MEDAL
Established by the Faculty of Social Sciences in 1982 in recognition of Professor R.C. McIvor, former Dean of the Faculty, for his outstanding contributions to the Faculty and the University during 35 years of service. 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 Graduands.
Value: $1,000 (50084 1498)

THE A.G. MCKAY PRIZE IN CLASSICAL STUDIES
Established in 1950 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 269)

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 1958 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 an additional 60 - 150 units of an Honours Classical program and who, in the judgment of the Department of Classics, has attained high academic standing. Preference will be given to students from the County of Hamilton-Wentworth.
Value: $350 (30160 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: $600 (40077 385)

THE A.B. MCLAY SCHOLARSHIP IN PHYSICS
Established in 1991 by C. Lucy Mcloyd in memory of her late husband, A. Boyd Mcloyd (Ph.D., F.R.S.C.), a member of the Department of Physics from 1930 to 1967. To be awarded to a student who has completed Level I and an additional 30 - 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 Mcloyd (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 an additional 60 - 75 units of an Honours program in Physics with a high Sessional Average.
Value: $2,500 (50010 001)

THE WALTER SCOTT MCLAY PRIZE
Established in 1938 in honour of Dean McIay, by his daughter, Mrs. R.R. McLaughlin (Marjorie McIay 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 (50037 279)

THE McMASTER HUMANITIES SOCIETY SCHOLARSHIPS
Established in 1996 by the McMaster Humanities Society. Two scholarships to be awarded to students who have completed Level I and an additional 30 units and, in the judgment of the Faculty of Humanities, have demonstrated outstanding achievement in the University through their involvement in extra-curricular activities.
Value: $250 each for books (30244 798)

THE McMasters University Futures Fund Graduand Award
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: $1,600 (50043 2405)

THE McMASTER UNIVERSITY SCHOLARSHIPS TO THE FULL-TIME STUDENT
To be awarded to the student who has completed Level I and an additional 30 units and who, in the judgment of the Faculty of Humanities, has demonstrated outstanding academic achievement. Recipient must obtain a Sessional Average of 9.5 or greater.
Value: $1,800 each (30270)

THE McMASTER UNIVERSITY SCHOLARSHIPS TO THE PART-TIME STUDENT
Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE McMASTER UNIVERSITY FUTURES FUND IN-COURSE AWARDS
Established in 2000. Four scholarships 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 (30270)

THE McMASTER UNIVERSITY RETIREES ASSOCIATION PRIZE
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 088)

THE McMASTER UNIVERSITY RETIREES SCHOLARSHIP IN GERONTOLOGY
Established in 1991 by the McMaster University Retirees Association. To be awarded to the student who has completed Level I and at least an additional 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. McNAB 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 60 to 75 units of an Honours program in Chemistry who, in the judgment of the Department of Chemistry, has achieved 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 an additional 30- 50 units of a program in Civil Engineering. Preference will be based on scholarship and evidence of practical engineering experience and background.
Value: $650 each (30139 112)
THE JOHN D. McNEIE ACHIEVEMENT AWARD OF EXCELLENCE
Established in 2001 by David O. Davis 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: $1400 (40107 1576)

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 1988 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 an additional 60 - 75 units of a program in Honours Art or 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 1998 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 academic 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 (40086 799)

THE AUDREY EVELYN MEMPHEL AWARD IN GEROLOGY
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 Department of Health, Aging and Society, has demonstrated notable academic achievement. Preference will be given to a student who has completed a thesis or course paper on issues relating to Alzheimer's disease.
Value: $1,200 (50030 1558)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society 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 (30252 119)

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 entering Level IV of the Honours Biology program with an outstanding Sessional Average and a grade of at least A- in BIOLOGY 3H03 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 ENGINEERING 2F04 taken in one session.
Value: $250 (40100 781)

THE MMG-NEOSID CANADA LIMITED CERAMIC ENGINEERING PRIZE
Established in 1976 by MMG-Neosid Canada Limited. To be awarded to the student who has completed Level I and at least an additional 75 units of the Materials Engineering program and who attains the highest standing in MATL 3B03.
Value: $100 (40037 122)

THE MODERN LANGUAGES TRAVEL SCHOLARSHIP
Established in 1991 by the Department of Linguistics and Languages. 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 Linguistics and Languages, 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 Abroad 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 4H03; and (b) the student who attains the highest grade in GEO 4H09.
Value: $150 each (40060 250)

THE MOLSON SCHOLARSHIP IN ENVIRONMENTAL STUDIES
Established in 1992 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 or Engineering and Society, who attains the highest Sessional 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 MATL 4C03.
Value: $125 (40061 264)

THE MICHAEL J. MORTON MEMORIAL BOOK PRIZE
Established in 1979 in memory of Dr. M.J. Morton. To be awarded to a student who has completed Level I and an additional 60 - 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 (3011)

THE ELIZABETH MOSGROVE SCHOLARSHIP
Established in 1959 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 SCHOLARSHIP
Established in 1999 by the Motorola Foundation. To be awarded to a student entering Level III in a Software Engineering program who, in the judgment of the Department of Computing and Software, has achieved notable academic standing, displayed strong communication skills, demonstrated leadership and involvement in extra-curricular activities.
Value: $1,500 (30252 844)

THE MOULTON COLLEGE SCHOLARSHIPS
Established in 1957 from funds originally subscribed by the Alumnae of Moulton College during the years 1946 to 1949 for the expansion of Moulton College. 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 an additional 30 - 45 units, and (b) one after completion of Level I and an additional 60 - 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 (30259)

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 Linguistics and Languages 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 (30065 119)

THE ELAINE NARDOCCHIO MEMORIAL SCHOLARSHIP FUND
Established in 1998 by family, colleagues and many friends in memory of Dr. Elaine Nardocchio, a professor for over 23 years at McMaster University, Chair of the Department of French from 1980 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 1986 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 (Corrosion).
Value: $100, (50036 120)

THE P.L. NEWBIGGINING SCHOLARSHIP
Established in 1982 in recognition of Dr. Lynn Newbigging for his outstanding contributions to the Department of Psychology, Neuroscience and Behaviour. 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: $100 each (50040 280)

THE P.L. NEWBIGGINING SCHOLARSHIP
Established in 1994 by family, friends and colleagues in memory of Dr. P.L. Newbigging, founding Chair of the Department of Psychology, Neuroscience and Behaviour, 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 1AAS.
Value: $375 (40072 263)

THE ALAN G. NEWCOMBE PRIZE IN PEACE STUDIES
Established in 1991 in memory of Dr. Alan G. Newcombe (1923-1991), who devoted 30 years to Peace Studies and was co-founder, with Dr. Hanna Newcombe, of the Canadian Peace Research and Education Association and the Peace Research Institute - Dundas. To be awarded to a student who, in the judgment of the Coordinating Council of the Centre for Peace Studies, demonstrates leadership in extracurricular endeavours and high academic achievement.
Value: $300 (40064 308)

THE NIEMEIER SCHOLARSHIP
Established in 1936 and augmented in 1982 by Dr. O.W. Niemeier. To be awarded to the student who attains the highest Sessional Average at the completion of Level I and an additional 31 - 55 units of the Nursing program.
Value: $1,100 (30114 244)

THE ROBERT NIXON SCHOLARSHIP
Established in 1966 by the Niagara-Haldimand Liberal Association in honour of Dr. Robert Nixon (Class of '50, L.L.D., '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: $575 (30203 144)

THE NORTEL NETWORKS SCHOLARSHIPS IN INFORMATION TECHNOLOGY
Established in 1999 by Nortel Networks. Ten scholarships are 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 870)

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 economy.
Value: $650 (40012 125)

THE FREDRIC P. OLSEN 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 an additional 60 - 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 both First and Second Degree.

THE ONTARIO ASSOCIATION OF SOCIAL WORKERS PRIZES*
Established in 1986 and augmented in 1992 by the Hamilton Branch. Two prizes to be awarded to the graduating students, one first degree and one second degree, who successfully complete SOC WORK 4D06 and attain the highest grade in SOC WORK 4D06 in the same session.
Value: $125 each (50037 126)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION GOLD MEDAL
Established in 1981 by the Ontario Professional Engineers Foundation for Education. Two scholarships are 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 (30068)

THE ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION UNDERGRADUATE SCHOLARSHIPS
Established in 1981 by the Ontario Professional Engineers Foundation for Education. Two scholarships are to be awarded to students in the Faculty of Engineering. The judgment of the Faculty of Engineering, 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 of '88), a part-time student who chose to return to University in 1996. To be awarded to a student who has completed Level I and an additional 29 - 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 (40069 265)

THE GDALS BALLANTYNE PARKER PRIZE
Established in 1953 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 1991 by the Canadian Engineering and Contracting Co. Limited in honour of its founder. To be awarded to a student who has completed Level I and an additional 75 - 85 units of the Civil Engineering program, or Level I and an additional 110 - 130 units of the Civil Engineering and Management program. Award is based on scholarship 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 Centenary United Church of Hamilton in honour of Irene Pearce, organist and choir director for forty-four years. To be awarded to a student who has completed Music I or 30-78 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 (30222 356)

THE HARRY L. PENNY PRIZE
Established in 1984 in recognition of Professor Harry L. Penny, founding Director of the School of Social Work, for his outstanding contribution to the School. To be awarded to the student with the highest Cumulative Average in a Social Work program.
Value: $100 (50025 125)

THE PEVENSING SCHOLARSHIP
Established in 1967 by David C. Hannaford (Class of '64). To be awarded to a student who has completed Level I and an additional 60 - 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
Value: $425 (30172)

THE PIONEER GROUP INC. GERONTOLOGY PRIZES
Established in 1988 by the Pioneer Group Limited. Two prizes to be awarded to (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 Department of Health, Aging and Society, have demonstrated high academic achievement and leadership in extracurricular activities.
Value: $45 each (50021 166)
Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

**THE PIONEER GROUP INC. PRIZE**
Established in 1988. To be awarded to a student in a Gerontology program, in the judgment of the Department of Health, Aging and Society, who, has achieved notable academic standing, and demonstrates practical aptitude for a career in health care of the elderly.

**Value:** $400 (40058 270)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

**THE PIONEER GROUP INC. PRIZES IN NURSING**
Established in 1989 by the Pioneer Group Limited in conjunction with the R. Samuel McLaughlin Centre for Gerontological Research. Two prizes to be awarded to students graduating from the Nursing program who, in the judgment of the School of Nursing, have achieved notable standing and demonstrated practical aptitude for a career in health care of the elderly.

**Value:** $150 (50056 370)

**THE PIONEER GROUP INC. SCHOLARSHIP**
Established in 1988. To be awarded to a student who has completed Level I and at least an additional 30 units of a program in Gerontology and who, in the judgment of the Department of Health, Aging and Society, achieves high standing in at least 12 units of Gerontology courses.

**Value:** $350 (30121 371)

Students who wish to be considered for this award are encouraged to submit a resume to the Chair of the Department of Health, Aging and Society by April 15th.

**THE BRIAN POCKNELL MEMORIAL SCHOLARSHIP**
Established in 2000 in memory of Brian Pocknell. To be awarded to a student who has completed Level I and an additional 60 - 75 units with the highest Sessional 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:** $700 each (30039 145)

**THE JOHN A. PYLYPIUK SCHOLARSHIP**
Established in 1987 in memory of Dr. John A. Pylypiuk 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 2T03.

**Value:** $700 (30039 145)

**THE HAROLD MEMORIAL PRIZE OF CLASS ’99**
Established by the Class of 1998 in Arts, on the occasion of the 25th anniversary of graduation, 1973, in memory of Chancellor Theodore Harding Rand, to encourage original literary work. To be awarded to the student who has completed Level I and an additional 60 - 75 units who, in the judgment of the Department of English and Cultural Studies, has made the most significant original contribution to student publications.

**Value:** $250 (40046)

**THE LLOYD REEFS PRIZES**
Established in 1983 in recognition of Dr. Lloyd G. Reeds for his outstanding contributions to the Department of Geography during 35 years of service. Four prizes to be awarded: (a) one to the student who attains the highest Cumulative Average in an Honours B.A. program in Geography; (b) one to the student who attains the highest Cumulative Average in an Honours B.Sc. program in Earth and Environmental Sciences; (c) one to the student who attains the highest Cumulative Average in a three-level B.A. program in Geography or B.Sc. program in Geoscience with a concentration in Geo; and (d) one to the student who, in the judgment of the School of Geography and Earth Sciences, has demonstrated outstanding achievement in GEO 3408.

**Value:** $100 each (50033)

**THE SHARON REEVES SCHOLARSHIP**
Established in 1987 by Kevin W. Reeves (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 140)

**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:** $100 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 4J06.

**Value:** $100 (50044)

**THE RETIRED TEACHERS OF ONTARIO HAMILTON/HALDIMAND DISTRICT PRIZE IN GERONTOLOGY**
Established in 1987 by the Superrannuated 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 by bequest 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 an additional 30 - 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 hold another scholarship.

**Value:** $1,000 each (30044)

**THE GLADYS RICHARDS SCHOLARSHIPS**
Established in 2002 by bequest of Gladys Richards. Two scholarships to be awarded to students who have completed at least Level II of a singleHonours program in English or a Combined Honours English and History program who, in the judgment of the Departments, have demonstrated outstanding academic achievement. Students may not hold another scholarship of equal or greater value.

**Value:** $2,000 each (30288)
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 (60103)

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 an additional 35 - 60 units of a program in Engineering and who, in the judgment of the McMaster Department of Health, Aging and Society, has demonstrated outstanding academic performance. Open to non-native speakers of Italian only. Value: $750 (30310)

THE ROBERT L. SINE MEMORIAL SCHOLARSHIP
Established in 2004 by bequest of Mary Anna Schneider. To be awarded to a student entering Level III of an Honours History or Honours Linguistics program with a concentration in Italian and who, in the judgment of the Department of History, has demonstrated outstanding academic performance. Value: $1,000 (30263 876.5)

THE E.T. SALMON SCHOLARSHIP
Established in 1994 by family and friends of Mrs. Edward Togo Salmon in memory of her husband, Herbert A. Salmon. To be awarded to the student who has completed Level I and an additional 60 - 75 units of a program in Science, has attained outstanding academic standing in an Honours program and who, in the judgment of the Faculty of Science, has demonstrated outstanding academic performance. Value: $500 each (30065 145)

THE ROSART PROPERTIES INC. SCHOLARSHIP
Established in 1993 by bequest of Sarah Rosenhead of Hamilton. To be awarded to a student who attains the highest Sessional Average in the Honours English program. Value: $400 (40013)

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: $250 (60013)

THE MORRIS AND SARAH ROSEHEAD MEMORIAL PRIZE
Established in 1986 by bequest of Sarah Rosehead of Hamilton. To be awarded to the student who attains the highest standing in ENGLISH 1A03 and 1A04. Value: $125 (30129 146)

THE THEOTOCOS MEMORIAL 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 Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in ages-related community activities. Value: $400 (40092 1130)

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 Department of Health, Aging and Society, has demonstrated high academic achievement and leadership in ages-related community activities. Value: $400 (40092 1130)

THE E. TOGO SALMON PRIZE IN HISTORY
Established in 1973 by friends and colleagues of Professor Edward Togo 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 an additional 60 - 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 the Department of History, has attained 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 an additional 30 - 45 units of a program in History who, in the judgment of the Department of History, has attained notable academic standing in at least nine units of History courses. Value: $150 for books (40075 359)

THE HILDA SAVING MEMORIAL SCHOLARSHIP
Established in 1980 by bequest of Bertha Savage. Value: $500 (30168)

THE LARRY SAYERS PRIZE IN EAST ASIAN HISTORY
Established in 1989 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 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 28, 1998. 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 (30263 876.5)

THE FEDOR SCHNEIDER SCHOLARSHIP IN ITALIAN
Established in 2004 by bequest of Mary Anna Schneider. To be awarded to a student entering Level I of an Honours Italian or Honours Linguistics program with a concentration in Italian and who, in the judgment of the Department of History, has demonstrated outstanding academic achievement and leadership. Value: $500 each (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: $1,000 each (30027 153)

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 1985 by graduates of McMaster University and friends in honour of Sheila Scott, Dean of Women from 1965 to 1992, 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 an additional 60 - 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 (30156)

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 (30097 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 Fortaleza, Brazil. To be awarded to a student entering Level II or IV of the Nursing program who, in the judgment of the School of Nursing, has demonstrated excellence in scholarship and leadership, and has served as a valuable role model for those qualities deemed important in success in a nursing career. Preference will be given to students enrolled in Level IV of the Nursing Program. Value: $250 (40103 246)
THE MARGARET A. SERVICE BOOK PRIZE
Established in 1990 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 1A04.
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 1989 by family and friends in memory of Dr. L.J. Shein, founding chair of the Russian Studies program and faculty member from 1968 to 1980. To be awarded to a student who, in the judgment of the Department of Linguistics and Languages, has achieved notable standing in a Russian language course.
Value: $375 (30168 255)

THE SHELL CANADA PRIZES IN ENGINEERING AND MANAGEMENT
Established in 1983. 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 an additional 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 (20137 984)

THE SHESTOPOLOVA PRIZE
Established in 1993 by J.N. Shestopolova 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 an additional 30 - 45 units of the Honours Physics program with the highest Sessional Average.
Value: $450 (30059 268)

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: $100 (50048)

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. SMYDE MEMORIAL PRIZES
Established in 1972 by the Patricia Smyde Memorial Fund Committee. Two scholarships to be awarded to students who have completed Level I and an additional 30 - 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: $575 each (30119)

THE SOCIAL WORK PRIZE
Established in 1982. To be awarded to the student who attains the highest grade in SOC WORK 2A06.
Value: $100 (40050)

THE SOCIETY OF CHEMICAL INDUSTRY MERIT AWARDS
Established in 1961. Three plaques to be awarded: (a) one to a Chemical Engineering graduate, (b) one to an Honours Biochemistry or Honours Biochemistry and Chemistry graduate, and (c) one to an Honours Chemistry graduate, 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 an additional 60 - 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 3AB3.
Value: $900 (30140 156)

THE SOCIOLOGY PRIZES
Established in 1962. Two prizes to be awarded to students with the highest Cumulative Average: (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: $100 each (50051)

THE SOMBRIER SCHOLARSHIPS
Established in 1969 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 SOUTH ONTARIO ECONOMIC DEVELOPMENT COUNCIL SCHOLARSHIPS
Established in 1975 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 an additional 60 - 75 units of the Honours Geography program and who elect GEO 4506 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 191)

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 MARINE SPEARS SCHOLARSHIP
Established in 1993 by many friends, colleagues and alumni of McMaster University as a tribute to Mamie Spears (Class of '69), Executive Director, Development and Public Relations from 1986-93 and dedicated alumna who served as President of the McMaster Alumni Council in 1989, in recognition of her outstanding contribution to the University. To be awarded to the student who has completed Level I and at least an additional 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 (30112 207)

Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th.

THE SPORT COACHING PRIZE
Established in 2003 by Pauline 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 KINESIO 3M03, 4M03 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 SCHOLARSHIPS
Established in 1938 by bequest of S.L. Square of Toronto. Four awards to be made to students in any Level I program who attain the highest standing in any two of MATH 1A03, 1B03, 1H03, 1N03, and in other tests provided for this scholarship by the Department of Mathematics and Statistics.
Value: $425 each (30132)
THE CLARENCE L. STARR PRIZE
Established in 1946 in memory of Dr. C.L. Starr, M.D., LL.D., F.A.S.S., Professor of Surgery at the University of Toronto, and an honorary alumnus of McMaster University (LL.D. 1922). To be awarded to the student who has completed Nursing I and who attains the highest Sessional Average. Value: $150 (30025)

THE ANNE STEIN MEMORIAL PRIZE*
Established in 1981. To be awarded to the part-time student who successfully completes SOC WORK 306D and attains the highest grade in SOC WORK 306D 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 306D and attains the highest grade in SOC WORK 306D in the same session. Value: $125 (40003)

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 an additional 30 - 75 units of an Honours program in Music or Art who, in the judgment of the School of the Arts, has demonstrated outstanding achievement. Value: $525 (30229 365)

THE MABEL STOKES SCHOLARSHIP
Established in 1957 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 an additional 30 - 45 units of any program and who gives evidence of outstanding academic achievement and leadership. Value: $250 for books (30103)

THE STOOBO SCHOLARSHIP
Established in 1957 by bequest of William Q. Stobo. Students should submit an application to the Office of Student Financial Aid & Scholarships by April 15th. Value: $325 (30170)

THE MARLE L. STOCK SCHOLARSHIP
Established in 1987 by the French Section of the Department of Romance Languages in honour of Marie L. Stock, Professor Emeritus of French, and Chair of the Department of Romance Languages from 1962 to 1985. To be awarded to the student who has completed Level I of an Honours program in French and who, in the judgment of the Department of Romance Languages, has demonstrated outstanding academic achievement. Value: $1,800 each (30242 780)

THE SWISS MINISTER TO CANADA BOOK PRIZE
Established in 1950. To be awarded from time to time to in-course students for proficiency in French, German, or Italian. Value: $500 (40051)

THE JUANITA LEBARRE SYMINGTON SCHOLARSHIP
Established in 1981 by The Women's Art 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 1989 by family, friends and colleagues in memory of Dr. Andrew Szendrovids, 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 science courses (COMMERCE 3QC3 and 3QA3) taken in the same session. Value: $450 (30288 1221)

THE KENNETH W. TAYLOR BOOK PRIZE
Established in 1992 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 for books (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 THTR&FLM 1A03 and 1B03. Value: Book (40014 052)

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 an additional 30 - 45 units of an Honours program in the School of Geography and Earth Sciences with the highest Sessional Average. Value: $250 (30089)

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 an additional 60 - 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 (30304)

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 3QC3; (b) one to the student who attains the highest standing in RUSSIAN 3QA3.

Value: $50 each for books (40036 266)

THE TINNERM A PALM ENGINEERED PRODUCTS SCHOLARSHIP IN MECHANICAL ENGINEERING
Established in 2001 by Tinerman Palm 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: $2,800 (30279 1540)

THE GRAHAM RONALD TOOP SCHOLARSHIP
Established in 1969 in memory of Graham Toop (Class of '89) by family and friends. To be awarded to the student entering Level IV of an Honours Philosophy program and who, in the judgment of the Department of Philosophy, has demonstrated leadership and influence in scholarly activities related to the field of philosophy. Value: $500 (30190 258)

THE CORELENE HELEN TOSTEVIN 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 (40036 735)

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: $50 (40028 176)

THE JOHN H. TRUeman PRIZE
Established in 1989 as a tribute to Professor John H. Trueman by his many friends, colleagues and students on the occasion of his retirement from McMaster University. 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 friend's 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 year 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 (40008 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 and originality in a creative project (such as an essay, poem, sculpture, mathematical or scientific problem, engineering design) or a related series of such projects.
Value: $150 each (40062)

THE UNIVERSITY (SENATE) SCHOLARSHIPS
Made available from by authorization of the Board of Governors of the University.
Value: $600 each (30179)

THE UNIVERSITY SCHOLARSHIPS
Established in 1978. 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 1981 by the Valley City Manufacturing Co. Ltd. of Dundas, Ontario. Two scholarships to be awarded to the students enrolled in an Honours B.Sc. program: one to the student entering Level III and one to the student entering Level IV who attain the highest Sessional Average. Recipients may not hold another scholarship of equal or greater value.
Value: $1,375 each (30205 227)

THE VAREY SCHOLARSHIPS
Established in 1978 by J.C. Varey, Dundas, in memory of Albert E. Varey, Jim Waddington and his career as a teacher and researcher. To be awarded to a student entering Level III of an Honours program in the Department of Classics who, in the judgment of the Department of Classics has achieved notable academic standing.
Value: $275 (30151 182)

THE JIM WADDINGTON PRIZE IN PHYSICS AND ASTRONOMY
Established in 2004 by friends, colleagues and students in recognition of Jim Waddington and his career as a teacher and researcher. To be awarded to a student entering Level II of an Honours Program in the Department of Physics and Astronomy who has attained the highest grade in PHYSICS 1B1A.
Value: $500 (30312)

THE HARRY WAISGLASS BOOK PRIZE
Established in 1988 in honour of Harry Waisglass, 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 (60024)

THE MELINDA WAPSHAW ACHIEVEMENT AWARD*
Established in 1999 by the Labour Studies Student Association and the Labour Studies Program. To be awarded to a student who has completed Level I and an additional 60 - 75 units of an Honours Program in Labour Studies and who, in the judgment of the Committee of Instruction, demonstrates outstanding achievement.
Value: $175 (40074 358)

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY
Established in 1990 by the former students, colleagues and friends of Dr. F.W. Waters, Professor from 1935 to 1959. To be awarded to the student entering Level IV of an Honours Program in Philosophy who, in the judgment of the Department of Philosophy, shows the most academic promise.
Value: $750 (30197)

THE F.W. WATERS SCHOLARSHIP IN PHILOSOPHY FOR PART-TIME STUDENTS
Established in 1998 by former students, colleagues and friends of Dr. F.W. Waters, Professor from 1935 to 1959. 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 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: $600 (40073 360)

THE WEIZS FAMILY FOUNDATION SCHOLARSHIP
Established in 1982. To be awarded to the student who has completed Level I and an additional 60 - 75 units of the Honours Commerce program and who attains the highest Sessional Average (at least 9.5).
Value: $1,500 (30162 184)

THE HOWARD P. WHIDDEN SCHOLARSHIP
Established in 1947 by the Honourable Jacob Noci (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: $600 (30176)

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: $750 (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 1660-1800.
Value: $250 for books (40044)

THE T. RUSSELL WILKINS MEMORIAL SCHOLARSHIPS
Established in 1963 by bequest of Mrs. T. Russell Wilkins (B.A. ’18 Brandon, M.A. ’32), daughter of former Chancellor Howard P. Whidden. To be awarded to students entering the penultimate level of an Honours program in Arts and Science, Health Sciences or Science who have demonstrated outstanding academic achievement. In addition, the students should demonstrate a lively interest in the humanities and in the human and social implications of scientific developments. The purpose of the scholarship is to enable the winners to spend the summer before the final Fall/Winter session in travel and study outside Canada.
Value: $4,600 each (30178)

THE MARJORIE AND CHARLES WILKINSON SCHOLARSHIP
Established in 1991 by the family in honour of Marjorie Wilkinson, author of many books and addresses on religion, and co-founder of the Hamilton Lay School of Theology at McMaster in 1966, and Charles Wilkinson, religion editor and writer for the Hamilton Spectator from 1963-1986. 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 272)

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 the Linguistics and Languages department, has demonstrated excellence in German studies.
Value: $375 (40082 772)

THE EMANUEL WILLIAMS SCHOLARSHIP IN PHYSICS
Established in 1948 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 an additional 30 - 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. To be awarded to an Engineering student in the judgment of a Selection Committee, rank highest in scholarship, leadership and influence. These scholarships are tenable for up to two years to provide the recipients maintain a Sessional Average of 9.5.
Value: $15,000 each ($7,500 per year for two years) (30280 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 (30012)
THE WOMEN'S ART 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 an additional 30 - 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 Cumulative Average.
Value: $750 (30160)

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 MARGUERITE Z. YATES SCHOLARSHIP
Established in 1963 by bequest of William Henry Yates of Hamilton. To be awarded to a student who has completed Level I and an additional 30 - 45 units of a program in Honours Art History with the highest Sessional Average. The recipients must be from the Hamilton-Wentworth Region.
Value: $225 (301 67)

THE YATES SCHOLARSHIPS
Established in 1960 by bequest of Mrs. W.H. Yates of Hamilton.
Value: $800 each (30171)

THE MARGARET ELIZABETH BURKE MEMORIAL ACADEMIC GRANT
Established in 2005 by Dr. Dennis Burke in memory of his wife, Margaret. To be awarded to a student who has completed Level I, has attained the highest grade in the required Level I Anatomy/Physiology courses, and demonstrates financial need.
Value: $1,800 (30101 180)

ACADEMIC GRANTS FOR FULL-TIME, IN-COURSE STUDENTS

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 an additional 70 - 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: $1,800 (30101 180)

UNDERGRADUATE AWARDS AND ACADEMIC GRANTS BY FACULTY

<table>
<thead>
<tr>
<th>Faculty/Program/Department</th>
<th>Award Type</th>
<th>Application Required</th>
<th>Award Category</th>
<th>Award Value</th>
<th>Name of Scholarship</th>
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<td>The Laura Dodeen Prize</td>
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<td>The Federation of Chinese Canadian Professionals Education Foundation Scholarships</td>
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<td>The Hamilton Port Authority Scholarship</td>
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Please look at the listings in relevant Faculties if you are in a combined program.
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<tr>
<th>Department</th>
<th>Award Type</th>
<th>Application Required</th>
<th>Award Category</th>
<th>Value</th>
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UNDERGRADUATE CALENDAR ORDER FORM

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